

## World Heritage Scanned Nomination

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UNESCO Region: AFRICA

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**SITE NAME:** Cape Floral Region Protected Areas

**DATE OF INSCRIPTION:** 7th July 2004

**STATE PARTY:** SOUTH AFRICA

**CRITERIA:** N (ii) (iv)

**DECISION OF THE WORLD HERITAGE COMMITTEE:**

*Excerpt from the Report of the 28<sup>th</sup> Session of the World Heritage Committee*

**Criterion (ii):** The Cape Floral Region is considered of outstanding universal value for representing ongoing ecological and biological processes associated with the evolution of the unique Fynbos biome. These processes are represented generally within the Cape Floral Region and captured in the eight protected areas. Of particular scientific interest are the plant reproductive strategies including the adaptive responses to fire of the flora and the patterns of seed dispersal by insects. The pollination biology and nutrient cycling are other distinctive ecological processes found in the site. The Cape Floral Region forms a centre of active speciation where interesting patterns of endemism and adaptive radiation are found in the flora.

**Criterion (iv):** The Cape Floral Region is one of the richest areas for plants than for any similar sized area in the world. The number of species per genus within the region (9:1) and per family (52) are among the highest given for various species-rich regions in the world. The species density in the Cape Floral Region is also amongst the highest in the world. It displays the highest levels of endemism at 31.9 % and it has been identified as one of the world's 18 biodiversity hot spots.

**BRIEF DESCRIPTIONS**

A serial site - in Cape Province, South Africa - made up of eight protected areas, covering 553,000-ha. The Cape Floral Region is one of the richest areas for plants in the world. It represents less than 0.5% of the area of Africa but is home to nearly 20% of the continent's flora. The site displays outstanding ecological and biological processes associated with the Fynbos vegetation, which is unique to the Cape Floral Region. The outstanding diversity, density and endemism of the flora are among the highest worldwide. Unique plant reproductive strategies, adaptive to fire, patterns of seed dispersal by insects, as well as patterns of endemism and adaptive radiation found in the flora are of outstanding value to science.

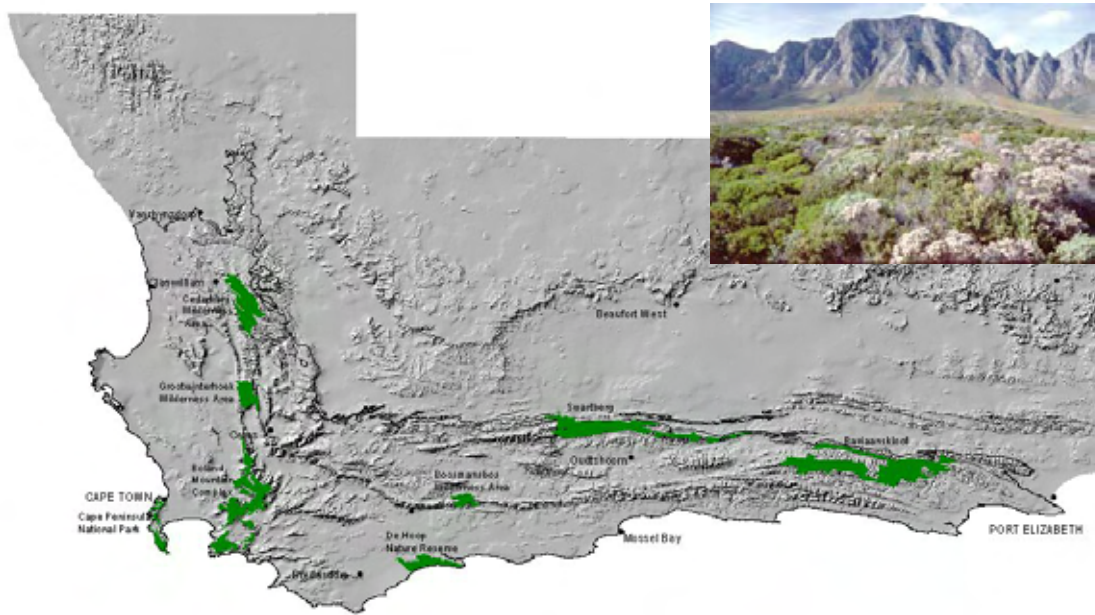
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**1.b State, Province or Region:** Western Cape Province, Eastern Cape Province

**1.d Exact location:** S34 10 00 E18 22 30

# Nomination of the Cape Floral Region of South Africa

for inclusion on the World Heritage List:



By the Government of the Republic of South Africa  
2003



Chief Directorate  
Environmental Affairs  
Eastern Cape



Western Cape  
Nature  
Conservation Board



Department of Environmental Affairs



Indigenous  
Vegetation  
Consultancy

Nomination of the  
Cape Floral Region  
of  
South Africa  
for inclusion on the World Heritage List:

By the Government of the Republic of South Africa  
Department of Environmental Affairs and Tourism  
2003

**Compiled for:**

**South African National Parks,  
Western Cape Nature Conservation Board  
and  
Chief Directorate: Environmental Affairs Eastern Cape**

This revision compiled by:  
**Indigenous Vegetation Consultancy  
in association with  
SANParks and Western Cape Nature Conservation Board**

based on previous work by:  
**Council for Scientific and Industrial Research (Phase 1)  
De Villiers, Brownlie and Associates (Phase 1)  
Common Ground Consulting (Phase 2)  
Indigenous Vegetation Consultancy (Phase 2)  
Shirley Pierce (Scientific Editor: Phase 2)  
EnAct International (Environmental Law: Phase 2)**

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## **VOLUME 2: LIST OF APPENDICES**

- Appendix 1 Topographic maps, at scales including 1:50 000; 1:250 000; and, 1:500 000, of the Cape Floral Region and of the eight protected areas.
- Appendix 2 Two examples of management plans for Western Cape and Eastern Cape protected areas (including the WCNCB standardised format for management plans).
- For the Cape Peninsula National Park, the following are included:
- The Integrated Environmental Management System (including Management Policy and Strategic Management Plan);
  - The Environmental Information System; and,
  - An overview on the Heritage Resources Management Plan.
- Appendix 3 Assessment of the value of proposed World Heritage Sites for the Cape Floral Kingdom. A study by Cowling & Heijnis, 2000.
- Appendix 4 World Heritage Site nomination: plant and vertebrate distributions in relation to nominated World Heritage Sites in the Cape Floral Region, South Africa. A study by Lombard, 2000.
- Appendix 5 Cape Action Plan for the Environment.
- Appendix 6 An overview of the State of Biodiversity Programme for the Western Cape.
- Appendix 7 Ecological Auditing (Ekologiese Ouditering) – template of monitoring procedure for the Western Cape Nature Conservation Board.
- Appendix 8 Legal statutes relating to the Cape Floral Region and the protected areas.
- Appendix 9 Supplementary documentation gathered for the first phase (Phase 1) of the Nomination process – Cape Peninsula National Park and Cape Peninsula Protected Natural Environment.

## **VOLUME 3: PROMOTIONAL MATERIAL**

Selected examples of policies, programmes and other materials relating to the presentation and promotion of the property and protected areas.

# INTRODUCTION

The property being nominated is the Cape Floral Region (CFR). Recognized globally as one of the world's richest floral regions it has the distinction of being by far the smallest of the world's six Floral Kingdoms, with some 9 000 species in only 90 000 km<sup>2</sup>. Astonishingly, almost 70% of these species are **endemic**, found nowhere else on the planet. Its **diversity** is comparable to many areas of similar size in moist tropics, remarkable for a temperate region. For these reasons, the Cape Floral Region is considered worthy of World Heritage Site status.

The nomination is for a natural property based on the following criteria:

Criterion 44.(a)(ii): Outstanding example representing significant ongoing ecological and biological processes in evolution.

Criterion 44.(a)(iv): The most important and significant natural habitats for *in situ* conservation of biological diversity.

The Cape Floral Region is located in the southwestern corner of South Africa, largely within the Western Cape Province, extending eastwards into the Eastern Cape Province, and minimally into the Northern Cape Province. The Cape Floral Region has a broadly Mediterranean-type climate with the western-most areas experiencing hot, dry summers and winter rainfall. Across the extent of the Cape Floral Region, there is an eastward trend for an increasing portion of the rainfall to fall in summer.

The distinctive vegetation for the Cape Floral Region is a sclerophyllous shrubland, known as **fynbos** ("fine-bush"). Fynbos comprises mainly fine-leaved shrubs such as heaths (Ericaceae), larger-leaved showy flowered Proteaceae, bunches of reed-like Restionaceae, and geophytic (bulb-like) plants, including many Iridaceae.

There are many forms of fynbos, which are named by habitat e.g. "mountain fynbos", or according to a distinctive component e.g. "grassy fynbos". Fynbos grows on the coarsely sandy, acidic, nutrient-poor soils occurring over most of the region. Adjacent to the coast, on alkaline, marine sands, fynbos shrubland occurs in a mosaic with thicket patches of trees and larger, mainly bird-distributed, shrubs. On finer, slightly richer soils in the valleys and forelands there is a form of fine-leaved shrubland known as **renosterveld**. Renosterveld is rich in Asteraceae and extremely rich in geophytic plant species, although Proteaceae are poorly represented.

Other types of vegetation also occur in the Cape Floral Region, but to a lesser extent. For example, pockets of evergreen forests are concentrated within moist, fire-protected gorges and in areas of deeper soils of the Cape Floral Region. In the eastern Cape Floral Region, Valley Thicket and Succulent Thicket are found in deeper valleys, while in the drier interior, on richer soils, the vegetation is a low succulent shrubland called Succulent Karoo. These non-fynbos vegetation types contribute towards the phenomenal plant diversity of the Cape Floral Region; however, it is the fynbos shrublands, which hold about 80% of this plant richness. Furthermore, it is the extraordinary way in which fynbos plant richness is arranged across the landscapes of the Cape Floral Region that makes it unique – over each hill, new suites of species are encountered. Carl Linnaeus, recognising the floral riches of the Cape called it "this Heaven on Earth", while the highly diversified family Proteaceae is named after the Greek God Proteus who could take on any form.

Although the Cape Floral Region has been forwarded as a World Heritage Site it is logistically not possible to nominate the whole region since it contains significant areas of agriculture and urbanisation. Furthermore, the peculiar nature of the pattern of species' distribution across the region negates a single, smaller, representative **protected area**.

Against this brief background, this document proposes that it is most effective (in terms of species representation) and efficient (in terms of space) to present a serial nomination for a constellation of eight sites with a high degree of natural integrity, as well as a high level of conservation status in order to represent and conserve optimally the **biodiversity** of the Cape Floral Region.

It must be noted that the series of eight natural properties emerged from an initial exercise to identify a minimum set of complementary natural properties that would best reflect the region's biodiversity, based on information available at this time. The Global Environmental Facility-funded Cape Action Plan for the Environment (**CAPE Project**) (1998-2000) provided much of the information regarding the final boundaries and location of this set of sites, using Standard Reserve Selection algorithms.

Analyses based on information from the CAPE Project (Cowling *et al.*, 1999a) were used to assist in the selection of the eight protected areas to represent the Cape Floral Region. In addition, the CAPE Project provides evidence of a commitment to continued conservation of the rich biodiversity of the Cape Floral Region, thus playing a key role in the future integrity of the eight protected areas.

Because this is a serial nomination, the format differs slightly from that of a single nomination. After a number of discussions with the World Heritage Site staff at UNESCO, the following format was agreed upon.

**Chapter 1** aims to provide the reader with some background to the nomination and explains broadly the value of the Cape Floral Region, emphasising the constellation of eight protected areas. Chapter 1 thus comprises an overview chapter of the Cape Floral Region in its entirety. This nomination applies for inscription of the Cape Floral Region by means of a serial nomination for a constellation of sites, and provides justification for the inclusion of the eight protected areas distributed across the 90 000 km<sup>2</sup> Cape Floral Region. This chapter includes some of the initiatives and recommendations from the CAPE Project, which has developed a strategic plan for the conservation of the biodiversity of the Cape Floral Region (refer also to Appendix 5; <http://fred.csir.co.za/extra/cape/reports/reports.html>).

- Section 1, identifies the Cape Floral Region and the eight protected areas, while Section 2, provides the justification for inscription of the eight protected areas as a natural property based on two criteria namely: *Criteria 44(a)(ii) and (iv)*.
- Sections 3 to 7 deal with Description (3), Management (4), Factors Affecting the Property (5), Monitoring (6), and Documentation (7) of the eight protected areas as a unit.
- Section 1.8 contains the Signature on behalf of the Republic of South Africa.

**Chapters 2-9** provide separate details for each of the eight protected areas that comprise this nomination according to the same headings in Chapter 1. Information that has already been mentioned in Chapter 1 is not repeated in these Chapters, but may be summarised where relevant.

Numbering of all sections includes the Chapter number followed by the section and then subsection number, hence Chapter 1, section 2, subsection b is referred to as 1.2b. Further subcategories of information are numbered using lower case Roman numerals e.g. 1.2b(i).

Overall, there are three volumes to this nomination.

- **Volume 1**, comprising nine chapters, is devoted to providing the background information for the nomination according to the format outlined above.
- **Volume 2** contains all Appendices and includes maps, management plans for selected protected areas, selected legislation relating to the status and protection of the nominated site, reports in support of this nomination, details of the CAPE Project, State of Biodiversity reports and details of Ecological Audits carried out in the protected areas.
- **Volume 3** covers the policies, programmes and promotion of the separate protected areas. Containing photographic and promotional literature spanning more than a decade, this volume aims to illustrate the majesty and detailed beauty of the Cape Floral Region, while indicating the activities of conservation authorities responsible for management of these sites.

## Notes

- For clarity the individual sites are termed **protected areas**, and the surrounding buffer zones are termed **reserves**.

- Throughout the document, the accepted use of technical terms has been retained. In some cases this has not been possible and in other cases the accepted words are in local languages. Hence, a glossary of terms has been employed. The first time such terms are used, they are marked in bold and are defined in the Glossary.
- Minor discrepancies in diversity statistics may be encountered in this document. Where possible these have been rationalised, but in places these small discrepancies are unavoidable and have come about as a direct result of using a variety of references for compilation of the nomination.
- For some of the individual protected areas, owing to focussed investigation of these areas by research groups (often from a number of institutions), substantial information is available on specific or general details regarding, for example, specific monitoring programmes or selected taxonomic data, while staff in other protected areas are currently in the process of updating and/or gathering such information. Greater detail for these areas is not currently available.
- Much of the information for the compilation of this nomination has been taken from management plans, research papers, unpublished reports and background information documents supplied by the Western Cape Nature Conservation Board, South African National Parks and the Eastern Cape Conservation authorities. Although the nomination has not been prepared as a formal scientific reference paper, where possible references to these documents are supplied for further reading and reference.

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### Phase 1:

The first phase of the nomination proposal was prepared by the South African National Parks (SANParks), in collaboration with the Western Cape Nature Conservation Board (WCNCB). Principal authors were James Jackelman (SANParks) and Peter Linder, Mike Picker and Amrei Von Hase of the University of Cape Town (UCT). Renee Selikowitz, Trevor Sparks and Jim Hallinan of SANParks, Peter Lloyd of WCNCB and John Yeld and Mike van Wierengen contributed to the compilation of information used in the nomination.

James Jackelman (previously SANParks), Monique Ruthenberg (SANParks) and Susie Brownlie (De Villiers, Brownlie and Associates) coordinated the compilation of this phase of the nomination proposal.

SANParks gratefully acknowledges financial support for the compilation of this nomination proposal from the *Table Mountain Fund* administered by the World Wide Fund for Nature (South Africa).

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Common Ground Consulting and Indigenous Vegetation Consultancy drafted the second phase of the nomination, in collaboration with the Western Cape Nature Conservation Board. Shirley Pierce acted as Scientific Consultant and Scientific Editor. Nicholas Smith (EnAct International) drafted the Environmental Law section. All are thanked for their substantial input.

**Phase 3 (this document):**

The two phases of the nomination process were merged and refined through collaborative effort between the Western Cape Nature Conservation Board and SANParks. Lee Jones (Indigenous Vegetation Consultancy) was responsible for the final drafting of the merged nomination document. Paul Britton (SANParks) and Guy Palmer (WCNCB) are thanked for joint co-ordination of this phase as well as for the review of drafts and constructive commentary.

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**DEDICATION**

We would like to dedicate this nomination to our late colleague Chris Burgers, in memory of his great contribution to the conservation of the Cape Floral Region.

# CHAPTER 1 AN OVERVIEW OF THE CAPE FLORAL REGION

## SECTION 1.1 IDENTIFICATION OF THE CAPE FLORAL REGION AND THE CONSTELLATION OF PROTECTED AREAS

### 1.1a Country

Republic of South Africa

### 1.1b Province

Western Cape Province and Eastern Cape Province

### 1.1c Name of property

Cape Floral Region of South Africa, represented by the Cape Peninsula National Park, Cederberg Wilderness Area, Groot Winterhoek Wilderness Area, Boland Mountain Complex, Boosmansbos Wilderness Area, De Hoop Nature Reserve, Swartberg Complex and Baviaanskloof.<sup>1</sup>

### 1.1d Location on map and identification of geographical co-ordinates

The Cape Floral Region (CFR) is situated on the southwestern tip of Africa between latitudes 31° and 34.5°S and longitudes 18° and 26°E (Table 1.1.1). The Cape Floral Region covers much of the Western Cape Province, extends into the Eastern Cape Province where it is represented by the Baviaanskloof protected area, and reaches marginally into the Northern Cape. In the south and west the region is restricted by the ocean, while the interior margin is formed by the Succulent Karoo, the Nama-Karoo, and eastwards by Thicket (Figures 1.1.1 and 1.3.2).

The serial nomination comprises eight spatially separate protected areas that represent the Cape Floral Region. The Cederberg Wilderness Area is the most northwesterly protected area and borders the Succulent Karoo close to the northwestern limit of the Cape Floral Region (Figures 1.1.1 and 1.3.2). Southwards lies the Groot Winterhoek Wilderness Area and even further south are several contiguous reserves making up the Boland Mountain Complex (Figure 1.1.1). The Boland Mountain Complex is situated on the eastern shore of False Bay, across the bay from the Cape Peninsula Protected Natural Environment and the Cape Peninsula National Park, the most southwesterly protected area. The Boland Mountain Complex, and the Cederberg and Groot Winterhoek Wilderness Areas lie in a north / south orientation along a range of mountains which form part of the Cape Fold Belt (Figure 1.1.2).

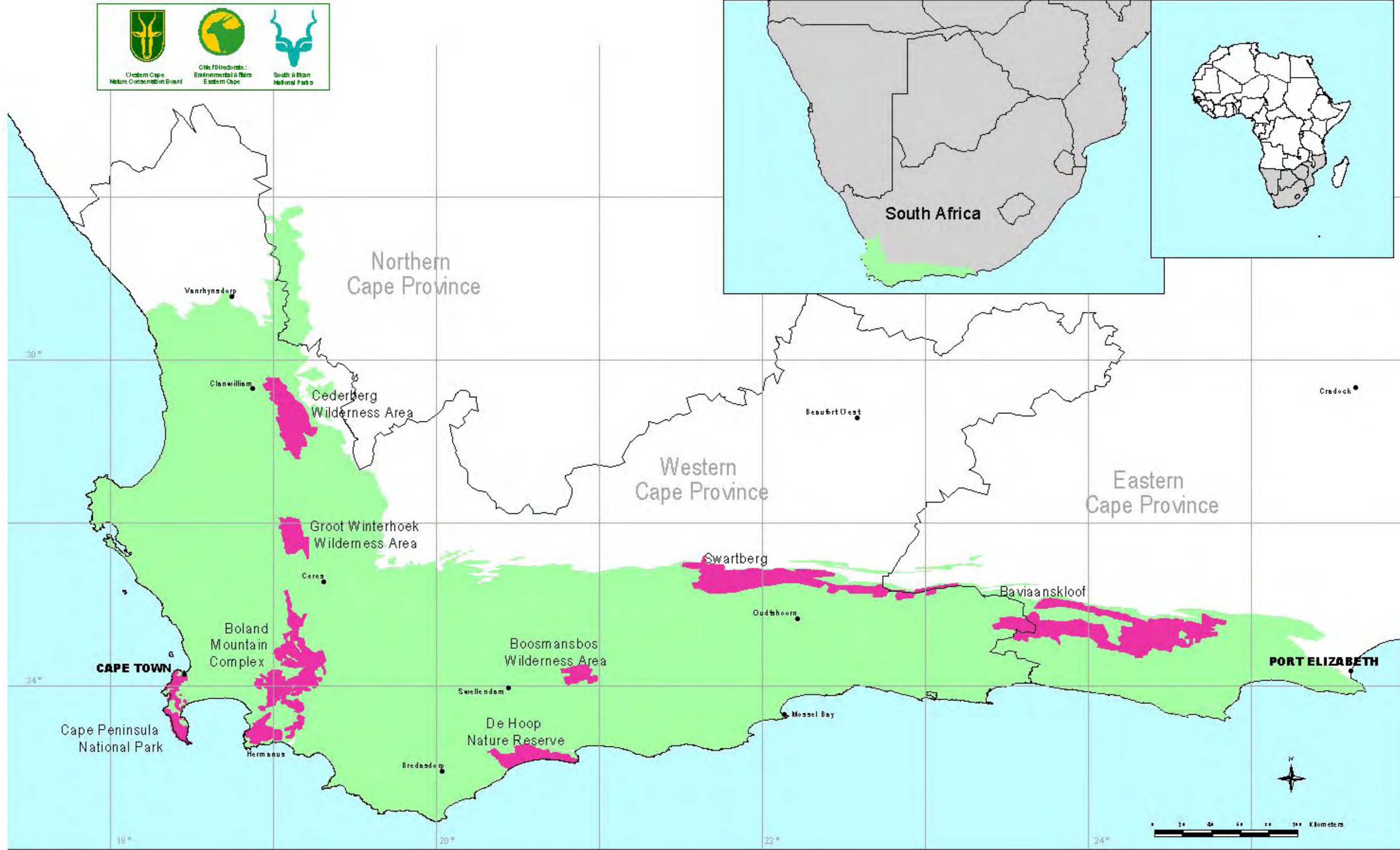
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<sup>1</sup> Although Baviaanskloof does not formally, nor legally, have the status of a Wilderness Area (refer section 1.4b(iii)), it is managed according to guidelines for a true Wilderness Area and is known by many as the Baviaanskloof "Wilderness Area". Boshoff *et al.* (2000) refer to Baviaanskloof as a Conservation Area. For the purposes of this nomination, given that proclamation of Wilderness Area status is imminent, the protected area will simply be referred to as Baviaanskloof, or as the Baviaanskloof protected area.

Table 1.1.1 Location details and land areas of the protected areas representing the Cape Floral Region for World Heritage Site status.

<b>Broader Area</b>	<b>Southwest co-ordinates</b>	<b>Northeast co-ordinates</b>		<b>Area</b>
Cape Floral Region	34° 21' 40"S & 18° 28' 30"E	33° 30' 00"S & 25° 45' 00"E		90 000 km <sup>2</sup>
<b>Protected area name</b>	<b>Southwest co-ordinates</b>	<b>Northeast co-ordinates</b>	<b>Central Point</b>	<b>Area (ha)*</b>
Cape Peninsula National Park	34° 21' 40"S & 18° 28' 30"E	33° 57' 25"S & 18° 26' 10"E	34° 10' 00"S & 18° 22' 30"E	17 000
Cederberg Wilderness Area	32° 36' 20"S & 19° 08' 17"E	32° 07' 10"S & 19° 02' 05"E	32° 21' 10"S & 19° 08' 00"E	64 000
Groot Winterhoek Wilderness Area	33° 10' 52"S & 19° 05' 50"E	32° 59' 05"S & 19° 09' 15"E	33° 05' 30"S & 19° 08' 00"E	26 000
Boland Mountain Complex	34° 20' 25"S & 18° 46' 10"E	33° 25' 00"S & 19° 05' 00"E	33° 55' 20"S & 19° 09' 50"E	113 000
De Hoop Nature Reserve	34° 30' 12"S & 20° 27' 07"E	34° 22' 40"S & 20° 36' 13"E	34° 25' 30"S & 20° 29' 30"E	32 000
Boosmansbos Nature Reserve	33° 58' 56"S & 20° 48' 00"E	33° 52' 46"S & 20° 56' 12"E	33° 55' 30"S & 20° 52' 40"E	15 000
Swartberg Complex	33° 24' 19"S & 20° 35' 30"E	33° 22' 40"S & 23° 11' 50"E	33° 22' 00"S & 22° 21' 15"E	112 000
Baviaanskloof	33° 38' 45"S & 23° 25' 00"E	33° 25' 20"S & 24° 50' 55"E	33° 37' 30"S & 24° 01' 00"E	174 000

\* Total land areas of the core, protected areas are given here in hectares (ha), rounded off to the nearest thousand ha. More accurate estimates are available, but minor discrepancies in the calculation of total land area exist, due to the often-extreme topography of this region, as well as the different scales applied (e.g. using different scales to capture information within Geographical Information Systems) and/or other methods of calculation used. For the purposes of this nomination, the use of an approximate size was considered to be more than adequate, given the substantial land areas of each contributing protected area. It is crucial to note, that despite the anomalies of scale presented by measuring land area on GIS systems, all boundaries for each protected area are officially, and unambiguously, fixed.



LEGEND

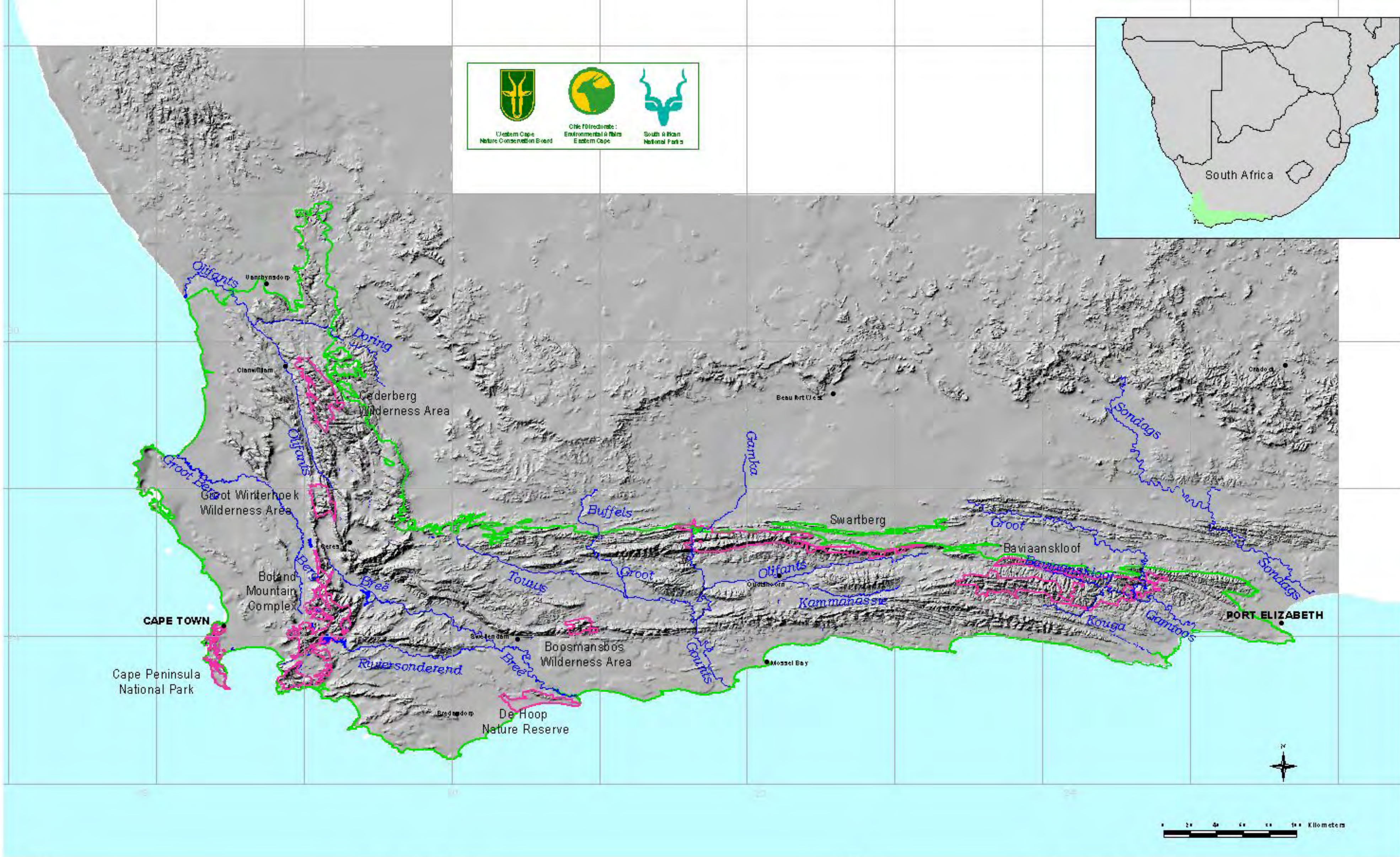
Cape Floral Region

World Heritage Sites

FIGURE 1.1.1

World Heritage nomination of the Cape Floral Region, represented by eight sites.





### LEGEND

Rivers  
 Cape Floral Region

World Heritage Sites

### FIGURE 1.1.2

Topography and drainage of the Cape Floral Region and surrounds.

The Boland Mountain Complex comprises a collection of contiguous protected areas (Figure 1.1.1). The Hottentots Holland, Jonkershoek and Assegaaibosch Nature Reserves, in the Boland mountain range; the Kogelberg Nature Reserve, which is bounded by agricultural and forestry land to the east and by the coast to the west; and the Limietberg Nature Reserve in the north of the Boland Mountain Complex.

East of the Boland Mountain Complex is the coastal De Hoop Nature Reserve, with 46 km of marine frontage, while north of De Hoop is Boosmansbos Wilderness Area in the Langeberg Mountains (Figures 1.1.1 & 1.1.2). Northeast of the latter protected area, is the Swartberg Complex in the Swartberg Mountains, parallel to the east / west trending coast, in the northern extreme of the Cape Floral Region (Figure 1.1.1). Baviaanskloof lies to the east of the Swartberg Complex in the Eastern Cape.

These eight protected areas therefore, conserve a representative sample of the wide diversity of the Cape Floral Region along both axes of the extensive Cape Fold Mountains (section 1.3).

### **1.1e Maps and plans showing boundary of area proposed for inscription**

A map of the Cape Floral Region, the protected areas and the relevant provinces in relation to Africa and South Africa, is shown in Figure 1.1.1. Figure 1.1.2 shows the varied topography of the Cape Floral Region, including both axes of the Cape Fold Belt, and the main drainage lines. The full extent of the Cape Floral Region is shown in a 1:500 000 topographical map that is appended to this document (Appendix 1).

The eight protected areas are relatively evenly distributed across the Cape Floral Region (Figure 1.1.1). Detailed maps of each of the protected areas are provided in Chapters 2-9 while 1:50 000, and 1:250 000 topographical maps are appended (Appendix 1).

Geographical co-ordinates of the eight protected areas are listed in Table 1.1.1.

### **1.1f Area of site proposed for inscription**

The total area of the Cape Floral Region is approximately 90 000 km<sup>2</sup>. The total area, of the constellation of eight protected areas representing the Cape Floral Region, amounts to over 550 000 ha or about 6% of the 90 000 km<sup>2</sup> Cape Floral Region (Table 1.1.1).

The reserves under conservation-orientated land use, surrounding the eight protected areas, total over 1 315 000 ha. Therefore the total area of the protected areas and their surrounding reserves total over 1.8 million hectares.

## **SECTION 1.2 JUSTIFICATION FOR INSCRIPTION**

### **1.2(i) Introduction**

A series of eight natural properties is proposed within the Cape Floral Region. The eight natural properties are related because they belong to the same biogeographic province, together having outstanding universal value. The Cape Floral Region is often loosely referred to as the 'Fynbos Biome', since fynbos is the dominant vegetation type and contributes most of the species to the flora of this Region (Figure 1.3.3). The flora characteristic of the Cape Floral Region is commonly referred to as the 'Cape Flora'.

The nominated sites fulfil two of the criteria for inclusion in the World Heritage List as a natural property, namely criteria (ii), and (iv) defined in Paragraph 44.(a) of UNESCO's Operational Guidelines for the Implementation of the World Heritage Convention (refer to section 1.2d).

With its highly distinctive flora, exceptional species richness and high degree of **endemism**, the Cape Floral Region has long been recognised as a global priority for conservation action. Owing to this diversity of plants and its vulnerability to threats, the Cape Floral Region is considered by many to be a biodiversity “**hotspot**” of global significance (Myers, 1990; Mittermeier *et al.*, 1998). The Cape Floral Region is also listed as a global Centre of Plant Diversity (WWF & IUCN, 1994); an Endemic Bird Area (Bibby *et al.*, 1992); and, a Global 200 EcoRegion (Olson & Dinerstein, 1998).

The region coincides with the Cape Floral Kingdom, the smallest of the world’s six Floral Kingdoms. The Cape Floral Region’s species richness of just on 9 000 plant species in an area of only 90 000 km<sup>2</sup> is exceptional when compared with the rest of Africa and southern Africa. Global comparisons reveal that its diversity is similar to some of the most species-rich regions on earth, including tropical rainforests. The Cape Floral Region has higher levels of species richness, and particularly endemism, than several ecosystems and islands representing **hotspots** in the comparable climate of the Mediterranean Basin (Goldblatt & Manning, 2000).

The area is home to an astounding 1 435 Red Data Book (**threatened**) plant species (Rebello, 1992b). Most are thus classified because they are highly localised endemics, which persist in very small populations.

The Cape Floral Region is exceptional in terms of the pattern, or the arrangement, of plant richness across the landscape. The region has relatively high **alpha diversity** – a measure of plant species richness in one habitat. However, the Cape is special with regard to measures of plant species turnover, having very high **beta** diversity – that is plant species turnover along habitat gradients, and particularly special in having very high **gamma** diversity - species turnover in similar habitats across geographical gradients. The high levels of species turnover, particularly in terms of **gamma** diversity, as well as the high levels of floral endemism have enabled botanists to divide the entire region into eight Phytogeographic Centres of endemism (refer also to section 1.3a(iii); Figure 1.3.4). Each Phytogeographic Centre is delimited by large numbers of endemic plant species.

The Cape Faunal Centre (*sensu* Stuckenberg, 1962) coincides roughly with the Cape Floral Region and contains a distinctive fauna with some invertebrates showing little change over millions of years. These relictual faunas date back to the time of Gondwanaland. There are numerous natural phenomena and, in global terms, areas of exceptional beauty, aesthetic value and cultural significance. It is truly a remarkable area of global conservation significance.

This Justification section is divided into two parts. The first outlines the process that was used to identify the constellation of protected areas, which represent the Cape Floral Region in this nomination. The second addresses the justification of the eight protected areas as part of a constellation of sites. Justification of each selected protected area is provided in the relevant sections in Chapters 2 – 9.

## 1.2(ii) Selection of the eight protected areas

This selection took careful consideration of the World Heritage Site Guidelines, which recommend that “it is the series as such of universal value and not its individual components”.

The Cape Floral Region is physically diverse with varying topography, climate and soil types which act in concert to give rise to exceptional patterns of biodiversity. As explained in the Introduction above, this plant biodiversity is not evenly distributed but is concentrated in Phytogeographic Centres of endemism. Therefore, areas on the west coast are entirely different from areas on the south coast or from those in the eastern and southern limits of the region. Thus, a reserve to the west would be home to very rich areas of mountain fynbos while a reserve in the eastern end would conserve grassy fynbos and mountain fynbos, as well as the transition to a more sub-tropical and Ethiopian faunal region. The natural processes that support this biodiversity also span steep gradients, including rainfall, temperature and altitudinal gradients, and links between all aspects of these ecosystems must continue operating if diversity is to be conserved.

This is a compelling rationale for representation of the spatial diversity of the Cape Floral Region by a number of separate protected areas rather than a single protected area which, given the sheer extent and diversity of the Cape Floral Region, is practically unfeasible.

### 1.2(iii) Identification of the eight protected areas

The identification of a range of protected areas, representative of the biodiversity of the Cape Floral Region, has followed several steps, which can be divided into two broad phases. The first steps were taken in an initial phase where the initial identification of protected areas, including the Cape Peninsula Protected Natural Environment, was undertaken (Anon, 1999). The process followed in this initial phase (Phase 1; Anon, 1999) was “an initial exercise to identify a minimum set of complementary natural properties that would best reflect the region’s biodiversity, based on information available at this time”. The authors of the Phase 1 nomination process went on to recommend that this was only a provisional list of protected areas, and that this selection should be confirmed perhaps using more rigorous reserve selection algorithms, such as used in the **CAPE Project** (Appendix 5).

The formal analysis used in the CAPE Project was based on the need to achieve conservation targets for the conservation of biodiversity in perpetuity (Cowling *et al.*, 1999b). A main aim of the CAPE Project was to identify new areas for conservation that would be added to existing protected areas to meet conservation targets. The broad outline of the recommendations from this analysis confirmed the importance of the protected areas selected in Phase 1 and, in particular, identified three mega-reserves (Anon, 1999). These proposed mega-reserves were strategically placed in the western, southern and south-eastern Cape Floral Region.

Following from Phase 1, and the CAPE Project, a final selection of protected areas for inclusion into a second phase (Phase 2) was made. Decisions were guided by satisfying World Heritage Site criteria, namely reserve integrity and appropriate physical, institutional and legal protection, to ensure long-term conservation of species and natural processes. Accordingly, four criteria were used. These were that the protected areas were surrounded by conservation-friendly land, had high management integrity in terms of conservation and management status, were relatively large and were biological “hotspots” (e.g. high species diversity, endemism, occurrence of threatened taxa, and operation of supporting natural processes).

This process confirmed and refined the initial selection of seven protected areas (including the CPPNE) suggested in Phase 1, and added one more protected area (Anon, 1999), namely Baviaanskloof. The largely pristine mountainous areas best satisfied these criteria since much of the indigenous vegetation of the lowlands has been converted through agricultural or urban land uses in the Cape Floral Region (Cowling *et al.*, 1999b). The following protected areas were identified (Figures 1.1.1 and 1.1.2):

1. the Cape Peninsula National Park (initially the Cape Peninsula Protected Natural Environment (CPPNE))<sup>2</sup>;
2. the Cederberg Wilderness Area;
3. the Groot Winterhoek Wilderness Area;  
(these last two protected areas approximated part of the Cederberg mega-reserve in the western Cape Floral Region as recommended by Cowling *et al.*, (1999b), broadly coinciding with the Witsenberg, Winterhoek, Cederberg and Koue Bokkeveld Mountains suggested in the initial Phase 1 (Anon, 1999) selection process);
4. the Boosmansbos Wilderness Area;
5. the Swartberg Complex.  
(these two protected areas approximated part of the Little Karoo mega-reserve in the southern Cape Floral Region as recommended by Cowling *et al.*, (1999b) and broadly coincide with the Langeberg Mountains, and Swartberg Mountains suggested in the initial Phase 1 (Anon, 1999) selection process);
6. the Boland Mountain Complex, which broadly coincides with the Hottentots Holland and Kogelberg Mountains suggested in the initial Phase 1 (Anon, 1999) selection process;
7. the De Hoop Nature Reserve, comprising the eastern part of the Elim Plain suggested in the initial Phase 1 (Anon, 1999) selection process; and,

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<sup>2</sup> This was refined following declaration of the CPNP during 1998, with the CPNP becoming the core protected area.

8. the Baviaanskloof Protected Area, approximating part of the Baviaanskloof mega-reserve in the southeastern Cape Floral Region as recommended by Cowling *et al.* (1999b).

## 1.2a Statement of significance

The series of properties making up this nomination all fall within the CFR. However, each property represents a particular component of the CFR, a priority site for biodiversity conservation within the CFR, and has specific attributes. When viewed as a series, the complementary natural properties are deemed to be of outstanding universal value.

The Cape Floral Region is nominated as a World Heritage Site based on the universal value of its natural processes and biodiversity. Its widespread and exceptional plant richness and endemism is related to the biophysical diversity of the Cape Floral Region. Carefully selected protected areas, representative of all eight Phytogeographic Centres of endemism (refer to Tables 1.2.3 and 1.3.1; Figure 1.3.4), are presented as the sites representative of this unique globally significant region.

The core of the Cape Floral Region is home to over 1 400 Red Data Book flowering plant species, contains at least 112 Red Data Book species of fauna and is an Endemic Bird Area (Bibby *et al.*, 1992).

With five endemic and two near-endemic plant families, and a total of 988 plant genera containing nearly 9 000 species of vascular plants, the Cape Floral Region sustains an astounding 20% of the total number of plant species found on the whole continent of Africa - in an area which is less than 0.5% of the continent's land surface (Goldblatt & Manning, 2000).

Not surprisingly, the Cape Floral Region has contributed richly to the global floral wealth through the protection of species such as the exceptionally beautiful but Vulnerable<sup>3</sup> "blushing bride" (*Serruria florida*), a member of the highly diverse Proteaceae family, and one of the species which aided research into the role of fire in fynbos ecology (Rebelo, 1995). Other internationally renowned plant species or genera from the Cape Floral Region include the king protea (*Protea cynaroides*), a veritable array of highly diversified and floriferous succulent plants (mostly from the family Aizoaceae), a plethora of "irises" (family Iridaceae) - including 86 endemic *Gladiolus* species, as well as 79 endemic *Pelargonium*<sup>4</sup> species (from the family Geraniaceae) (Goldblatt & Manning, 2000). A number of species of the latter two genera are widely propagated globally as horticultural specimens. The region, particularly in the southwestern coastal areas, is world renowned for the spectacular spring flower displays of Namaqualand and the West Coast.

Members of the family Fabaceae, the legume family, further contribute to international renown of products emanating from the Cape Floral Region through fynbos endemic species such as Rooibos tea (*Aspalathus linearis*) and Honeybush tea (*Cyclopia genistoides* and other species). Several plants from the Cape Floral Region exhibit medicinal properties - including some of the endemic members of the buchu family (for example *Agathosma crenulata* from the family Rutaceae).

A number of larger mammals thrive, particularly in the mountainous regions and foothills of the Cape Floral Region, including the Rare but widespread leopard (*Panthera pardus*), the Vulnerable ratel or honey-badger (*Mellivora capensis*) and the magnificent eland (*Taurotragus oryx*). Medium-sized mammals include the engaging Chacma baboons (*Papio ursinus*), as well as a diversity of the families Mustelidae and Viverridae, while smaller mammals include the endearing Rare spectacled dormouse (*Graphiurus ocellatus*), the Cape Floral Region near-endemic Cape horseshoe bat (*Rhinolophus capensis*) and the Cape Floral Region endemic Cape gerbil (*Tatera afra*).

Bird species, while not showing unusual diversity in fynbos, are nonetheless plentiful with captivating shows of colour and dexterity from the many sunbird species, including the fynbos endemic orange-breasted sunbird (*Nectarinia violacea*), that are regular visitors to the blooms of *Erica* species and the Proteaceae family, amongst other plant species. Birds play a significant role in the pollination biology

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<sup>3</sup> *Serruria florida* has a Red Data Book status of Vulnerable owing to alien plant invasion (Rebelo, 1995).

<sup>4</sup> *Pelargonium* species are more commonly, but incorrectly, known in horticultural circles as "Geraniums". The genus *Geranium* is a separate genus in the family Geraniaceae.

of fynbos and some seventy-five percent of all bird-pollinated species in South Africa are found in the Cape Floral Region (le Maitre & Midgley, 1992). The majestic black eagle (*Aquila verreauxii*), lanner falcon (*Falco biarmicus*) and – doubtless the call of Africa – the fish eagle (*Haliaeetus vocifer*), are some of the numerous raptors which sweep the skies above the Cape Floral Region.

Not to be outdone by the warm-blooded fauna, the Cape Floral Region is rich in endemic amphibian, reptile and fish species while levels of endemism amongst invertebrates are extremely high, rivalling and possibly outdoing the exceptional plant wealth when all is told. From relictual Gondwanan invertebrates to highly specialised pollinators the invertebrate fauna has not yet been fully surveyed owing to often-secretive and cryptic lifestyles. The invertebrate fauna demands continued attention and investigation.

To conserve this diversity, the Cape Floral Region is nominated as a constellation of eight widespread, protected areas rather than a single protected area or rather than nominating the whole Cape Floral Region. This approach deals appropriately with the most distinctive feature of the Cape Floral Region, namely its spread of Phytogeographic Centres of endemism (*sensu* Cowling and Hejnis, 2000; refer also to section 1.3a(iii)). The proposed constellation of these protected areas covers all eight of these Phytogeographic Centres (refer to Figure 1.3.4), demonstrating a significant attempt to ensure the broadest possible conservation of biological diversity in the Cape Floral Region.

Covering a total area of just under 6% of the 90 000 km<sup>2</sup> spanned by the Cape Floral Region, the constellation of sites is surrounded by reserves which, together with the area of the constellation of protected areas, comprise just over 20% of the area of the Cape Floral Region. Within this sizeable area, significant representation and conservation of habitats and vegetation types is made possible (refer to section 1.3a(iii) and descriptions of individual protected areas for further detail).

The eight protected areas here described are thus representative of a significant portion of the Cape Floral Region's biodiversity. Furthermore, these protected areas enjoy sound management and have legal integrity, which will ensure conservation of the protected areas into the future.

Although the constellation of protected areas is not being proposed as a cultural property, all protected areas show evidence of early occupation by humans and are rich in rock art dating back over 5 000 years. Two sites in the Cederberg Wilderness Area have rock paintings that are of national and international importance. The cultural history of the region is further reflected in artefacts and fossils that bear evidence of the occupation of the area by people at least 125 000 years ago (Deacon, 1992).

In addition, many of the mountainous regions of these protected areas contain beautiful historical buildings and spectacular mountain-passes with unique vistas of the Cape landscape.

Despite the rich diversity, exceptional endemism, range of communities and special ecological processes among plants and animals (particularly invertebrates), to date no natural sites within the Cape Floral Region are represented on the World Heritage list.

**In summary, the CFR is significant because:**

- it is a highly distinctive phytogeographical unit which is recognized as a floral kingdom of its own - the Cape Floral Kingdom (Good, 1974; Takhtajan, 1986);
- it is ranked by Myers (1990) as the world's 'hottest hotspot' of plant biodiversity and endemism, and by Mittermeier *et al.* (1998) as the number nine biodiversity 'hotspot' in the world according to plant endemism<sup>5</sup>;
- it has exceptionally high plant richness at the regional scale (10-10<sup>6</sup> km<sup>2</sup>) (Cowling *et al.*, 1996b). It is one of only five Mediterranean-climate regions of the world and has the highest floral diversity at this scale;

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<sup>5</sup> This ranking was calculated on the basis of a total of 5 682 endemic species. According to Goldblatt & Manning (1999), the CFR has 6 191 endemic species, which implies that it would rank as the number 7 biodiversity 'hotspot' in the world.

- the CFR boasts five endemic and two sub-endemic families (Goldblatt & Manning, 2000; Munro & Linder, 1998). Gamma diversity in the CFR is widely recognised to be among the highest in the world (Cowling & Holmes, 1992a; Cowling *et al.*, 1989; Goldblatt & Manning, 2000; Good, 1974; Linder, 1985);
- it has recently been declared a centre of diversity and endemism under the auspices of the IUCN's Centres of Plant Diversity Project (Davis & Heywood, 1994);
- the CFR occupies less than 4% of the area of southern Africa, and is home to 40% of the subcontinent's flora of 22 211 species (Arnold & de Wet, 1993; Goldblatt & Manning, 2000);
- close to 69% of the vascular plant species belonging to the CFR are not found naturally anywhere else in the world (Goldblatt, 1978; Bond & Goldblatt, 1984): 6 191 species, 193 genera and five families (and two sub-endemic families);
- it provides habitat for 1 435 Red Data Book species of plants, amounting to 70% of all southern African threatened plant species (Rebelo, 1992);
- the Cape Flora exhibits adaptive responses to fire and patterns of seed dispersal by ants, which are of global scientific interest;
- the core of the CFR matches a natural zoogeographic zone, the Cape Faunal Centre. The component species of this Centre represent what is probably the richest known assemblage of post-Gondwanan relict species;
- the Cape Faunal Centre (CFC) provides habitat for at least 112 Red Data Book species of fauna;
- the pollination biology and nutrient cycling by termites, are amongst other unique ecological processes, of international scientific interest.

No natural sites within the Cape Floristic Region are represented on the current World Heritage list.

## **1.2b Comparative analysis**

This comparative analysis is based on two principal considerations, applicable to the Cape Floristic Region as a whole, namely levels of species richness and diversity as well as levels of endemism.

### **1.2b(i) Levels of species richness and diversity**

The entire CFR has been identified as a centre of plant diversity (Davis & Heywood, 1994) since it satisfies the criteria of high species richness and levels of endemism (Cowling & Hilton-Taylor, 1994). Species density in the CFR is amongst the highest in the world (Cowling *et al.*, 1992) and is substantially higher than values from climatically similar (warm temperate to subtropical) regions. The richness of other Mediterranean regions of comparable area is relatively low.

Comparisons show that the Cape Flora compares favourably with floral diversity in some parts in Neotropical rainforests, the most species-rich regions on earth (Goldblatt & Manning, 2000) and with selected areas in southern Africa, Australia and North America that were not glaciated during the Pleistocene (Linder *et al.*, 1992). For example, Panama supports about 7 300 seed plant species in an area of 75 000 km<sup>2</sup> whereas the flora of Costa Rica (54 000 km<sup>2</sup>) comprises approximately 9 000 species (Table 1.2.1). In comparison, 8884 seed plant species (8 996 vascular plant species) are found in the CFR, extending over an area of 90 000 km<sup>2</sup> (Goldblatt & Manning, 2000). The CFR also has much higher levels of species richness (density), and particularly of endemism, than several Mediterranean-type climate regions and islands representing 'hotspots' in the Mediterranean Sea. Only the larger islands New Zealand and Madagascar have greater values for endemism (Goldblatt & Manning, 2000).

The CFR is one of five Mediterranean-type climate regions of the world. Of these five, the CFR has the highest diversity at the scale of 10-10<sup>6</sup>km<sup>2</sup>: For a given area, it has, on average, 1.7 times the diversity of southwestern Australia, about 2.2 times the diversity of California and the Mediterranean Basin, and 3.3 times the diversity of Chile (Cowling *et al.*, 1996b).

A comparison of the Cape Flora with various regions in the southern hemisphere and elsewhere that were not glaciated in the Pleistocene (Linder *et al.*, 1992) is also valuable in drawing out aspects that make the Cape special. Of all the regions analysed, the CFR has by far the highest species density (0.1 species/km<sup>2</sup> compared with the next highest value of 0.05 species/km<sup>2</sup> in KwaZulu-Natal) and the largest species to family ratio (52, in contrast with 41 for Western Australia as the next highest) (Linder *et al.*, 1992).

Table 1.2.1 Comparison of diversity and endemism of vascular plants in various regions in the world - compiled by Goldblatt & Manning (2000)<sup>1</sup> from various sources (see their references), the World Conservation Monitoring Centre (1992)<sup>2</sup>, Cowling *et al.* (1996)<sup>3</sup>, Arnold & de Wet (1993)<sup>4</sup>.

	Area (10 <sup>3</sup> km <sup>2</sup> )	Genera	% endemic	Species	% endemic	Ref.
<i>Continental regions</i>						
South Africa	2674	2604	20	22211	80.3	1,4
Peru	1285	2210	2.1	16500	31.2	1
Ecuador	272				21	2
United States	9809				21	2
Greece	132			5500	15	2
<i>Mediterranean-type climate regions</i>						
CFR	90	988	16.2	8996	68.8	1
California FP	324	806	6.5	4240	47.7	1
				4300	35	3
Central Chile	104	591	-	2395	~ 22.5	1
	155	-	-	2537	~ 23.4	1
Mediterranean Basin	2300			25000	50	3
SW Australia	270	462	~20	3650	68	1
	310			8000	75	3
<i>Moist to wet tropics</i>						
Costa Rica	54	1877	-	~ 9000	~ 15	1, 2
Panama	75	1800	-	7300	~ 15	1
<i>Tropical or temperate islands</i>						
New Zealand	268	393	10	1996	81	1
Madagascar	594	1000	-	~ 11500	~ 80	1
					~ 68	2
<i>Mediterranean islands</i>						
Crete	~ 9	-	-	~ 1706	~ 10	1
Peloponnese	21	-	-	2400	~ 12.5	1
Sardinia	24	-	-	2054	~ 6	1
Sicily	26	-	-	~ 2700	~ 10	1

The flora of southern Africa, having 22 211 species (Arnold & de Wet, 1993), is among the richest in the world for similar-sized areas, including those in the tropical areas of Africa and elsewhere. Richness is not, however, uniformly distributed across the subcontinent. Richer than average areas are the southwestern parts of the CFR, mesic parts of the Tongaland-Pondoland Region and the Afromontane uplands of the east and north-east.

Taking a regional and continental view of the CFR strongly reinforces its exceptional status. The whole of Africa encompasses an estimated total of 47 000 species (Goldblatt & Manning, 2000). Almost half of these, 22 211 species (Arnold & de Wet, 1993), occur in southern Africa which largely falls within the temperate climate zone. This fact demonstrates that the entire southern African subcontinent, circumscribing the countries South Africa, Lesotho, Swaziland, Namibia and Botswana (Goldblatt, 1978), has a very diverse flora, to which the CFR (with 8 996 vascular plant species) makes a central contribution. In fact the Cape Floristic Region has just under one fifth of all the species living in Africa, despite occupying less than 0.5% of the continent's area (Goldblatt & Manning, 2000).

The CFR, occupying less than 4% of the southern African land area, encompasses nearly 44% of the 22 211 species found on the subcontinent (Arnold & de Wet, 1993; Goldblatt & Manning, 2000). This level of species richness is not only very noteworthy in an African context but also globally,



considering that the CFR falls into the temperate zone. Thus, it provides an exception to the general rule of decreasing diversity with increasing latitude, as its diversity is comparable with many species-rich tropical habitats of similar size, except some Neotropical regions (Goldblatt & Manning, 2000).

An exceptional characteristic of the flora is the existence of numerous large genera: six have more than 250 species and 29 have more than 100 species (Cowling & Hilton-Taylor, 1997). Seventeen of these large genera are centred in the CFR.

The CFR has a genus: species ratio of 9.1 (all vascular plants), which is one of the highest in the world (Table 1.2.2) and more typical of isolated island biota. It is comparable with data from oceanic islands such as Hawaii (7.5) and New Zealand (7.4) (Cowling & Hilton-Taylor, 1997), rather than of a continental region (Goldblatt, 1978; Goldblatt & Manning, 2000).

Table 1.2.2 Comparison of species to genus ratios in floras of selected regions in the world, as compiled in <sup>1</sup>Goldblatt (1978) and <sup>2</sup>Goldblatt & Manning (2000).

Region	Species : Genus ratio	Region	Species : Genus ratio
Southern Africa <sup>2</sup>	9.6	Hawaii <sup>2</sup>	4.4
CFR <sup>2</sup>	9.1	Cape Peninsula <sup>1</sup>	4.2
Europe <sup>1</sup>	7.8	Texas <sup>1</sup>	3.9
California <sup>2</sup>	5.3	Carolinas <sup>1</sup>	3.5
Eastern North America <sup>1</sup>	5.2	Sonoran Desert <sup>1</sup>	3.3
New Zealand <sup>2</sup>	5.1		

Mean alpha diversity, which relates to the number of species in a homogeneous community, in montane and lowland fynbos is 68 species per 1000m<sup>2</sup>, a range from 62 to 69 species/1000m<sup>2</sup> is reported (Bond, 1983; Campbell & van der Meulen, 1988; Cowling, 1990; Cowling *et al.*, 1989). This figure compares well with 69 species/1000m<sup>2</sup> in southwestern Australian fynbos-like kwongan vegetation (Goldblatt & Manning, 2000) and exceeds values in other Mediterranean shrublands (Cowling *et al.*, 1989). However, many tropical lowland sites are significantly richer in species than Mediterranean communities and have twice the alpha diversity of the Cape (Goldblatt & Manning, 2000).

Beta diversity, which relates to species turnover along habitat gradients, contributes greatly to the region's floristic diversity (Goldblatt, 1997; Linder, 1985). Despite this, limited work has been done to explore this aspect (Cowling & Holmes, 1992a). Linder (1985) estimates a replacement rate of around six species per square kilometre in the Cape Hangklip area, a high value for beta diversity. Varied physical and ecological conditions are not exclusive to the CFR but also occur in the Mediterranean and the California Floristic Region, for example (Goldblatt & Manning, 2000), where beta diversity is likely to be high.

Gamma diversity, which reflects species turnover in equivalent habitats along geographical gradients, in the CFR is widely recognised to be among the highest in the world (Cowling & Holmes, 1992a; Cowling *et al.*, 1989; Goldblatt & Manning, 2000; Good, 1974; Linder, 1985). Yet, comparative figures from a variety of regions elsewhere are difficult to obtain (Cowling & Holmes, 1992a) and largely based on unsubstantiated estimates. In other Mediterranean areas, such as in California and Australia, species turnover along landscapes may be similar to the CFR or slightly lower. Some estimates for highly diverse lowland Neotropical areas give higher values than found at the Cape (Goldblatt & Manning, 2000); around 58% for two cloud forest sites in Ecuador and an exceptional 82% difference for sites in eastern lowland Peru (B. Boyle, pers. comm., as cited in Goldblatt & Manning, 2000).

### 1.2b(ii) Levels of endemism

The CFR has an exceptional degree of endemism, which is amongst the highest in the world (Table 1.2.1). With some 6 191 endemic species (Goldblatt & Manning, 2000), the CFR centre has southern Africa's largest concentration of endemic plant species.

The entire CFR has been identified as a centre of plant diversity (Davis & Heywood, 1994) since it satisfies the criteria of high species richness and levels of endemism (Cowling & Hilton-Taylor, 1994).

The southern African centres include about 3.6% of the world's flora in 0.2% of the Earth's surface, a ratio considerably higher than Mediterranean-climate and tropical rainforest centres or "hotspots" identified by Myers (1990). The southern African centres of endemism, therefore, collectively represent one of the world's most important areas for interventions aimed at reducing rates of species extinction.

Southwestern Australia, with 68% of its species classified as endemic, is on a par with the CFR, whereas the figures are far lower for California - less than 48% - and Central Chile - less than 24% (Table 1.2.1). Bykov's index of endemism ( $I_e$ )<sup>6</sup> for the Cape Peninsula alone was calculated at 6.1, a value exceeding those for other continental areas and comparable with geographically isolated areas such as certain oceanic islands and mountain peaks. At a regional scale, the level of floral endemism was higher than for all other areas so far studied in the CFR, but only marginally higher than that of the Langeberg mountains where 160 endemic species were recorded in an area 3.5 times larger than the Peninsula (Cowling & Richardson, 1998).

Eight regional centres of endemism occur in the CFR (Weimarck, 1941; Goldblatt & Manning, 2000; Cowling & Heijnis, 2000). These centres are shown on Figure 1.3.4 and Tables 1.2.3 and 1.3.1.

Table 1.2.3 Species richness, endemism and proportion of life forms in six of the eight recognised Phytogeographic Centres of endemism of the Cape Floristic Region compared with the Cape Peninsula and entire Cape Floral Region (Goldblatt & Manning, 2000).

Regional centres	Area (10 <sup>3</sup> km <sup>2</sup> )	Total Species	Endemic Species (%)	Trees	Annuals	Geophytes
Northwestern	22	4058	26.1	69	415 (10.3)	855 (21.2)
Southwestern	23	4651	31.9	95	312 (6.8)	846 (18.2)
Agulhas Plain	3	1374	14.9	24	92 (6.7)	202 (14.7)
Karoo Mountain	19	2156	15.4	47	130 (6.1)	330 (15.5)
Langeberg	7	2364	11.7	100	127 (5.4)	389 (16.4)
Southeastern	18	2830	9.7	163	156 (5.5)	427 (15.1)
Cape Peninsula*	4.71	2285	3.98	n/a	n/a	n/a
CFR	90	8996	68.9	220	609 (6.8)	1546 (17.2)

\*Trinder-Smith *et al.* (1996a)

It is interesting to isolate the two richest phytogeographic centres in the CFR, namely the Southwestern and Northwestern centres, and to contrast them with local 'hotspots' of similar size in the Mediterranean Basin - Sardinia, Sicily, Crete and the Peloponnese Peninsula. The Cape centres show significantly higher levels of endemism (Table 1.2.3) and twice as many species as the other centres, where endemism ranges from about 6% to 12.5% (Table 1.2.1; Goldblatt & Manning, 2000).

The Cape Faunal Centre, which corresponds roughly with the CFR (Stuckenberg, 1962), is a pronounced hotspot for faunal endemism within southern Africa, where high levels of endemism are characterised for virtually all taxa examined. Palaeogenic groups contribute significantly to these high levels of endemism.

### 1.2b(iii) State of conservation

Of the five countries in southern Africa, two have achieved the goal of protecting 10% of their major vegetation types: Botswana (17.9%) and Namibia (12.6%). South Africa is halfway in achieving this goal (5.52%), whereas Swaziland (3.2%) and Lesotho (0.2%) are well below the levels attained internationally (5.9%) or for the African continent (4.6%) (World Resources Institute, 1994).

Three of the seven southern African biomes have more than 10% of their area conserved - the Desert, **Fynbos** and Savanna biomes, with the Forest biome approaching 9% (also represented in the CFR). In contrast, the Nama-karoo and Succulent Karoo biomes have less than 3% of their respective areas conserved. The greater part of these biomes fall largely within South Africa and hence their conservation in the subcontinent is almost entirely this country's responsibility.

<sup>6</sup> Bykov's index allows for the comparison of levels of endemism between different sized areas.

In South Africa, 14 of the 70 recognised vegetation types have more than 10% of their area conserved. Five vegetation types (Fynbos, *Themeda-Festuca* Alpine Veld, Lowveld, Arid Lowveld and Mopane Veld) have over one fifth of their area conserved, chiefly in the mountain catchments of the CFR and the Drakensberg (first two mentioned) and in the Kruger National Park (last three mentioned). The number of vegetation types lacking any conservation area has remained unchanged at around 17 since 1974, and amounts to about one-quarter of the total. Of the vegetation types with no conservation status in South Africa, seven occur in the Nama-karoo, six in grassland, two in Succulent Karoo and two in Savanna. Even the well-covered CFR has major inadequacies (section 1.3d). For example:

- mountain fynbos is relatively well protected, whilst Renosterveld shrubland is least well protected;
- of the 19 centres of endemism for the Proteaceae in the fynbos, five have less than 5% conserved (section 1.3d) although most of the species-rich districts are well conserved (Rebello, 1994); and
- with regard to reserve size: 20% of the 244 reserves (private and public) in the CFR, mostly in the mountains, are larger than 10 000ha; 43% of the reserves, comprising mainly private and subsidized reserves, are smaller than 500ha; 17% are less than 50ha in size.

As noted in the guidelines “it is the series as such, of universal value, and not its individual components”. Hence comparisons between each of the component protected areas are not appropriate in this nomination and each subsequent chapter will refer to this section.

## **1.2c Authenticity / Integrity**

The Cape Floral Region represents a floristic unit characterised by a highly distinctive flora having exceptional species richness and levels of endemism. The Cape Faunal Centre coincides roughly with the CFR and contains a distinctive fauna characterised by the phylogenetic antiquity of many of its invertebrate fauna and a few vertebrate taxa (sections 1.2a-b, section 1.2d, Criterion 44.(a)(ii)). The CFR contains numerous natural phenomena and areas of exceptional beauty and aesthetic value in global terms.

### **1.2c(i) Biophysical**

Eight protected areas (refer to section 1.1c and Table 1.1.1) emerged from an iterative exercise to identify a minimum series of complementary natural properties that would best reflect and protect the region’s biodiversity and aesthetic value, based on information available at this time. Key characteristics of the eight protected areas making up the series are that:

- each of the protected areas comprise core areas conferring adequate long-term protection with management plans in place for each of these conservation areas (section 1.4j);
- they are located in the most species-rich areas of the CFR with peak concentrations of endemics and therefore, together, they contain a very large proportion of the Cape Flora, including virtually all of its unique elements and taxa that are of outstanding value to science, conservation and the natural beauty of the region;
- they are positioned in all eight centres of endemism in the CFR (Cowling & Heijnis, 2000), thus they represent phytogeographically different parts of the CFR (refer to Table 1.3.1) and desired consequence of the careful selection of the eight protected areas is that a wide range of climatic zones, altitudes, and soil types are represented;

- they are separated and spread over a considerable geographic range, which should reflect the high levels of gamma diversity (between-landscape species turnover) characteristic of the CFR which is essential so that disjunct portions of the same habitat, but with different constituent species are conserved, to maximise the protection of existing diversity and allow for future diversification of ecologically equivalent taxa (Simmons & Cowling, 1996) (no detailed data for these particular regions are available for the measure of gamma diversity, but the levels of endemism in the phytogeographical centres give an indication of relatively high species turnover from one centre to the next (Goldblatt & Manning, 2000));
- all of the protected areas forming the 'core' of the natural properties forming the series in this nomination are over 15 000ha in size and they contain all the important habitats for biodiversity conservation and are extensive enough to allow the perpetuation of individual taxa and entire communities that are represented (refer to Table 1.2.4) and furthermore, the size, connectivity, and management of these protected areas and their surrounding reserves, allows for the operation of even larger-scale natural processes that are essential for the long term conservation of biodiversity; and
- each of the protected areas covers a sufficiently large area to include the full complement of habitats important for the conservation of its flora (Table 1.2.4) and the inclusion of the full range in habitats along steep environmental gradients is essential so that each centre encompasses the high beta diversity (species turnover along habitats), which is prominent in the CFR (all protected areas other than the Cape Peninsula National Park and De Hoop Nature Reserve (refer to Figure 1.1.1) comprise mountain blocks from the peaks to the foothills. Both the CPNP and De Hoop contain extensive areas with an array of microhabitats that are distinguishable according to edaphic, climatic, altitudinal and/or topographic features).

### 1.2c(ii) Institutional

All eight selected protected areas fall under the jurisdiction of recognised national and provincial conservation authorities; the Cape Peninsula National Park falls under South African National Parks, six conserved areas fall under the Western Cape Nature Conservation Board, while Baviaanskloof falls under the Game Reserve and Conservation Division of the newly delegated management authority, the Eastern Cape Tourism Board, under the auspices of the Chief Directorate: Environmental Affairs; Eastern Cape. These national and provincial organisations, despite a number of organisational transitions over the past years, have many decades of nature conservation experience and their philosophy is guided by a Mission that directly promotes the long term conservation of natural processes and biodiversity through a process of scientific management and empowerment in order to facilitate the efficient utilisation and management of environmental resources (Table 1.2.5).

The eight protected areas are largely unspoilt and in a natural state. Nonetheless, where necessary, re-establishment of near-extinct plants and locally extirpated animals is being actively managed and monitored. Active management programmes are in place to deal with major threats of inappropriate burning regimes and alien plants. Furthermore, strategies have been formulated to develop biological corridors among surrounding reserves and protected areas, which will further secure long term conservation of these protected areas.

The World Heritage Site nomination is part of a larger initiative that began with the creation of **conservancies**, biosphere reserves, and other bioregional planning initiatives by the Western Cape Nature Conservation Board. This has subsequently been embraced by local and provincial government planning departments. To meet the challenges of a renewed conservation effort within the limits of dwindling resources, the organisation became a statutory board, thus granting it greater autonomy (refer to section 1.4a(i)).

Table 1.2.4 Ecological and evolutionary processes conserved in different-sized reserves in the Cape Floral Kingdom. Adapted from Cowling *et al.*, (1999a & b).

RESERVE TYPE (SIZE IN HA)	PROCESS
Very small <b>conservation areas</b> (5–500)	<ul style="list-style-type: none"> <li>• Maintain micro-evolutionary processes within some plant populations</li> <li>• Maintain plant-pollinator relations including those that promote plant diversification</li> </ul>
Small conservation areas (ca. 1 000)	<ul style="list-style-type: none"> <li>• Sustain regular, whole-patch fires, thereby maintaining some of the associated ecological processes</li> <li>• Maintain ecological diversification of plant lineages in relation to fine-scale soil gradients</li> <li>• Maintain plant-herbivore relationships associated with medium-sized mammals in many eastern <b>Broad Habitat Units</b></li> <li>• Support managed, compartment-based, fire regime, thereby maintaining most fire-associated ecological and evolutionary processes</li> </ul>
Medium conservation areas (5 000–10 000)	<ul style="list-style-type: none"> <li>• Maintain diversification of plant lineages in relation to mesoclimatic and larger-scale soil gradients</li> <li>• Maintain, for smaller mobile dunefields, inland movement of sands and gradients of soil development important for soil-specific plant assemblages and diversification of plant species</li> </ul>
Large conservation areas (25 000–100 000)	<ul style="list-style-type: none"> <li>• Support - under certain circumstances - a natural fire regime, thereby maintaining associated ecological and evolutionary processes</li> <li>• Maintain plant-herbivore relationships associated with some megaherbivores, and predator-prey relationships associated with smaller predators</li> <li>• Depending on location, maintain diversification of plant lineages in relation to some macroclimatic and finer-scale geographical gradients</li> <li>• Facilitate, in reserves that span the upland-lowland gradient, diversification of basal, upland animal lineages in lowland habitats</li> <li>• Maintain, for larger mobile dunefields, inland movement of sands and gradients of soil development important for soil-specific plant assemblages and diversification of plant species.</li> <li>• Protect riverine habitats that function as biological corridors for plant and animal migrations</li> <li>• Maintain seasonal migration of fauna</li> <li>• Facilitate shifts in species' distribution along macroclimatic gradients in response to climate change</li> </ul>

Table 1.2.5 Summary of the Mission, Goals and Functions of the Western Cape Nature Conservation Board; the Vision, Mission and Functions of the Department of Economic Affairs, Environment and Tourism, Eastern Cape; and, the Vision and Mission of the South African National Parks.

### **1. Western Cape Nature Conservation Board**

#### **MISSION**

The conservation of the natural heritage of the Western Cape for the benefit, well being and enjoyment of present and future generations.

#### **GOALS**

**To accomplish the mission the goals are to:**

- maintain ecological systems and processes;
- conserve genetic diversity;
- ensure that the use of species and ecosystems is sustainable;
- conserve and use the natural heritage of the Western Cape.

#### **FUNCTIONS**

**To achieve these goals the following functions are required:**

- prevention of unnatural extinction of any species indigenous to the Western Cape;
- establishment and management of reserves representative of each ecological region of the Western Cape;
- communication to all people the value of the natural environment and the necessity of conservation;
- promotion of the sustainable use of natural resources;
- provision of scientific services to support conservation programmes;
- provision of visitor facilities and services in nature reserves;
- formulation and application of legislation to ensure the conservation of the Western Cape's natural heritage;
- evaluation of development proposals to ensure that environmental quality is maintained; and,
- conservation of sites of cultural-historical significance on reserves in accordance with the mission and goals of Cape Nature Conservation.

### **2. The Department of Economic Affairs, Environment and Tourism, Eastern Cape<sup>7</sup>**

#### **VISION**

The Department of Economic Affairs, Environment and Tourism strives for an Eastern Cape which is devoid of the inequalities of the past, unified through integrated and sustainable economic, social and cultural development; thus providing an acceptable quality of life for all of its people in the context of a united, non-racial, non-sexist and democratic South Africa.

#### **MISSION**

To build a sound, growing and sustainable economy which facilitates economic empowerment and delivers an optimal quality of life for all citizens of the Province; especially through the efficient utilisation and management of environmental resources, the promotion of investment and the strategic deployment of the human and financial resources at its disposal.

#### **FUNCTIONS**

- Secure the maintenance and rehabilitation of environment;
- Maintain and improve the functioning of the natural environment; and,
- Safeguard the beneficial interaction between humans and natural resources.

### **3. South African National Parks**

#### **VISION**

National Parks will be the pride and joy of all South Africans.

#### **MISSION**

To acquire and manage a system of national parks which represent the indigenous wildlife, vegetation, landscapes and significant cultural assets of South Africa for the pride and benefit of the nation.

<sup>7</sup> Note that the newly appointed conservation management authority for the Eastern Cape, namely the Eastern Cape Tourism Board, is in the process of formulating comprehensive operational and management policies and strategies for the management of the Eastern Cape Nature Reserve Network. Details of these processes were not available at time of writing.

This has facilitated efforts to obtain funding from international agencies and has assisted collaboration and close associations with universities, research bodies, non-governmental organisations (NGOs), and other branches of provincial and national government. A particularly relevant and extensive partnership exists between SANParks, the Western Cape Nature Conservation Board, the Chief Directorate Environmental Affairs; Eastern Cape, and the Cape Action Plan for the Environment (CAPE Project). This significant partnership has embarked on developing a multi-sectoral strategy to conserve the Cape Floral Region (refer to Appendix 5). For an in depth Internet assessment of the CAPE Project view: <http://fred.csir.co.za/extra/cape/reports/reports.html>.

This long term planning strategy has identified challenges associated with conservation in the Cape Floral Region; has initiated a plan for partnerships; and, has established the Western Cape Nature Conservation Board as the lead agent for implementation of CAPE, responsible for 19 of 37 CAPE Projects. The World Heritage Site nomination of the constellation of sites within the Cape Floral Region is one layer in a multi-layered approach aimed at long-term, sustainable conservation of the Cape Floral Region's exceptional biodiversity. 1.2c(iii) Legislative and regulatory protection

All the protected areas within this nomination are legally protected. Detailed information on the various types of legal protection and management applicable to each is given in sections 1.4b & c. With the exception of Baviaanskloof, which is sufficiently large and isolated to be secure in its own right, all of the protected areas are safeguarded by surrounding reserves offering additional security to long term conservation of these areas.

## **1.2d Criteria under which inscription is proposed, and justification for inscription**

It is proposed that the eight protected areas, representing the Cape Floral Region, satisfy two criteria for listing as a natural World Heritage Site. Protected area-specific details are provided in Chapters 2-9. In addition, within these protected areas are exceptional examples of natural beauty as well as culturally important sites and artefacts. These features were not selected as criteria for nomination but their descriptions have been included to support this nomination where appropriate. Information supporting this criterion (44 (a) (iii): *Superlative natural phenomena or areas of exceptional natural beauty*) is nonetheless provided below, since the natural splendour of the Cape Floral Region provides an extraordinary backdrop for the remarkable biodiversity of this, the smallest of the world's six floral kingdoms.

**CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution**

The Cape Floral Region is considered to be of universal value in that it represents outstanding examples of significant ongoing ecological and biological processes in the evolution of terrestrial ecosystems and plant communities.

The Cape Floral Region is one of the most intensively researched floral regions in the world (refer to section 1.7c). Certainly over the past 25 years, the Cape has enjoyed unparalleled co-operation between managers and scientists, fostered by Co-operative Scientific Programmes and the current Fynbos Forum. These structures add to the conservation of the natural systems, ensuring the continued operation of biodiversity patterns and processes (refer to Appendix 9 for a synthesis of some of the many patterns and processes investigated in the Cape Floral Region).

The eight protected areas are medium to large, ranging in area from 15 000 to 174 000 ha. In all, they cover 6% of the Cape Floral Region but together with the safeguards afforded by surrounding reserves, and in particular, the contiguous area of the Cederberg / Groot Winterhoek / Boland Mountain Complex, this percentage increases to 20%. The great size of the areas ensures that natural processes, such as fire regimes, are able to operate. These are described more fully in Table 1.2.4 (above) and in some detail in Appendix 9.

Two scales of processes are relevant; local- and large-scale. Local-scale processes include plant reproductive strategies, in some cases involving faunal pollinators such as rodents (Rourke & Wiens, 1977) and seed dispersal by ants (myrmecochory). These operate at the size of the protected areas or at a smaller scale. However, local population declines could lead to extinction unless there is connectivity to areas from where recolonisation can occur. In addition to the size of the protected areas, the adjacent reserves fill this much needed connectivity gap and allow natural recolonisation of the protected areas. The added advantage is that these larger areas are supportive of large-scale ecological processes such as fire or drought and impart a greater diversity of altitudinal gradients to ensure climatic ranges, as well as a spatial spread, across the Cape Floral Region.

The Cape Floral Region forms a centre of active speciation where interesting patterns of endemism and adaptive radiation are found in the flora. In addition, the southwestern Cape represents a distinct zoogeographic zone, characterised by the phylogenetic antiquity of much of its invertebrate fauna.

In addition to the natural processes of primary production, nutrient recycling, climatic extremes, predation and herbivory, competition, and major natural episodic events such as severe floods and droughts, the Cape flora is dependent on natural fire regimes and specialised pollination guilds (refer to Appendix 9 for a synthesis of these, and other, aspects). In view of the particular complexity of the flora it is vital that, within these protected areas, there is clear guidance from management plans, based on scientific understanding of these systems and processes. The organisations responsible for the eight protected areas have scientific staff and experienced management personnel that contribute to the drafting of management plans to ensure that natural processes continue to operate effectively in the protected areas.

With the exception of nutrient cycling by termites (which is largely restricted to Renosterveld), the ecological and biological processes in evolution, described in greater detail in Appendix 9, are relevant and applicable throughout the entire Cape Floral Region. That is, they are equally important in all of the individual natural properties that make up the nominated series in the Cape Floral Region.

The combination of effective management plans for all protected areas; and, the large, relatively undisturbed protected areas with surrounding reserves (as well as strategies to link the protected areas with these reserves), suggests that natural processes operate within these areas to maintain the patterns and processes of biodiversity. Importantly, the mountainous terrain of many of these protected areas will provide refuges in the event of climate change thus contributing to the future conservation of the Cape Floral Region's biodiversity.

<p><b>CRITERION 44(a)(iii): <i>Superlative natural phenomena or areas of exceptional natural beauty</i></b></p>
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Although physically small, the CFR contains a disproportionately large variety of superb natural phenomena and areas of exceptional natural beauty and aesthetic importance. These features are sufficiently compelling in their own right to draw hundreds of thousands of visitors from around the globe each year, but they also naturally complement the region's unique botanical features. Together, these two elements create an area of biological significance and outstanding natural beauty that is unsurpassed in global terms.

Broadly speaking, the CFR is bounded on the landward side by elongated belts of Cape Folded mountains, which tower majestically over the coastal and inland valleys and provide a dramatic backdrop to virtually every vista.

On the seaward side, the CFR is bounded on the west by the Atlantic Ocean and in the south by the Indian Ocean, which 'meet' dramatically below the sheer cliffs of Cape Point, the most southwesterly point on the continent. Further east, on the edge of the Elim Plain, the historic Agulhas Lighthouse - modeled on the ancient light that for centuries guarded the entrance to Alexandria harbour at the opposite end of the continent – sweeps its beam over the actual southern tip of Africa.



A particular feature of the Cape Folded mountains are historic passes constructed with great engineering skill through the narrow kloofs and gorges: Michell's Pass at the southern end of the Witsenberg, Bain's Kloof Pass in the Limietberg, Du Toit's Kloof Pass in the range of the same name, Tradouw Pass in the Langeberg mountains, Pakhuis Pass through the Cederberg mountains, and the Swartberg Pass in the Swartberg range. In each of these passes, the road twists and turns through dramatic natural scenery that includes sheer cliffs, fynbos clad slopes, forested valleys and boulder-strewn river beds with clear, unpolluted waters – a series of exceptional natural beauty.

The superb nature of these mountains is particularly evident to hikers and climbers, who appreciate at close range the extraordinary range of hues in the rocks and the fantastic shapes forged during millions of years of weathering. For example, dramatic features of the popular Cederberg range in the northern area of the CFR include the naturally sculpted 20m high Maltese Cross, the huge Wolfberg rock arch, and the spectacular labyrinth in the Wolfberg Cracks. In one area of the Koue Bokkeveld, explorers were so entranced with the weird and wonderful rock formations and the imaginative creatures they resembled that it was named Zoo Ridge.

The Olifants River, a prominent feature of the region, rises in the Witsenberg Mountains and its headwaters are fed by the Groot Winterhoek, Koue Bokkeveld and Skurweberg ranges. In its upper reaches, the river cuts through the Visgat Gorge – a wild, starkly beautiful area whose sheer cliffs and giant boulders create a dramatic landscape in which rapids, cascades and waterfalls alternate with long, calm pools.

Virtually all the mountainous areas in the region enjoy formal protection, either as part of a national park, nature reserve or wilderness area, or as officially proclaimed, but privately owned, mountain catchments where all activities are strictly regulated.

Rising just 250m above the flat Agulhas Plain, the Soetanyenberg, a lovely, fynbos clad range of hills, is a superb natural feature, offering incomparable views across the plain to the north, and over the narrow coastal strip with its associated wetlands to the south and east.

Among the most spectacular natural features of the region are sheltered bays along the southern Cape coast, such as Walker Bay and St. Sebastian Bay at opposite sides of the Agulhas Plain, where southern right whales return to calve each year and thrill human watchers enjoying the world's best land-based whale-watching.

All areas below the high water mark are protected. Many of the most outstanding natural coastal features also enjoy formal protection, either as part of a national park (the Cape Peninsula National Park, West Coast National Park, Tsitsikamma National Park, Knysna National Lake Area and the Agulhas National Park are all within the CFR) or in a wide network of provincial, local authority or private nature reserves.

Many of these outstanding natural features are inseparable from the biodiversity of the CFR, in that they either occur in, or are an integral part of, the natural habitat. For example, the Cape Folded Mountains are the habitat of Mountain Fynbos, one of the major vegetation types of the Region, while the coastal regions support another two of these vegetation types: Coastal Fynbos and Strandveld vegetation. Maintaining the integrity of the natural features is therefore part and parcel of the *in-situ* conservation of the region's biological diversity.

<p><b>CRITERION 44 (a) (iv): The most important and significant natural habitats for <i>in situ</i> conservation of biological diversity</b></p>
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As explained above, the plant richness of the Cape Floral Region is concentrated in Phytogeographic Centres of endemism. Each and every one of these centres is represented in at least one of the protected areas (Figure 1.3.4). Hence, each protected area is unique and represents a priority site for biodiversity conservation within the Cape Floral Region.

The substantial contribution to conserving biodiversity by the protected sites is exemplified in a study commissioned for this nomination (Lombard, 2000; Appendix 4)<sup>8</sup>. A subsample (non-random) of data on selected plant and vertebrate taxa in the Cape Floral Region was analysed using GIS. The results showed that the seven protected areas analysed conserve close to half the number of plant species and selected vertebrate taxa of the region.<sup>9</sup> This figure is even higher for endemic plants (69%) and for Proteaceae elements (59%).

The Cederberg, Swartberg and Baviaanskloof protected areas lie near the limits of the Cape Floral Region. The steep altitudinal gradients linked by a stepped topography and soil changes at the interface of fynbos shrublands and arid karoo shrublands, provide a combination of physical features that determine the unique biota of these regions. Boosmansbos Wilderness Area harbours, in addition to its species-rich fynbos, well-developed forests. The climatic differences associated with Baviaanskloof in the east are, in themselves, sufficient to determine vegetation differences between this area and others in the Cape Floral Region. The ecotonal areas between different vegetation types ensure that much of the diverse character of the Cape Floral Region is conserved.

The De Hoop Nature Reserve is one of the few reserves of a significant size that protects lowland fynbos and is also important in conserving coastal vegetation, which is at great risk to development elsewhere in the Cape. De Hoop contains unique limestone habitats with localised endemic plant species, and is further bounded by a marine reserve representing a zone of confluence of two oceans, making it an area of rich marine biota. De Hoop Nature Reserve is therefore an essential element in the conservation of the Cape Floral Region.

The Cederberg- and Groot Winterhoek Wilderness Areas, along with the Boland Mountain Complex, together with their surrounding reserves, form a valuable conservation band along the north-trending axis of the Cape Fold Belt. This imparts a high degree of protection to the levels of biodiversity that occur in this region of the southwestern Cape. In particular, the Boland Mountain Complex, situated at the junction of the Cape Fold Mountains axes, includes the very heart of the fynbos - the hotspot for plant diversity (Anon, 1999). This protected area, not only includes some of the most diverse and **endemic**-rich flora in the world, but it is also an area of great beauty. Incorporating the pristine Palmiet River, it stretches from the coast in the south, extending northwards along rugged mountains with high peaks and deep valleys.

Furthermore, a study commissioned for this nomination using vegetation types known as **Broad Habitat Units** (BHU) (Cowling & Heijnis, 2000; Appendix 3), generated for the CAPE Project, indicated that certain habitats, especially mountain complex BHUs were exceptionally well represented by the eight protected areas. Details of these are provided later in section 1.3a(iii).

## **SECTION 1.3 DESCRIPTION OF THE CAPE FLORAL REGION AND THE REPRESENTATIVE PROTECTED AREAS**

The features that make the Cape Floral Region unique in the world are the exceptionally high plant species richness and endemism with almost 70% of the 9 000 plant species endemic to the region. A range of ecological processes operating within highly variable topographic, climatic, and habitat diversity supports this diversity. This chapter summarises the significant features of the Cape Floral Region but focuses on the details and descriptions relevant to the eight representative **protected areas**. These eight protected areas are core areas supported by a much wider network of adjacent or surrounding conserved areas ranging from provincial reserves to conservancies and Mountain **Catchment** Areas.

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<sup>8</sup> Refer also to section 1.3a(iii) and to Table 1.3.3 for further information regarding this study.

<sup>9</sup> These totals are likely to be higher with the inclusion of the Cape Peninsula National Park.

## 1.3a Description of the property and the protected areas

### 1.3a(i) Physical attributes

Amongst others, the oldest rocks in the Cape Floral Region are the Cape Granite Suite. These older rocks, together with the more recent shales of the Bokkeveld Group, produce base-rich clays (Kruger, 1983) and rich, heavy textured soils (Kruger, 1983; Bond & Goldblatt, 1984).

In contrast, the Table Mountain and Witteberg Groups have produced sandy, quartzitic materials, generally associated with base-poor, acidic and nutrient-poor soils (Bond & Goldblatt, 1984; Campbell & Werner, 1988). These two broad groups of soils, one slightly richer and the other nutrient-poor, explain some of the diversity of habitat and thus vegetation in the Cape Floral Region.

The CFR is bounded in the south and west by the Indian and Atlantic oceans respectively, while the interior margin is formed by a series of mountains that dominate the region. The coastal zone, well developed in the south and to the west, rises fairly abruptly to this mountainous region called the Cape Fold Belt that has an important influence on the Cape Flora (Bond & Goldblatt, 1984). This extensive chain, with steep mountain ranges, can be divided into two systems; the north / south-trending mountains near the West Coast, and two parallel east-west trending ridges inland of the south coast (Lambrechts, 1979; Figure 1.1.2).

The region is made up of a mixture of resistant and erodable rocks (Taylor, 1996; Figures 1.1.2 & 1.3.1) and erosion has produced massive, remarkable rock sculptures, which are a feature of the Groot Winterhoek and Cederberg Wilderness Areas (Volume 3). High-lying areas generally have nutrient poor soils, while further down, in the foothills and valleys, the shale-derived, slightly richer, and finer soils accumulate. The low-lying plains have mainly deep sands.

While great altitudinal variation influences the vegetation (through e.g. temperature and moisture differentials) the evolution of fynbos is closely related to soil nutrient differences (Cowling *et al.*, 1992). Different habitats (e.g. low nutrient soils at high altitude as opposed to low nutrient soils at a low altitude) may isolate populations - leading to local differences in plants (Bond & Goldblatt, 1984). The consequences of these soil and altitudinal differences, as well as other factors (such as local rainfall patterns and aspect), are high levels of regional plant diversity and endemism.

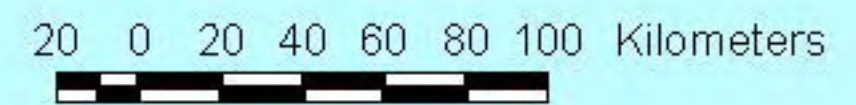
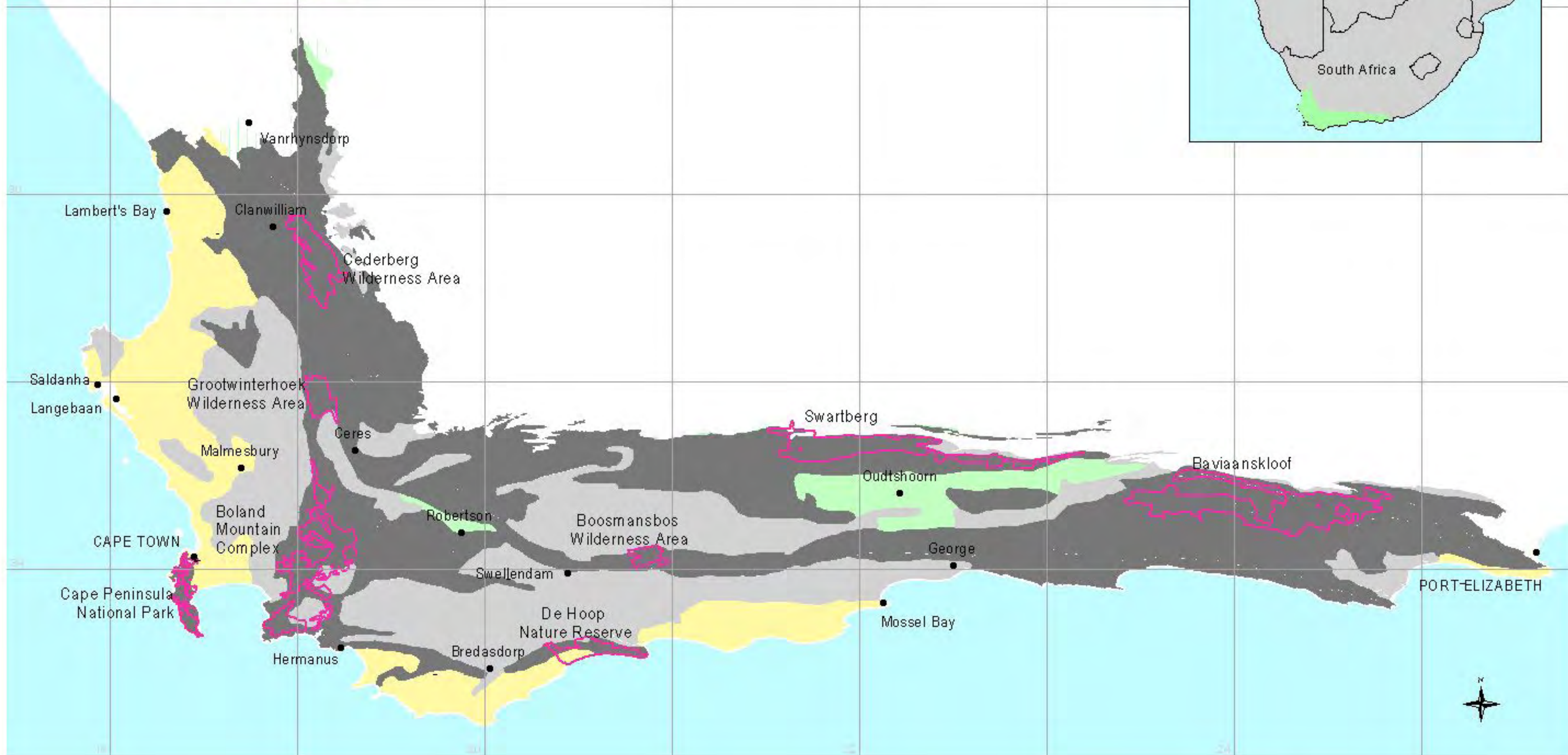
The wide distribution of the selected protected areas across the Cape Floral Region ensures that a diversity of physical attributes is conserved (Figure 1.1.2). These include altitudinal variation, principally along river corridors within the mountain ranges that form the basis of the eight protected areas but also include the altitudinal range from the Potberg Mountain to the threatened lowland habitats all within the De Hoop Nature Reserve.

The geology of the Cape Floral Region is described in detail by Wellington (1955), King (1967) and Theron (1983), while a more detailed treatment of the soils is given by MacVicar *et al.* (1977).

### 1.3a(ii) Climate

Most of the southern African subcontinent has summer rainfall with higher rainfall volumes (>1 000mm per annum) in the east, declining westwards. The southwestern tip of Africa, however, has a predominantly Mediterranean or semi-Mediterranean climate (Kruger, 1979a; Bond & Goldblatt, 1984) with winter rainfall and hot, dry summers between October and April. Winter rainfall is a unique climate regime in the sub-continent. Precipitation has a strong orographic component and varies with topography. Mean annual rainfall in the lowlands ranges between 300 and 500 mm (Fuggle & Ashton, 1979; Goldblatt, 1978) while the values are much higher at greater elevations (1000-3300mm per annum) where rainfall is supplemented by fog and cloud moisture even in the dry months (Kruger, 1979a; Bond & Goldblatt, 1984). Eastwards across the Cape region, there is a trend for an increasing portion of the rainfall to fall in the summer months.

Strong winds are a common feature along the Cape coast. In winter, occasional hot, gusty **berg winds** result from warm subsiding air in the interior (Kruger, 1979a) causing sudden, steep temperature rises. These winds play an important role in the fire-climate (Fuggle & Ashton, 1979), particularly in the central southern Cape area.



**LEGEND**

- Pre Cambrian, Granite Suite & Cape Supergroup
- Nutrient-poor Cape Supergroup
- Karoo Sequence
- Tertiary, Pleistocene & Recent deposits
- World Heritage Sites

**FIGURE 1.3.1**

Geology of the Cape Floral Region  
(after Deacon et al., 1992).

As rainfall gradients are superimposed on the mountainous and rugged topography, a mosaic of diverse climatic zones results (Fuggle & Ashton, 1979; Campbell, 1983; Campbell & Werger, 1988). Although a relatively recent phenomenon, the Mediterranean-type climate has limited the recruitment of plant taxa from the summer rainfall region (Linder, 1991) and, with the soil and altitudinal gradients, has contributed to the distinctive flora of the Cape Floral Region. These factors result in a unique and diverse biota in comparison with the rest of southern Africa and an exceptional diversity within the Cape Floral Region (refer to section 1.2a). The wide distribution of the protected areas ensures that the range of climatic zones is also well represented.

### 1.3a(iii) Vegetation, habitats and plant species<sup>10</sup>

The distinctive vegetation for the region is fynbos (“fine-bush”), a shrubland, which holds about 80% of the plant richness of the Cape Floral Region. Fynbos grows on the coarse-grained, low nutrient acidic sands generally characteristic of the region. Fynbos extends from the mountain peaks, down hill slopes, across the coastal plains to the seashore, comprising mainly fine-leaved shrubs, such as heaths, (e.g. 635 endemic species of *Erica*), larger-leaved, showy-flowered Proteaceae (319 endemic species) and clumps of reed-like Restionaceae. Fynbos is further enlivened by the spectacular blooms of an assortment of geophytic plants, including many Iridaceae (520 endemic species) and Orchidaceae (138 endemic species)<sup>11</sup>.

Roughly half of all Southern African genera are represented in the CFR, with *Erica* (655 species) being by far the most sizeable genus among the total of 988 genera. It accounts for more than 7% of the species in the Cape flora and is therefore a striking example of radiative diversification (Goldblatt & Manning, 2000). Other than *Erica*, there are 12 genera containing over 100 species. The largest 10 and 20 genera contribute over 21% and 30% respectively to the species total in the Cape. A very important characteristic linked to this is the large species to genus ratio. At 9.1 (all vascular plants), it is one of the highest in the world (Table 1.2.2) and more typical of isolated island biota than of a continental region (Goldblatt, 1978; Goldblatt & Manning, 2000).

No common ecological pattern has been identified among the most speciose genera. Several occur mainly on impoverished, sandy substrates and are most diverse in the mountains (e.g. *Erica*, *Aspalathus*, *Agathosma*, *Phyllica* and *Cliffortia*) whereas others prefer the lowlands and grow on soils ranging from leached to fairly nutrient-rich - e.g. *Lampranthus*, *Oxalis*, *Pelargonium*, *Crassula* (Goldblatt & Manning, 2000). Whereas all growth forms are represented within the large genera, seasonal geophytism and shrubbiness are the most evident features they share (Goldblatt & Manning, 2000).

In the valleys and on the forelands between the mountains and the coastal plains, where differently-derived, slightly richer soils have accumulated, there is another form of fynbos shrubland, called renosterveld. Renosterveld shrublands are for the most part fine-leaved and are especially rich in Asteraceae and geophytic plants - while Proteaceae elements are less well represented than on the low nutrient soils. Owing to its richer soils, most lowland renosterveld has been transformed by agriculture, especially for cultivation of wheat and deciduous fruit crops. Adjacent to the coast, on alkaline sands of recent marine origin, fynbos shrublands occur in a mosaic of thicket patches of trees and large shrubs of subtropical affinity, having links extending up the Indian Ocean coast. All of these fine-leaved shrublands are fire-dependent and are highly adapted to a natural fire regime – regenerating, often spectacularly, after fires that burn naturally at intervals of 10 to 20 years (with natural extremes as low as 5 years and as high as 45 years).

Pockets of evergreen forests are found within moist, fire-protected gorges and in areas of deeper soils of the Cape Floral Region. Along a section of the southern Cape coast, nestled between a coastal mountain range and the sea, the all-year-round rainfall has resulted in the best-developed areas of forest. Towards the eastern extent of the Cape Floral Region, in river valleys and on steep slopes Valley Thicket and Succulent Thicket are found – vegetation types, which, like forest, are not reliant on fire as an ecological process.

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<sup>10</sup> Refer also to Appendix 9.

<sup>11</sup> Statistics from Goldblatt & Manning, 2000.

Inland behind westerly mountain ranges, which limit rainfall, where temperatures are more extreme and soils are richer, is the home of a unique succulent flora called the Succulent Karoo. The low arid shrubland vegetation of the Succulent Karoo is not fire-prone but is mainly influenced by low winter rainfall and mid-summer aridity. Plant species diversity in this area is exceptional and is unrivalled for any comparative arid area of this size anywhere on the planet (Low & Rebelo, 1996).

In Figure 1.3.2, the extensive areas of the Nama-Karoo and Succulent Karoo **biomes** relative to the Cape region can be seen. This further emphasises the great diversity of the Cape vegetation within a very small area. This diversity of vegetation types can clearly be seen in Figure 1.3.3, where the large number and small size of vegetation types within the Cape Floral Region is shown.

Finally, but probably most importantly, the Cape Floral Region has been divided by researchers into eight Phytogeographic Centres of endemism, each of which is delimited by high numbers of plant species endemic to each centre. These centres suitably represent much of the spatial variation of plants in the Cape Floral Region. Critically, the selected protected areas are suitably distributed to represent all eight centres (Table 1.3.1; Figure 1.3.4).

Table 1.3.1 Representation by the nominated constellation of sites of the eight recognised Phytogeographic Centres of endemism falling within the Cape Floral Region.

Phytogeographic Centre	Represented by:
Southwestern	Boland Mountain Complex / Cape Peninsula National Park
Northwestern	Cederberg Wilderness Area / Groot Winterhoek Wilderness Area
Karoo Mountain	Swartberg Complex
Langeberg	Boosmansbos Wilderness Area
Southeastern	Baviaanskloof
Agulhas Plain	De Hoop Nature Reserve
Little Karoo	Swartberg Complex
Albany	Baviaanskloof

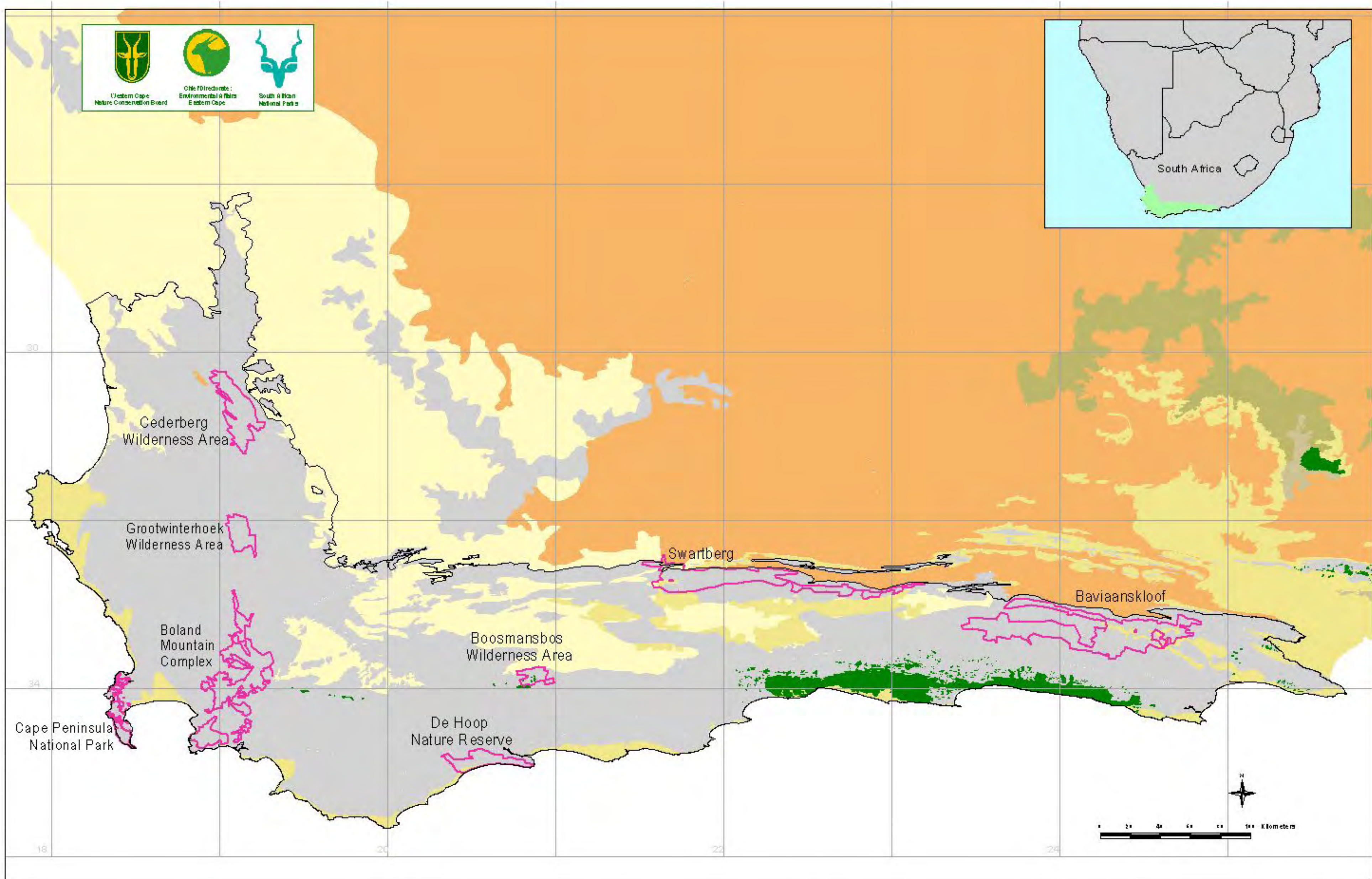
Characteristics of the different vegetation kinds have been described more fully in various publications over the decades. These descriptions include texts such as Bews (1925), Marloth (1929), Taylor (1978), Kruger (1979a), Moll *et al.* (1984), Bond & Goldblatt (1984), Acocks (1988), Low & Rebelo (1996) and Cowling & Hejnis (2000).



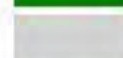

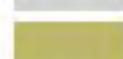

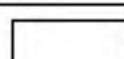

A vegetation classification, developed for the CAPE Project, is referred to in this nomination. This classification is based on the Broad Habitat Unit (BHU), which is a surrogate for landscape diversity and especially vegetation pattern (Cowling & Hejnis, 2000). Altogether 102 Broad Habitat Units were described, of which 88 are restricted to the Cape Floral Region (Figure 1.3.5; Appendix 3).<sup>12</sup>

For the second phase of this nomination process (section 1.2(iii)), a study was commissioned to evaluate how well the seven protected areas<sup>13</sup> provided natural habitats for *in situ* conservation of biological diversity to meet Criterion 44(a)(iv). For this evaluation, explicit and defensible quantitative targets were set for conserving the 88 Broad Habitat Units in the Cape Floral Region (Appendix 3).

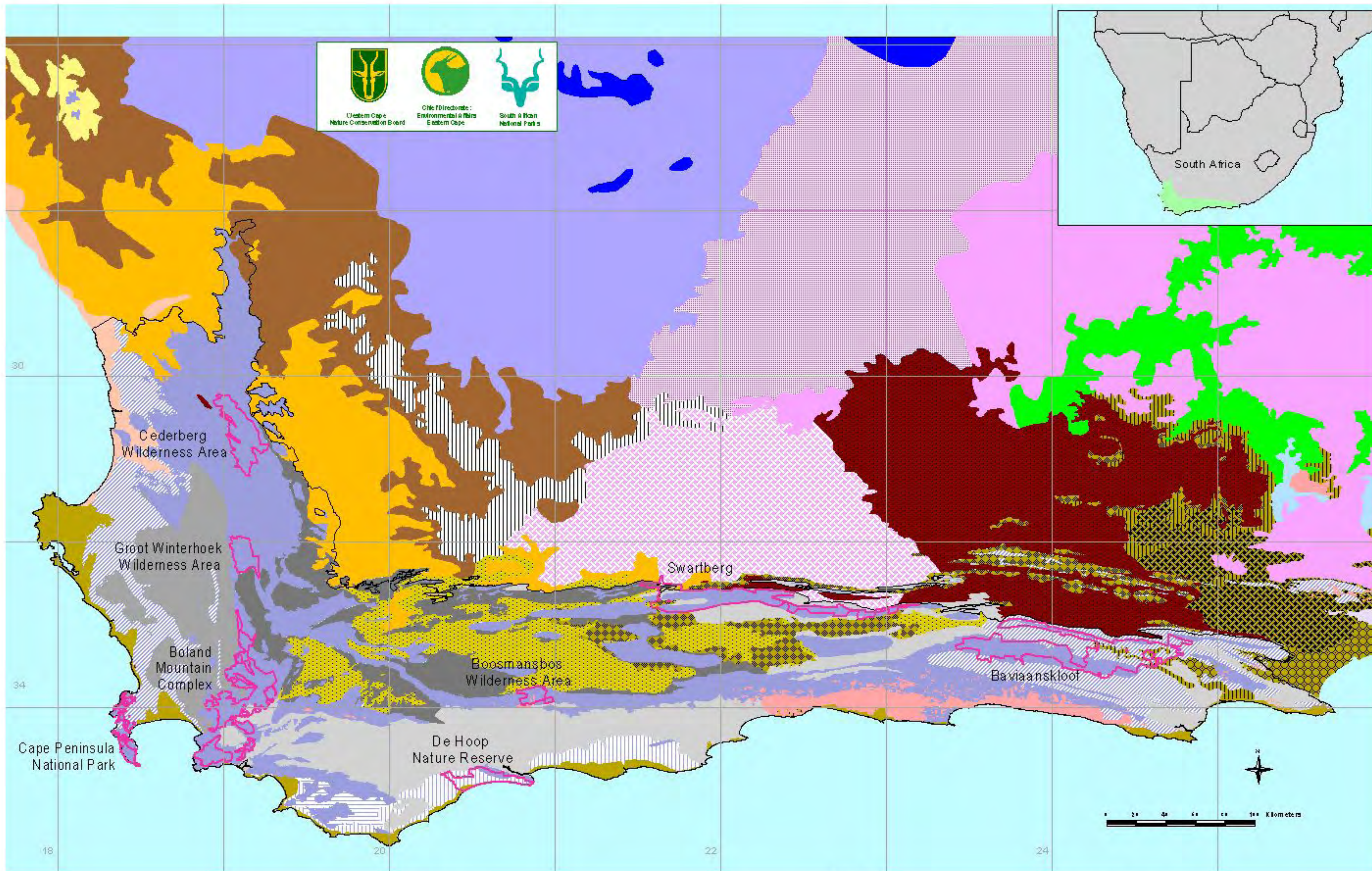
<sup>12</sup> The delineation of the Broad Habitat Units enabled further refinement of the boundaries of the Cape Floral Region's six Phytogeographic Centres recognised by Goldblatt & Manning (2000). This refinement confirmed two additional centres, namely the Little Karoo Centre and the Albany Centre (Figure 1.3.4, Table 1.3.1), which had been recognised by earlier phytogeographers.

<sup>13</sup> The Cape Peninsula National Park was not included in the Phase 2 study, since it (as the Cape Peninsula Protected Natural Environment) had already been identified, during Phase 1 of the site selection process, as a defined core protected area for inclusion in this nomination. The Cape Peninsula National Park primarily conserves the Peninsula Mountain Complex BHU.



LEGEND			
	Forest		Nama-karoo
	Fynbos		Savanna
	Grassland		Dune, Valley & Succulent Thicket
			World Heritage Sites
			Cape Floral Region

**FIGURE 1.3.2**  
 Biomes of the Cape Floral Region and surrounds (Low & Rebelo, 1996).



LEGEND

Vegetation key - see next page

World Heritage Sites

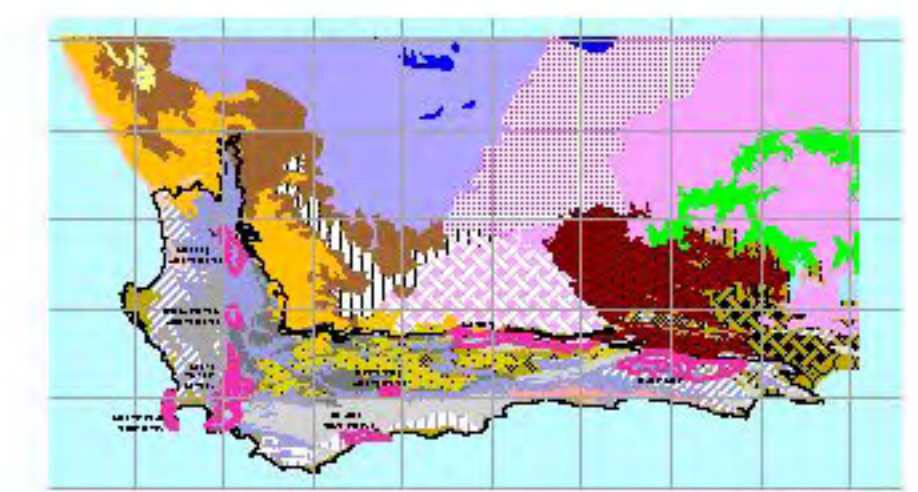
FIGURE 1.3.3

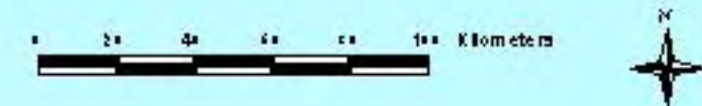
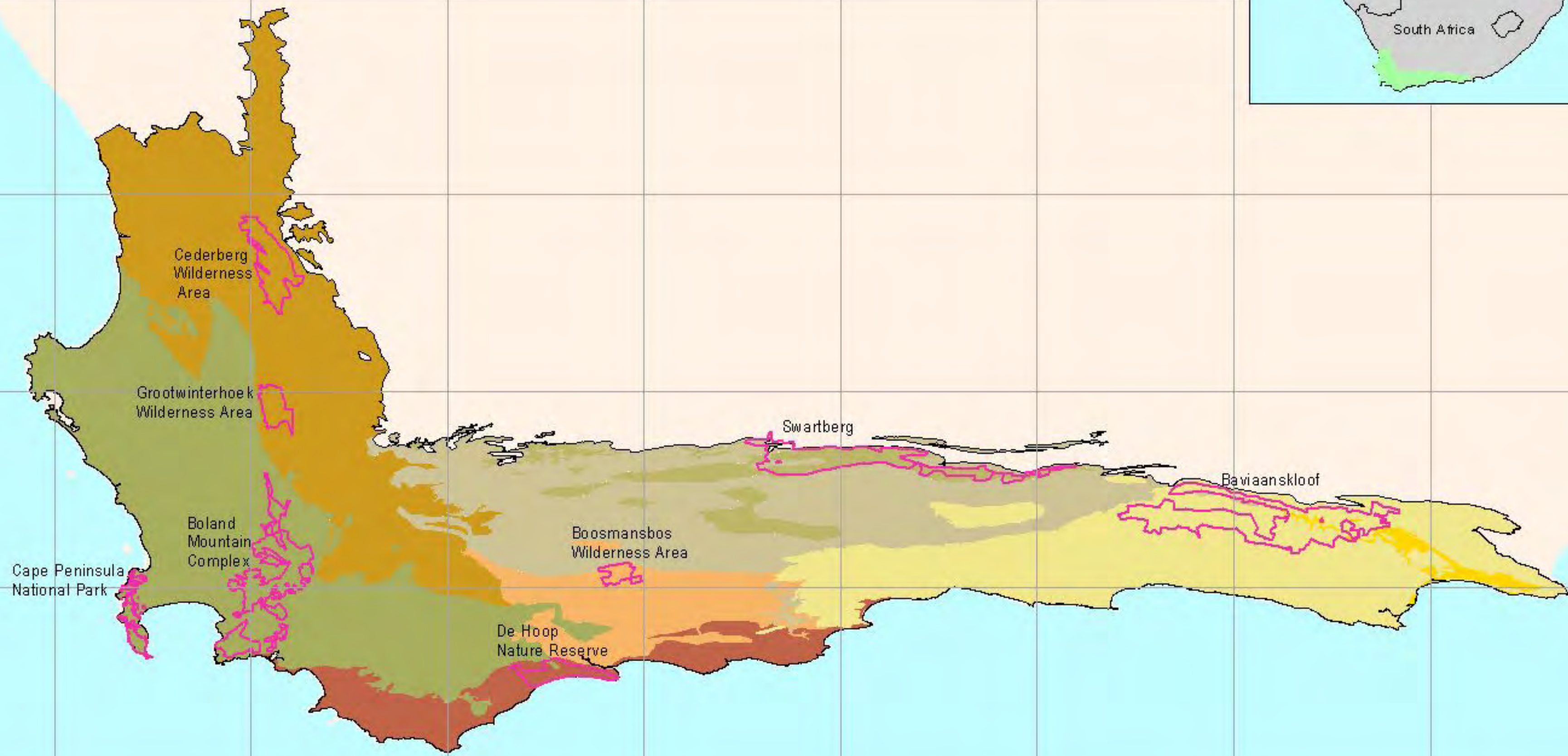
Vegetation types of the Cape Floral Region and surrounds (Low & Rebelo, 1996).



# Vegetation Types Legend

	1 Coastal Forest		22 Subhumid Lowveld Bushveld		47 Short Mistbelt Grassland
	2 Afromontane Forest		23 Coastal Bushveld-Grassland		48 Coastal Grassland
	3 Sand Forest		25 Natal Central Bushveld		49 Bushmanland Nama Karoo
	4 Dune Thicket		26 Natal Lowveld Bushveld		50 Upper Nama Karoo
	5 Valley Thicket		27 Thorny Kalahari Dune Bushveld		51 Orange River Nama Karoo
	6 Xeric Succulent Thicket		28 Shrubby Kalahari Dune Bushveld		52 Eastern Mixed Nama Karoo
	7 Mesic Succulent Thicket		29 Karroid Kalahari Bushveld		53 Great Nama Karoo
	8 Spekboom Succulent Thicket		30 Kalahari Plains Thorn Bushveld		54 Central Lower Nama Karoo
	9 Mopane Shrubveld		31 Kalahari Mountain Bushveld		55 Strandveld Succulent Karoo
	10 Mopane Bushveld		32 Kimberley Thorn Bushveld		56 Upland Succulent Karoo
	11 Soutpansberg Arid Mountain Bushveld		33 Kalahari Plateau Bushveld		57 Lowland Succulent Karoo
	12 Waterberg Moist Mountain Bushveld		34 Rocky Highveld Grassland		58 Little Succulent Karoo
	13 Lebombo Arid Mountain Bushveld		35 Moist Clay Highveld Grassland		59 North-western Mountain Renosterveld
	14 Clay Thorn Bushveld		36 Dry Clay Highveld Grassland		60 Escarpment Mountain Renosterveld
	15 Subarid Thorn Bushveld		37 Dry Sandy Highveld Grassland		61 Central Mountain Renosterveld
	16 Eastern Thorn Bushveld		38 Moist Sandy Highveld Grassland		62 West Coast Renosterveld
	17 Sweet Bushveld		39 Moist Cool Highveld Grassland		63 South & South-west Coast Renosterveld
	18 Mixed Bushveld		40 Moist Cold Highveld Grassland		64 Mountain Fynbos
	20 Sweet Lowveld Bushveld		41 Wet Cold Highveld Grassland		65 Grassy Fynbos
	24 Coast-Hinterland Bushveld		42 Moist Upland Grassland		66 Laterite Fynbos
	19 Mixed Lowveld Bushveld		43 North-eastern Mountain Grassland		67 Limestone Fynbos
	21 Sour Lowveld Bushveld		44 South-eastern Mountain Grassland		68 Sand Plain Fynbos
			45 Afro Mountain Grassland		
			46 Alti Mountain Grassland		



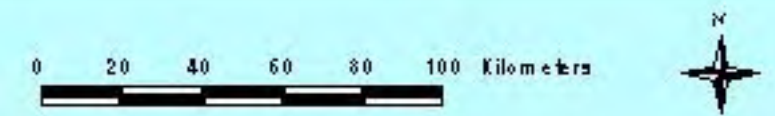
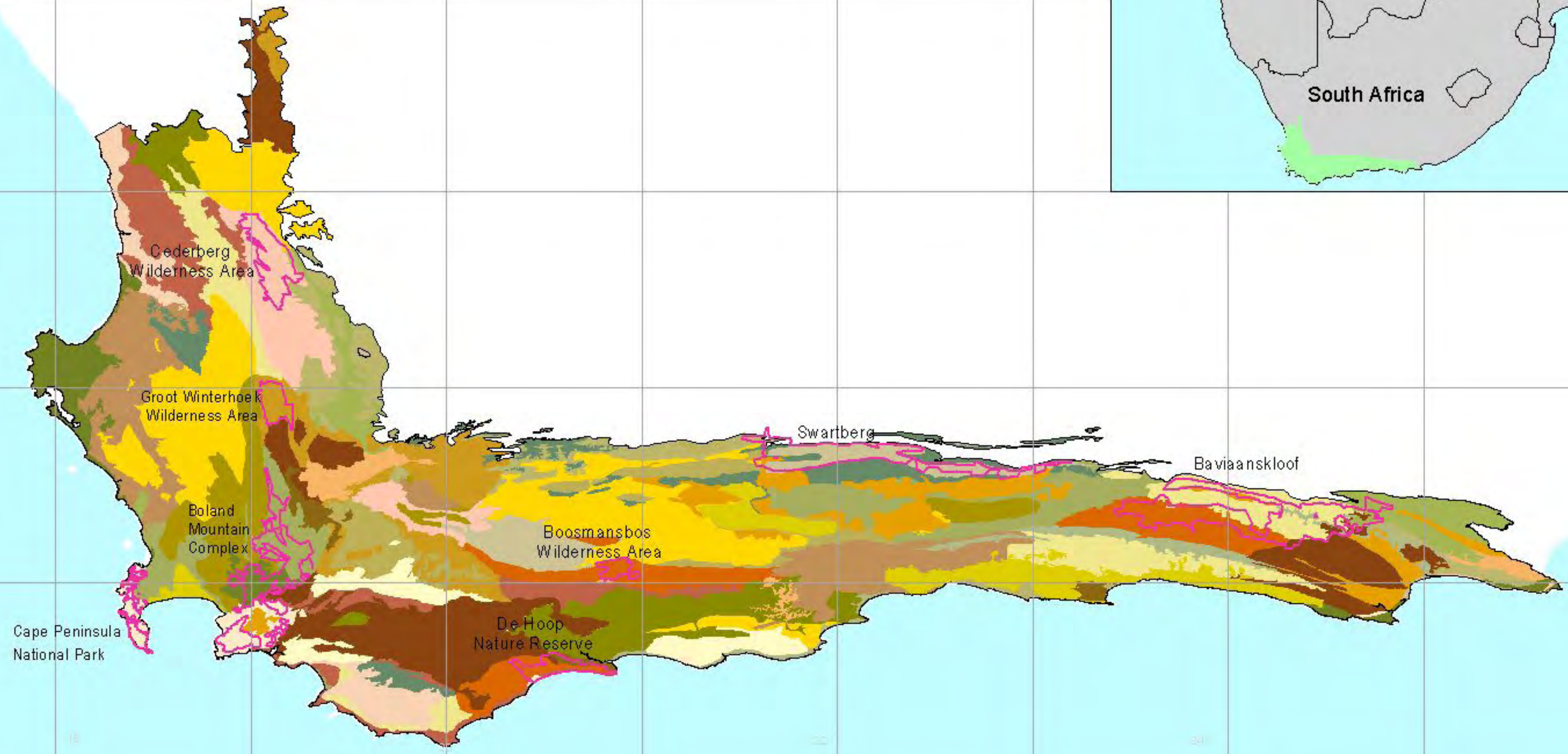


**LEGEND**

- |                |              |              |                      |
|----------------|--------------|--------------|----------------------|
| Agulhas Plain  | Langeberg    | Southeastern | World Heritage Sites |
| Albany         | Little Karoo | Southwestern |                      |
| Karoo Mountain | Northwestern |              |                      |

**FIGURE 1.3.4**

Phytogeographic Centres of the Cape Floral Region  
(from Goldblatt & Manning, 2000 by Cowling, in prep).



**LEGEND**

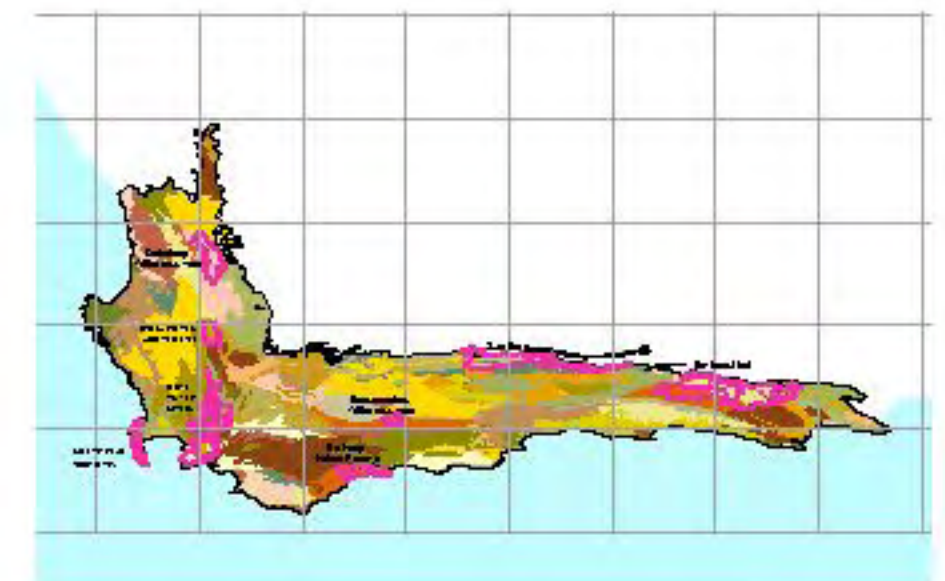
See next page for Broad Habitat Unit legend     World Heritage Sites

**FIGURE 1.3.5.**

Broad Habitat Units of the Cape Floral Region (sensu Cowling et al., 1999b).

# Broad Habitat Unit Legend

	Agulhas Fynbos / Thicket Mosaic		Groot Swartberg Mountain Fynbos Complex		Overberg Coast Renosterveld
	Albertinia Sand Plain Fynbos		Groot Winterhoek Mountain Fynbos Complex		Perdeberg Fynbos / Renosterveld Mosaic
	Alexandria Indian Ocean Forest		Hagelkraal Limestone Fynbos		Piketberg Mountain Fynbos Complex
	Algoa Grassy Fynbos		Hawequas Mountain Fynbos Complex		Potberg Mountain Fynbos Complex
	Aloes Mesic Succulent Thicket		Hopefield Sand Plain Fynbos		Riversdale Coast Renosterveld
	Ashton Inland Renosterveld		Humansdorp Grassy Fynbos		Riviersonderend Mountain Fynbos Complex
	Baviaanskloof Mountain Fynbos Complex		Kamanassie Mountain Fynbos Complex		Robertson Broken Veld
	Blackheath Sand Plain Fynbos		Kango Inland Renosterveld		Rooiberg Mountain Fynbos Complex
	Blanco Fynbos / Renosterveld Mosaic		Keurbooms Grassy Fynbos		South Dune Pioneer
	Bokkeveld Mountain Fynbos Complex		Klawer Vygiveld		South East Dune Pioneer
	Boland Coast Renosterveld		Klein River Mountain Fynbos Complex		South West Dune Pioneer
	Bredasdorp Mountain Fynbos Complex		Klein Swartberg Mountain Fynbos Complex		Southern Langeberg Mountain Fynbos Complex
	Breede Fynbos / Renosterveld Mosaic		Knysna Afromontane Forest		Spekboom Xeric Succulent Thicket
	Caledon Swartberg Mountain Fynbos Complex		Kogelberg Mountain Fynbos Complex		Springfield Sand Plain Fynbos
	Canca Limestone Fynbos		Koo Langeberg Mountain Fynbos Complex		St Francis Fynbos / Thicket Mosaic
	Cannaland Inland Renosterveld		Kouebokkeveld Inland Renosterveld		Stilbaai Fynbos / Thicket Mosaic
	Cape Flats Fynbos / Thicket Mosaic		Kouga Mountain Fynbos Complex		Suurbrak Grassy Fynbos
	Cape Peninsula Mountain Fynbos Complex		Kromme Fynbos / Renosterveld Mosaic		Swartland Coast Renosterveld
	Cederberg Mountain Fynbos Complex		Lamberts Bay Strandveld		Swartruggens Mountain Fynbos Complex
	Cockscomb Mountain Fynbos Complex		Langebaan Fynbos / Thicket Mosaic		Swellendam Afromontane Forest
	De Hoop Limestone Fynbos		Langkloof Fynbos / Renosterveld Mosaic		Tanqua Vygiveld
	Elgin Fynbos / Renosterveld Mosaic		Leipoldville Sand Plain Fynbos		Touws Vygiveld
	Elim Fynbos / Renosterveld Mosaic		Little Karoo Broken Veld		Tsitsikamma Mountain Fynbos Complex
	Franschhoek Mountain Fynbos Complex		Matjies Inland Renosterveld		Uniondale Inland Renosterveld
	Gamtoos Mesic Succulent Thicket		Matroosberg Mountain Fynbos Complex		Waboomsberg Mountain Fynbos Complex
	Genadendal Grassy Fynbos		Montagu Inland Renosterveld		Waveren-Bokkeveld Inland Renosterveld
	Gifberg Mountain Fynbos Complex		Nieuwoudtville Inland Renosterveld		Witrantjies Broken Veld
	Goukamma Fynbos / Thicket Mosaic		Olifants River Mountain Fynbos Complex		Witteberg Mountain Fynbos Complex
	Gouritz Mesic Succulent Thicket		Oudtshoorn Broken Veld		
			Outeniqua Mountain Fynbos Complex		



Generally, the protected areas are very effective in achieving the targets for those Mountain Complex Broad Habitat Units, which fell within the protected areas (Table 1.3.2). These protected areas made an important contribution to conserving 15 Broad Habitat Units but made no or negligible contribution to achieving targets for the remaining 73 Broad Habitat Units. However, in many cases, especially on the southwestern lowlands, the Broad Habitat Units have been extensively transformed and each fragment of remnant habitat is required to achieve specified targets). Needless to say, there are currently very few reserves within these transformed Broad Habitat Units (Cowling & Heijnis, 2000). Given the requirements of integrity for World Heritage Site listing, these few reserves would not be good candidates for World Heritage Site status, but are being considered as priorities in the CAPE Project and by provincial conservation agencies.

Table 1.3.2. Effectiveness of the seven protected areas<sup>13</sup> in conserving Broad Habitat Units (BHUs) in the Cape Floral Region. (Values expressed in terms of achieving conservation targets, namely >15% of achievable target -refer to Appendix 3 for details). Lowland Broad Habitat Unit complexes are marked with an asterisk.

World Heritage Site protected areas	Broad Habitat Unit	Target achieved (%)
Cederberg Wilderness Area	Cederberg Mountain Fynbos Complex	100
Groot Winterhoek Wilderness Area	Groot Winterhoek Mountain Fynbos Complex	100
Boland Mountain Complex	Hawequas Mountain Fynbos Complex	75
	Franschhoek Mountain Fynbos Complex	100
	Kogelberg Mountain Fynbos Complex	72
De Hoop Nature Reserve	Agulhas Fynbos/Thicket Mosaic*	39
	De Hoop Limestone Fynbos*	35
	South Dune Pioneer*	49
	Potberg Mountain Fynbos Complex	90
Boosmansbos Wilderness Area	Southern Langeberg Mountain Fynbos Complex	69
	Swellendam Afromontane Forest*	99
Swartberg Complex	Groot Swartberg Mountain Fynbos Complex	100
	Kango Inland Renosterveld*	39
	Spekboom Xeric Succulent Karoo*	18
Baviaanskloof	Humansdorp Grassy Fynbos	15
	Kouga Mountain Fynbos Complex	100
	Baviaanskloof Mountain Fynbos Complex	100
	Cockscomb Mountain Fynbos Complex	89
	Gamtoos Mesic Succulent Thicket	100

The Cape Floral Region has been identified as a global centre of plant diversity due to its high species richness and exceptional endemism. For example, although occupying less than 4% of the area of southern Africa, the Cape Floral Region is home to 40% of the subcontinent's flora of 20 367 species (Goldblatt & Manning, 2000) including well over 1 400 Red Data Book plant species (70% of southern African's threatened plants). The species to genus ratio is one of the highest in the world and more typical of isolated island biota than of a continental region (Goldblatt & Manning, 2000).

However, owing to differences in soil, altitude, climate and other factors, this diversity is unevenly distributed in Phytogeographic Centres of endemism (Figure 1.3.4). Levels of *beta* diversity (plant species turnover along habitat gradients), and very high *gamma* diversity (species turnover in similar habitats across geographical gradients) within the Region are so marked that plant communities growing on different soils often form different vegetation types, contributing greatly to the region's floristic diversity and endemism.

For this nomination a study was commissioned (Lombard, 2000; Appendix 4) to evaluate the contribution of the seven protected areas to conservation of species diversity *in situ*, to meet Criterion 44(a)(iv). In this study, an analysis of a subset of the Cape Floral Region flora, comprising 3 298 plant species (about 30% of the total flora) and about 25 000 records, showed that the selected protected areas perform well at species-level representation in the Cape Floral Region, despite comprising only 6% of the total area of the Cape Floral Region (Table 1.3.3, Appendix 4).

Further analysis, at a finer resolution, shows that the constellation of protected areas perform remarkably well at conserving “hotspots” of Proteaceae species (Appendix 4). Because some of these analyses were at a coarse scale (quarter degree squares (QDS) or 636 km<sup>2</sup>), these values may in fact be underestimates of species within the protected areas, rather than overestimates.

Table 1.3.3 The contribution of the seven protected areas<sup>14</sup> to conserving selected taxa in the Cape Floral Region (Lombard, 2000; Appendix 4). There were 24 436 records in this database, which, because it does not represent all species in the Cape Floral Region is a biased subsample. Further, this subsample was not randomly collected across the Cape Floral Region.

Database (subsample of Cape Floral Region)	Scale of data	Number of taxa (Subsample of Cape Floral Region)	Number of taxa in protected areas (Subsample of Cape Floral Region)	Taxa in protected areas (%)
Plant species	QDS	3298	1579	48
Threatened species	QDS	1588	440	28
Endemic families	QDS	111	74	67
Proteaceae spp.	Points	364	215	59
Freshwater fish, amphibians and reptiles	Points	345	169	49

Note: QDS = quarter degree squares (QDS) equivalent to 636 km<sup>2</sup>

### 1.3a(iv) Fauna<sup>15</sup>

A distinct zoogeographic zone, called the Cape Faunal Centre, coincides with the Cape Floral Region (refer to Appendix 9). The Cape Faunal Centre is associated with the mountain ranges of the Western Cape: the Cederberg, Koue Bokkeveld Mountains, Hex River Mountains and Hottentots Holland Mountains running in a north-south axis. The northern boundary of the Cape Faunal Centre corresponds roughly with that of the Cape Floral Region (Stuckenberg, 1962). The slightly younger east-west chains of the Riviersonderend Mountains, Swartberg, Langeberg, and Outeniqua Mountains make up a second core of this zoogeographic zone. The eastern limit of the Cape Faunal Centre is the George/Knysna area, where the fauna gradually changes to include more Ethiopian elements characteristic of much of Africa.

The Cape Faunal Centre provides habitat for at least 112 Red Data Book animal species. Although the invertebrate diversity exceeds that of the vertebrates, there are a number of recognised vertebrate “hotspots” in the Cape Floral Region including one for small mammals and freshwater fish in the Cederberg. Table 1.3.4 provides a summary of the numbers of endemic and/or threatened fish, amphibians and reptiles of the Cape Floral Region. A number of threatened and/or endemic mammal and bird species are also conserved in the protected areas. These include species such as the Rare leopard (*Panthera pardus*), Vulnerable aardvark (*Orycteropus afer*) and the Cape Floral Region Rare endemic bontebok (*Damaliscus dorcas dorcas*).

Among the birds typical of fynbos habitats are the Cape Floral Region endemics orange-breasted sunbird (*Nectarinia violacea*) and Protea canary (*Serinus leucopterus*), while threatened birds in the protected areas include martial eagle (*Polemaetus bellicosus*), Cape vulture (*Gyps coprotheres*) (both Vulnerable) and the Critically Endangered blue crane (*Anthropoides paradiseus*).

<sup>14</sup> The Cape Peninsula National Park was not included in the Phase 2 study, since it had already been identified as a key element for inclusion in this nomination during Phase 1 of the site selection process.

<sup>15</sup> Refer also to Appendix 9.

Table 1.3.4 Diversity of selected vertebrate fauna for the Cape Floral Region, indicating levels of endemism and numbers of species currently considered threatened (data from Baard *et al.*, 1999; Impson *et al.*, 1999).

Taxon	Number of South African endemic species indigenous to the Cape Floral Region	Number of Cape Floral Region endemic species	Number of species currently considered to be threatened
Amphibians	44	24	5
Reptiles	142	27	5
Freshwater fish	19	16	14

A study was commissioned for this nomination to evaluate the contribution of the protected areas to the conservation of selected taxa. It analysed data for freshwater fish, amphibians and reptiles of the Cape Floral Region. Results showed that the relatively small area occupied by the constellation of protected areas conserves half the species in this set of known records (Table 1.3.3; Appendix 4).

The zoogeographic centre is characterised by elements of invertebrate fauna, which are survivors of a Gondwanaland fauna<sup>16</sup>. These invertebrates occur in the high altitude mountain fynbos and forests of the southwestern Cape and represent the oldest and least disturbed of the continent's fauna. These animals probably represent the richest surviving assemblage of such basal lineages on the Southern continents.

The combined faunal diversity in this series of protected areas is exceptional. The vertebrate fauna of the more central parts of the Cape Floral Region are well represented in the Boland Mountain, Groot Winterhoek, Boosmansbos and De Hoop protected areas. Adding to this diversity is the richness of the fauna in the Swartberg and Cederberg protected areas, which reflects the location of these protected areas close to the interface between the Fynbos and Karoo biomes (Figure 1.3.2). These protected areas harbour more typical fynbos species, such as grysbok (*Raphicerus melanotis*), grey rhebuck (*Pelea capreolus*) and klipsspringer (*Oreotragus oreotragus*), more generalised species such as steenbok (*Raphicerus campestris*) and grey duiker (*Sylvicapra grimmia*), as well as karoo species not usually found in fynbos-covered mountains, such as springbok (*Antidorcas marsupialis*). Furthermore, owing to the proximity of Baviaanskloof to a more sub-tropical and Ethiopian faunal region, animals not found in the rest of the Cape Floral Region, including large game such as kudu (*Tragelaphus strepsiceros*), occur in that protected area. The Cape Peninsula National Park is less well known for its vertebrate fauna than for its high levels of endemism in the macroinvertebrates (refer to section 2.3a(iv)).

### 1.3a(v) Processes<sup>17</sup>

Natural processes are well represented in the selected protected areas and operate at a range of scales (Table 1.2.4). At a large scale, one of the most important processes is the effect of natural fires. Fire has been a strong driving-force in the evolution of fynbos flora (Cowling, 1987; Le Maitre & Midgley, 1992) and fire adaptations in the Cape Floral Region are of considerable interest to evolutionary biologists.

Plant reproductive strategies represent another vital process operating at a different scale from fire. The Cape Flora has the highest known ratio of bird-pollinated plant species to nectar-feeding species (Rebelo, 1987), the second richest assemblage of mammal-pollinated plants known, and a rich assemblage of fly pollinators, including specialised groups for which the Cape Faunal Centre is thought to be an epicentre (Bowden, 1978). Eighty three percent of plants in the Cape Floral Region are insect-pollinated (Johnson, 1992) with fly and beetle pollination probably far more important in

<sup>16</sup> Refer to section 1.2d(ii). Relictual Gondwanan invertebrate fauna include the fynbos endemic, flightless stag-beetle (*Colophon* spp.), described in more detail by Endrödy-Younga (1988), of which a number have already been identified as surviving in the peaks of the Cape Peninsula, Boosmansbos Wilderness Area, Swartberg Complex and Baviaanskloof. It is probable that improved sampling will discover more of these species to be present in high altitude habitats.

<sup>17</sup> Refer to Appendix 9 for a synthesis of the patterns and processes operating in the Cape Floral Region.

the Cape Floral Region than anywhere else. For some of the more speciose plant groups it has been suggested that pollinator limitation may have been a driving force in speciation (Johnson, 1992).

Seed dispersal by ants (myrmecochory) is also a biological process of great importance in the Cape Floral Region (Bond & Slingsby 1983; Keeley, 1992) particularly among endemic plant species. Short seed dispersal distance is seen as a factor in high plant speciation. Estimates of the number of species dispersed by ants in the Cape Floral Region approximate 28% of the entire flora (Breytenbach, 1988) including over half of the family Proteaceae (Bond & Slingsby, 1983).

Substantial tracts within the Cape Floral Region are dominated by large termite mounds (Lovegrove & Siegfried, 1986) that produce distinctive on-mound plant communities through elevated nutrient levels (Midgley & Musil, 1990). This affects the floral *beta* diversity of some landscapes.

The montane areas in the Cape Floral Region are particularly important in conserving the highly disjunct Afrotropical biogeographical links stretching from the Cape Mountains to Ethiopia. In addition, the strong Gondwanaland links, both among plants and animals, are well reflected in the Cape Floral Region allowing reconstruction of the flora's ancient connections.

The links between the Cape Flora and the Afrotropical flora distinguish it from the tropical African flora (dominating most parts of the continent) and enhances its isolated nature. In this respect, the Western Cape Province best reflects the recent evolutionary history of the region, characterised by shifts in climate and dominant flora of the region, coupled with massive speciation that generated the enormous diversity of an unusual flora.

To ensure persistence, a system of conservation areas must also accommodate the processes that maintain and generate biodiversity (Table 1.2.4; Cowling *et al.*, 1999a).

All eight protected areas fall in the category of medium- to large-sized (15 000 – 100 000ha) conservation areas (Table 1.1.1). The relatively large, physically and biologically heterogeneous Swartberg Complex, as well as Baviaanskloof, accommodate most ecological and evolutionary processes and, therefore, maintain biodiversity (Table 1.2.4). The other protected areas have a number of adjacent surrounding reserves that effectively increase the area under conservation, thereby ensuring maintenance of most processes necessary for *in situ* conservation of biological diversity (refer to Figure 1.3.6).

Although seven of the eight protected areas are located in mountainous regions there is, nonetheless, a large degree of altitudinal gradient conserved in all eight protected areas. Global warming predictions suggest that impacts will be much greater in the western, winter-rainfall and generally driest parts of the Cape Floral Region (Rutherford *et al.*, 1999). The Boosmansbos, De Hoop and, to a lesser extent, Swartberg and Baviaanskloof protected areas may ultimately be the most secure.

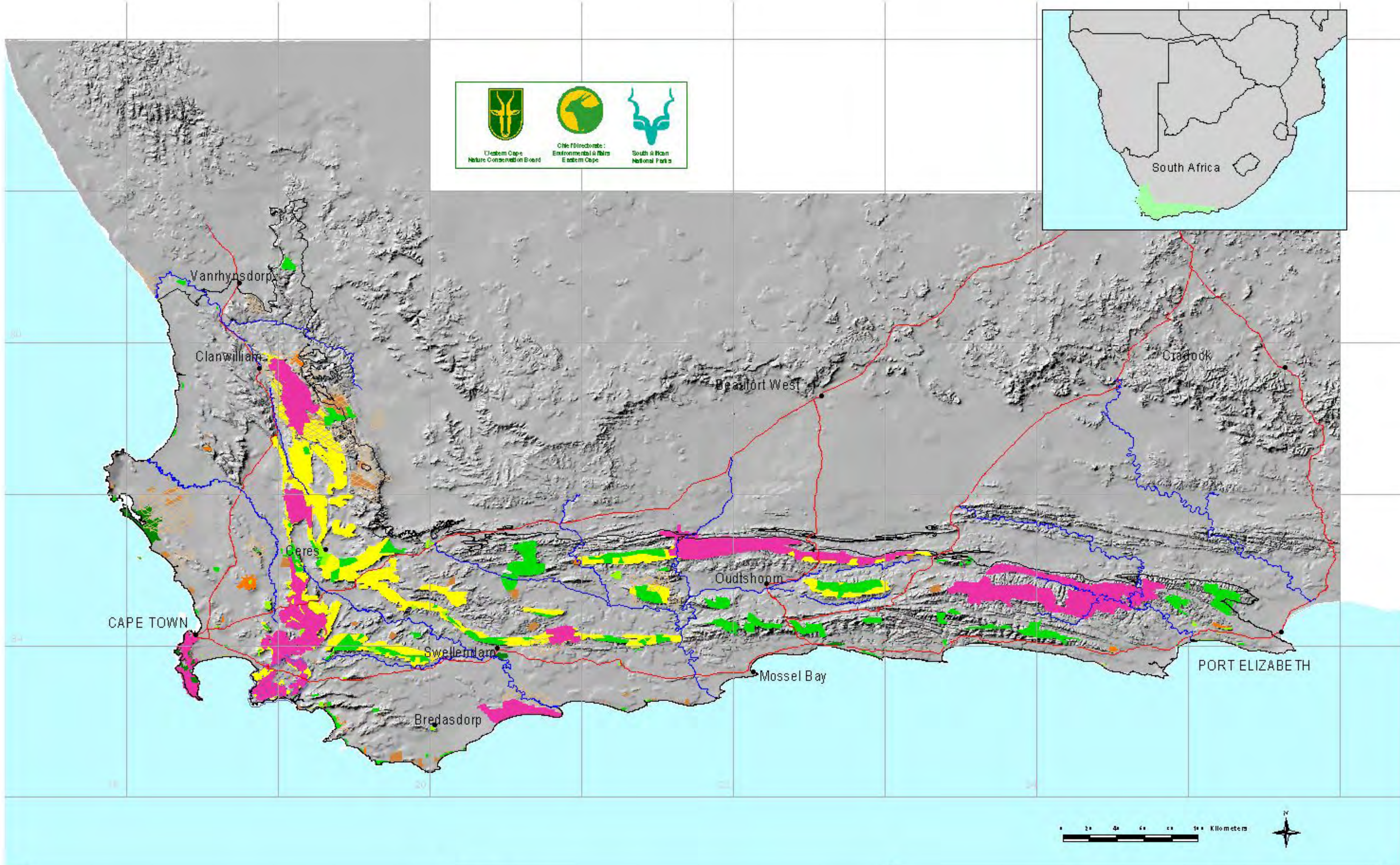
## **1.3b History and development**

### **1.3b(i) Introduction**

The archaeological and historical evidence for human settlement is outlined below and indications are given of the ways in which people have functioned as agents of ecological change. Much of this information is summarised from Deacon (1992). Further historical and cultural details are given in subsequent chapters dealing with each protected area.

There is a great deal of information about the early inhabitants of the Cape Floral Region dating back thousands of years. Evidence in the form of rock paintings, caves, burial sites and artefacts including middens are well preserved, suggesting habitation of these protected areas by humans over many centuries.





### LEGEND

- |                                  |                          |                      |
|----------------------------------|--------------------------|----------------------|
| Biosphere                        | Conservancies            | Rivers               |
| W Cape Nature Conservation Board | Mountain Catchment Areas | Towns                |
| Local authority reserves         | Private reserves         | Main roads           |
| SA National Parks                | Natural Heritage Sites   | World Heritage Sites |

FIGURE 1.3.6

Distribution of different types of protected land within the Cape Florial Region.

### **1.3b(ii) Initial settlement**

Dispersion of humans to the southernmost part of the African continent and into the Cape Floral Region started about one million years ago. Early human fossils are rare because bones are not well preserved in acidic soils. Hence, more durable markers, such as stone artefacts, are used to map the locations of Stone Age people.

The oldest sets of artefacts found in the fynbos landscape are those of the Earlier Stone Age (Deacon, 1975). One of the more informative sites is in dune sand near the Langebaan Lagoon on the West Coast. Among the fossils is a human skull that, with the Kabwe skull from Zambia, represents the ancestral Middle Pleistocene (700 000 - 125 000 years before present) populations inhabiting this southern part of Africa.

The **San** were hunter-gatherers, and from the Late Stone Age, they lived off plants, herds of game, and marine life. During the Middle Stone Age, technology, characterised by flake blades, appeared. These Middle Stone Age artefacts are more widespread with occupations recorded in open areas and rock shelters, some at high altitudes (Deacon, 1989). The flake blades are likely to have been used to obtain geophytes (e.g. bulbs, rhizomes or tubers) for food. Geophytes are most prominent in early post-fire succession and it is believed that fire was used to promote geophytes (and other fresh plant growth) from at least the beginning of the Late Pleistocene (Deacon, 1986; Deacon *et al.*, 1992). These burning practices are thought to have resulted in a substantial increase in the incidence of fires above that of the natural fire regime.

### **1.3b(iii) Late Pleistocene and Holocene**

Hunter-gatherers of the Later Stone Age occupied the Cape Floral Region from around 21 000 years ago. Zebra, wildebeest and eland were among the main species hunted but became locally extinct at the end of the Pleistocene (Klein, 1983). Their extinction meant not only a change in the environment, but also a change in human activities. It is in the Holocene period (10 000 years ago) that archaeological sites are more numerous and evidence suggests territorially organised groups of hunter-gatherers.

### **1.3b(iv) Khoi herders**

The practice of herding only became established with the spread of the Khoi or Khoekhoen people. Khoi pastoralists settled in the Cape Floral Region about 2 000 years ago. These people were reported to have burnt the vegetation in late summer to provide pasture for their sheep. Stock-keeping constrained the Khoi to areas of sufficient grazing thereby focussing their activities to certain terrain types. The introduction of domestic stock by Khoi herders would have had two important effects. First, sheep would have had a very different ecological influence on the plant communities compared with the local wild herbivores. Second, these herders may have pushed the hunter-gatherer San into habitats that were more marginal so that their occupation of the mountains became permanent. This, as mentioned above, in turn changed the fire regime (Meadows & Sugden, 1991).

The westward expansion of the cattle- and maize-farming Nguni people into the Cape Floral Region was restricted by poor grazing (on the low nutrient soils) and winter rainfall (which was not conducive to summer-growing crops).

### **1.3b(v) Colonial settlement**

During the sixteenth and seventeenth centuries, ships from various countries stopped over at the Cape to gather supplies (Raven-Hart, 1967). In 1652 the Dutch East India Company set up a supply station at Cape Town resulting in significant changes in the lives of the Khoi, the San, the natural landscape and the fynbos ecosystems.

By 1760, farming extended over the entire Cape Floral Region. Colonial settlement initiated many changes in the landscape, with initial impacts on resources including natural pastures, timber and game. The expansion of the pastoral frontier was rapid and uncontrolled and agriculture intensified. By the end of the eighteenth century, several areas in the Cape Floral Region were well settled.

Farmers occupied the lower-lying foothills and valley lands and used the mountains for grazing. The settlers moved their sheep to low-lying areas during winter, and burnt the mountain vegetation in late winter or early spring to provide summer grazing. These unseasonable fires would have been detrimental to the fynbos (Kruger & Bigalke, 1984). While the semi-nomadic Khoi pastoralists would have moved their herds when the grazing deteriorated, the sedentary settlers moved their flocks back to the same pasture year after year (Wicht & Kruger, 1973). The practice of burning the vegetation to provide pasture was continued in one form or another until the introduction of fire protection areas.

### **1.3b(vi) Cultural aspects**

Although the Cape Floral Region is not being nominated as cultural property, there is a wealth of artefacts and sites that attest to a rich and varied history across the Cape Floral Region. Some of these have been mentioned above and more are mentioned throughout this nomination.

### **1.3c Form and date of most recent records**

For both the national as well as the provincial conservation authorities, the recording of information (and access to such information) is a work in process. While records exist for all components of this nomination, many of these records exist in different formats; and/or are in different phases of completion. For example, some of the component sites have recently updated floristic records, while faunal records for the same site may be less recent (or *vice versa*).

The location of three universities within a 50 km radius of the Cape Peninsula National Park has contributed significantly to the vast body of information currently available on this protected area. Nonetheless, the requirements for State of Biodiversity reporting (for both provincial authorities) are clearly addressing the updating of all records and a robust effort, to update all records and to improve access to these records, has been undertaken by all Conservation Authorities. While the Western Cape Nature Conservation Board has the more advanced data recording programme in process (of the two Provinces), the Eastern Cape is in the process of addressing this issue through the development of a centralised database system in Bisho.

The effective date of the most recent records for both provincial conservation authorities is variable owing to the diverse nature of recording and reporting for these areas. On at least a monthly basis, records are sent from each protected area to either the Regional Office, and/or to the Head Office of each conservation authority. Regular recording of information is a component of the conservation management ethic for both provincial authorities.

#### **1.3c(i) Western Cape Nature Conservation Board**

The Western Cape Nature Conservation Board's Scientific Services component has established a Geographic Information System Section, which has developed a system for spatially recording data that are relevant to the management of protected areas. This involves an extensive database that is supplemented by information gathered by Western Cape Nature Conservation Board staff as well as by collaborating institutions. This information includes species checklists, a fire-reporting database and an alien plant database. All are held at the Scientific Services in Jonkershoek, near Cape Town and all conservation personnel have ready access to these records. The State of Biodiversity Programme (refer to section 1.4f) will contribute significantly to this database as information is gathered and refined.

In addition, copies of all national monitoring programmes to which provincial conservation agencies have contributed are also kept at Jonkershoek. Reserve specific data are maintained on site (each reserve has Internet and GIS facilities) and data are sent to the GIS Section in Jonkershoek.

#### **1.3c(ii) Eastern Cape**

Records for the Eastern Cape are held at the Western Regional Offices and at the headquarters of the Chief Directorate Environmental Affairs; Eastern Cape, in Bisho. Geographical Information System facilities are available at the Bisho Head Office as well as to personnel at Baviaanskloof.

The Eastern Cape Conservation authorities are in the process of developing an integrated management system that will include improved storage and retrieval of all records.

Recent recording of water quality, population monitoring, fire data, etc. has been done using electronic format. This has accelerated the recording process, for all aspects of conservation management, and has allowed faster access to, and retrieval of, previous records for the conservation areas of the Eastern Cape.

### **1.3c(iii) South African National Parks**

Refer to section 2.3c for detailed information on the records maintained on the Cape Peninsula National Park.

### **1.3d Present state of conservation**

Three of the eight protected areas included in this nomination have special conservation management protection in the sense that they are proclaimed Wilderness Areas, namely the Cederberg, Groot Winterhoek, and Boosmansbos Wilderness Areas (refer to Figure 1.3.6; section 1.4b(iii)). Although Baviaanskloof has yet to be declared as a Wilderness Area, it has been managed as one for some time. Integrity of these Wilderness Areas, from a combined ecological, legal and management perspective, is of the highest order. These protected areas are managed as primitive wildernesses in which natural processes are allowed to proceed and human numbers are restricted. Only those activities that are compatible with the wilderness concepts are permitted and staff based at the protected areas monitor the impacts of these activities, addressing impacts as a matter of priority – by, for example, reducing visitor numbers. The Cape Peninsula National Park is a South African National Park and as such is governed by some of the most binding protected area legislation under the National Parks Act (Act 57 of 1976).

A component of one protected area, the Boland Mountain Complex, is part of a biosphere reserve (refer to section 1.4b(vi)) and is managed according to internationally recognised standards. The De Hoop Nature Reserve contains a Ramsar Wetland Site (De Hoop **Vlei**) and the ecological, legal and management approach to this area accords with this internationally recognised status.

It is noteworthy that the World Heritage Site nomination is part of a larger initiative that involves transformation of the managing authority, and a Cape Floral Region-wide conservation strategy called the CAPE Project (Appendix 5). These actions have resulted in a strategic plan with new partnerships (refer to section 1.2c(ii)). The World Heritage Site nomination is but one component of this larger pro-active strategy, which integrates social, financial and conservation initiatives.

The eight protected areas in this nomination contribute to several national monitoring exercises (refer to section 1.6a) including the *Protea* Atlas Project, Birds in Reserves Project, Frog Atlas Project, as well as the Provincial Fire Records database maintained by the Western Cape Nature Conservation Board. While sensitive data (e.g. on precise localities of threatened taxa) is appropriately safeguarded, these readily accessible records are available for most Conservation staff at the touch of a button and provide a clear indication of management and conservation trends in the protected areas and the larger Cape Floral Region.

The conservation system in the Cape Floral Region has been divided into two broad categories:

- |                     |  |
|---------------------|--|
| Category 1 reserves | consisting of national parks, provincial nature reserves and Department of Water Affairs and Forestry (DWAF) reserves, and are supported by strong legal and institutional structures; and,  |
| Category 2 reserves | consisting of conservancies, DWAF demarcated forests, private demarcated forests, local authority reserves, mountain catchment areas, natural heritage sites, protected natural environments and private nature reserves and comprise a heterogeneous assemblage with varying degrees of protection and defensibility (Cowling <i>et al.</i> , 1999a). |

In this nomination, a proposed **conservancy** refers to those in the final stages of planning prior to registration as a conservancy (refer to section 1.4b(v)).

As is the case for most conservation systems throughout the world (Beardsley & Stoms, 1993; Pressey *et al.*, 1996), the Cape Floral Region system is strongly biased in favour of remote, rugged and infertile landscapes that offer little potential for economic development. While approximately 22% of the Cape Floral Region is reserved in some form – the total area being equally shared between Category 1 and 2 reserves – Mountain Complex Broad Habitat Units are over-represented in the system (Table 1.3.5; refer also to Rebelo 1992a). Overall, only 9% of the lowlands are conserved with slightly more than 3% of the system comprising Category 1 reserves (Cowling *et al.*, 1999b). On the other hand, almost 50% of the combined area of Mountain Complexes has some form of reservation status.

In terms of gaps in the reservation system, 54 of the 88 Cape Floral Region Broad Habitat Units have less than 5% of their pre-European area included in the Category 1 system; of these 46 are on the lowlands. Of the 27 Broad Habitat Units that have more than 20% of their area under Category 1 reserves, 20 are Mountain Complex Broad Habitat Units (Cowling *et al.*, 1999b). These biases and gaps are a result of the *ad hoc* manner in which the reserve system of the Cape Floral Region has been assembled. Rebelo (1992a) provides an account of the history of the development of the reserve system in the region.

Table 1.3.5 Extent of reservation within the Cape Floral Region of different reserve categories (refer to text for definition) within different land classes or Broad Habitat Units. (From Cowling *et al.*, 1999b).

Land class	Area (km <sup>2</sup> )	Percentage (%)*
<u>Category 1</u>		
Mountain Complex BHUs	7 728	26.2
Lowland BHUs	1 822	3.1
Total	9 549	10.9
<u>Category 2</u>		
Mountain Complex BHUs	6 851	23.2
Lowland BHUs	3 293	5.6
Total	10 144	11.5
<u>All reserves</u>		
Mountain Complex BHUs	14 579	49.5
Lowland BHUs	5 114	8.8
Total	19 693	22.4

\* Data shown are the percentages of each corresponding land class category

### 1.3e Policies and programmes related to the presentation and promotion of the protected areas

The Communications Department of the Western Cape Nature Conservation Board has a broad range of outreach and educational programmes, information pamphlets, maps, brochures, and an advertising campaign both within the reserves and in travel magazines. Promotional work is done using various media outlets as well as through meetings and discussions between reserve managers and reserve neighbours in both provinces.

The conservation staff within the Chief Directorate Environmental Affairs; Eastern Cape and the Eastern Cape Tourism Board have access to the expertise within the Tourism Board for promotional matters.

Detailed examples of presentations and promotional work done by both national and provincial authorities for the eight protected areas, as well as work planned for the future, is provided in Volume 3 while Internet-based websites for the National and Provincial Conservation Authorities may be viewed on:

Western Cape Nature Conservation Board:.....	<a href="http://www.cnc.org.za">http://www.cnc.org.za</a> <a href="http://www.capenature.org.za">http://www.capenature.org.za</a>
Chief Directorate Environmental Affairs; Eastern Cape:.....	<a href="http://www.ecprov.gov.za">http://www.ecprov.gov.za</a>
Eastern Cape Tourism Board:.....	<a href="http://www.ectour.co.za">http://www.ectour.co.za</a>
SANParks:.....	<a href="http://www.parks-sa.co.za">http://www.parks-sa.co.za</a>
Cape Peninsula National Park	<a href="http://www.cpnpc.co.za">http://www.cpnpc.co.za</a>

## SECTION 1.4 MANAGEMENT OF THE EIGHT PROTECTED AREAS

This section provides a brief description of South African environmental laws and the management regime that regulates different areas within and surrounding the eight protected areas that represent the Cape Floral Region in the South African provinces of the Western and Eastern Cape.

Firstly, this section deals with the issue of ownership and the associated rights of ownership of the protected areas (section 1.4a).<sup>18</sup> Limitations on ownership rights depend on the legal status of the particular protected area in question. A similar analysis is given for the conservation-orientated land surrounding or adjacent to the relevant protected areas.<sup>19</sup>

Secondly, this section lists and describes the legal status enjoyed by the component parts or different areas of the protected areas (in section 1.4b). The legal status of protected areas varies and, in some instances, may be conferred by different statutes. Some areas may also be afforded more than one type of legal status (for example, an area may comprise part of the sea-shore (as defined<sup>20</sup>) and be part of a nature reserve as defined by other legislation.<sup>21</sup>

Thirdly, protective measures and their means of enforcement are explained in a presentation of current South African environmental laws applicable to the protected areas and their surrounds (section 1.4c).<sup>22</sup> Also included are analyses of draft South African laws of general (as well as specific) application to the protected areas and their surrounds. In the analysis of each law the brief description of the law's aims or objectives is followed by an analysis of the extent to which the law enables the protection of biodiversity.

Section 1.4c also includes details of management, such as management plans, financing and staffing in the context of protective measures and their means of enforcement.

### 1.4a Ownership

#### (A) Ownership of the eight protected areas (called Category 1 areas in the CAPE Project)

The eight spatially separate protected areas in this nomination include protected areas designated in law as Provincial Nature Reserves<sup>23</sup>; State Forests<sup>24</sup>; Wilderness Areas<sup>25</sup>; Mountain Catchment

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<sup>18</sup> These are called "Category I" areas in the CAPE Project (refer to Appendix 5).

<sup>19</sup> These are called "Category II" areas in the CAPE Project (refer to Appendix 5).

<sup>20</sup> In section 1 of the Sea-shore Act, 21 of 1935.

<sup>21</sup> For example, the Cape Nature Conservation Ordinance, 19 of 1974.

<sup>22</sup> Copies of these statutes may be viewed in **Appendix 8**

<sup>23</sup> Under the Cape Nature Conservation Ordinance, 19 of 1974.

Areas<sup>26</sup> and National Park<sup>27</sup>. These areas as well as the sea and the sea-shore<sup>28</sup> (portions of which fall within two of the protected areas that are the subject of this nomination) are owned by the State (refer to Figure 1.3.6).

The State's ownership rights are regulated under different laws - depending on the particular legal status of the area in question - for example, whether the area is designated a Provincial Nature Reserve, State Forest, Wilderness Area or part of the sea-shore. Whether or not the protected area is regulated under more than one statute (for example, as both a Mountain Catchment Area and as a Wilderness Area), the right of ownership in each core protected area lies with the State. This right of ownership is regulated by the relevant legislation, which may delegate management authority for, and in some cases prescribe ownership to, for example, the relevant Provincial Authority (see section 1.4b(i)).

#### **1.4a(i) Provincial nature reserves**

Provincial nature reserves are owned by the State, and controlled and managed (in terms of nature conservation carried out there) under the (provincial) Cape Nature Conservation Ordinance<sup>29</sup> ("the Nature Conservation Ordinance").

In the case of the Western Cape province, the provisions of the Nature Conservation Ordinance must be read with the provisions of the Western Cape Nature Conservation Board Act<sup>30</sup> (which details the powers and duties of the Western Cape Nature Conservation Board ("the Board"). In terms of the latter Act, the administration of the whole of the Nature Conservation Ordinance in the Western Cape was delegated to the Western Cape Nature Conservation Board. The main effect of the amendments to the Nature Conservation Ordinance in the Western Cape was to make provision for control of the Provincial nature conservation function by the Statutory Board. In essence, the provisions of the Nature Conservation Ordinance (other than a reorganisation of administrative roles and functions) remain the same for the Western Cape as for the Eastern Cape Province with respect to – for example - conservation activities such as game relocation. Importantly, for the purposes of this nomination, where the Nature Conservation Ordinance is referred to, without distinction between the two Provincial Authorities, it may be assumed that the provisions of the Nature Conservation Ordinance are the same for both provinces.

While the Nature Conservation Ordinance applies in its original form in the Eastern Cape Province, it has recently been amended in the Western Cape by the Western Cape Nature Conservation Laws Amendment Act<sup>31</sup>.

The provisions of the Nature Conservation Ordinance and the legal status that it confers on Provincial Nature Reserves are considered in more detail in section 1.4b(i).

#### **1.4a(ii) State forests**

State forests are state-owned. Ownership rights and the management of State forests are regulated under the National Forests Act. The National Forests Act is analysed in more detail in sections 1.4b(ii) and 1.4c(ix).

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<sup>24</sup> Defined under the National Forests Act, 84 of 1998 (section 2).

<sup>25</sup> The Cederberg, Boosmansbos and Groot Winterhoek Wilderness Areas in the Western Cape province. They were declared as such under the Forest Act, 122 of 1984.

<sup>26</sup> Which are declared under the Mountain Catchment Areas Act, 63 of 1970 (section 2).

<sup>27</sup> Declared under the National Parks Act, 57 of 1976

<sup>28</sup> Section 2 of the Sea-shore Act, Act 21 of 1935.

<sup>29</sup> Ordinance 19 of 1974.

<sup>30</sup> Act 15 of 1998.

<sup>31</sup> Act 3 of 2000, which was published in *Provincial Gazette Extraordinary* 5426 dated 17 February 2000. The amending Act in essence states that the responsibilities for nature conservation described in the Nature Conservation Ordinance are now the responsibility of the Western Cape Nature Conservation Board.

### **1.4a(iii) Wilderness areas**

Wilderness areas were previously defined under the Forest Act.<sup>32</sup> That definition was repealed by the provisions of the National Forests Act. Nonetheless, areas previously defined and demarcated as wilderness areas retain their status by virtue of the savings provisions in the National Forests Act.<sup>33</sup> In summary therefore, any designation of a wilderness area under the Forest Act remains valid if it is consistent with the National Forests Act, until repealed or overridden. Wilderness areas also appear to fall within the definition of “State forest” in the National Forests Act insofar as they can be described as “State land, other than trust forests, designated as demarcated State forest or a similar designation in terms of any previous forest legislation, unless it was withdrawn from demarcation and is no longer used for forestry”.<sup>34</sup>

State forests as well as other categories of land<sup>35</sup> can be declared as “forest wilderness areas” under the National Forests Act.<sup>36</sup> An important limitation on the Minister’s powers to declare a forest wilderness area is contained in section 8(2) of the Act. It provides that the “Minister may declare such an area only if he or she is of the opinion that it is not already adequately protected in terms of other legislation”. The effect of this is that in each case where an application for designation as a specially protected area in one of the three categories provided for in the Act is made, the applicant must consider the issue of whether or not that area is already adequately protected in terms of statutory provision, because that fact will influence the decision-making powers of the Minister, insofar as those powers are constrained by the proviso described.

Under the relevant legislation<sup>37</sup>, forest wilderness areas can incorporate State-owned and privately owned components. Each of the Wilderness Areas formerly proclaimed under the Forest Act that form part of this nomination proposal has a core component, which is State-owned. The core areas include State-owned land that falls into different categories, including Provincial Nature Reserves, State forests and State land (the latter two terms are both defined in the National Forests Act<sup>38</sup>).

The Cederberg, Groot Winterhoek, and Boosmansbos Wilderness Areas are designated in law as wilderness areas and are State-owned. While the Baviaanskloof “wilderness area” is also State-owned it does not have the formal legal status of a wilderness area, although it is currently managed as such. Further details are provided in sections 1.4b(iii) and 1.4c(iv).

### **1.4a(iv) The sea and sea-shore**

Ownership of the sea and sea-shore is regulated under the Sea-shore Act<sup>39</sup>. It provides that the State President (in other words – the State) is the owner of the sea and seashore, except for any portion of the sea-shore lawfully sold before the operation of the Sea-shore Act commenced.<sup>40</sup>

The sea-shore is defined in the Sea-shore Act as the water and the land between the low-water mark and the high-water mark. The “low-water mark” is defined as the lowest line to which the water of the sea recedes during periods of ordinary spring tides, and the “high-water mark” is defined to mean the highest line reached by the water of the sea during ordinary storms occurring during the most stormy period of the year, excluding exceptional or abnormal floods.<sup>41</sup>

The sea is defined as the water and the bed of the sea below the low-water mark and within South Africa’s territorial waters, including the water and the bed of any tidal river and of any tidal lagoon

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<sup>32</sup> Act 122 of 1984.

<sup>33</sup> Specifically, section 74, which provides in the section entitled “savings” that “anything done in terms of a law repealed by this Act – (a) remains valid if it is consistent with this Act, until repealed or overridden”.

<sup>34</sup> See section (a)(ii) of the definition of “State forest” in section of the National Forests Act, 84 of 1998.

<sup>35</sup> See section 8 of the National Forests Act, 84 of 1998.

<sup>36</sup> Section 8(1).

<sup>37</sup> The National Forests Act, 84 of 1998 – see section 8.

<sup>38</sup> Section 1 of the National Forests Act, 84 of 1998.

<sup>39</sup> Act 21 of 1935.

<sup>40</sup> The Act commenced on 10 April 1935.

<sup>41</sup> Section 1 of the Sea-shore Act, 21 of 1935.



(in other words, any estuary). South Africa's territorial waters extend seawards for a distance of twelve nautical miles from the low-water mark.

Reclaimed land in the sea and the seashore is also owned by the State.<sup>42</sup>

#### **1.4a(v) National Parks**

Ownership of National Parks is regulated under the South African National Parks Act.<sup>43</sup> Refer to section 2.4a for details of the ownership of the Cape Peninsula National Park.

#### **(B) Ownership of the reserves (called Category II areas in the CAPE Project)**

The different reserves (specifically referring to reserves that surround the protected areas) comprise Mountain Catchment Areas, private nature reserves, conservancies, and, in one instance, components of a biosphere reserve.<sup>44</sup> Ownership of the different parts of land that make up these reserves vests in different persons or entities. As a general rule, they are in private ownership (with the exception of the core of the biosphere reserve, which is State-owned). Significantly, while land that comprises a reserve may be privately owned, the provincial and national governments are empowered by law to protect the environment and biodiversity both inside and outside formally proclaimed reserves.

#### **1.4a(v) Private nature reserves**

As their name implies, private nature reserves are privately owned. The Nature Conservation Ordinance entitles any private landowner, with the approval of the provincial Minister responsible for nature conservation and subject to conditions imposed by that Minister, to establish a private nature reserve by proclamation on land "of which he or she is the owner and assign a name to such reserve."<sup>45</sup>

In the Western Cape Province, the responsible provincial minister is the Minister for Environmental and Cultural Affairs and Sport. In the Eastern Cape Province, it is the Minister for Economic Affairs, Environment and Tourism. The procedure for establishing the reserve is stipulated in the Nature Conservation Ordinance.<sup>46</sup>

#### **1.4a(vi) Conservancies**

As a general principle, conservancies incorporate privately-owned land but if land within them is State-owned then potentially there could be elements comprising both private and State ownership of land within a particular conservancy.<sup>47</sup>

#### **1.4a(vii) Biosphere reserves**

The core areas within biosphere reserves are normally State-owned and the buffer zone or zones and outer transition areas are usually in private ownership. In the case of the Kogelberg Biosphere Reserve, the core area (Kogelberg Nature Reserve) is a demarcated State forest<sup>48</sup>, which is State-owned.

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<sup>42</sup> Section 5 of the Sea-shore Act, 21 of 1935.

<sup>43</sup> Act 57 of 1976.

<sup>44</sup> The Kogelberg Biosphere Reserve.

<sup>45</sup> Section 12(1) of the Nature Conservation Ordinance, 19 of 1974.

<sup>46</sup> Section 12(2) of the Nature Conservation Ordinance, 19 of 1974.

<sup>47</sup> For example, the Cederberg conservancy spans approximately 200 000 hectares of which 50% is state-owned and 50% comprises private land (Refer to Appendix 5: *An assessment and review of the Current Policy, Legal, Institutional, Socio-economic and Financial Situation Affecting the Conservation of Biodiversity in the Cape Floristic Kingdom* ("CAPE Report"), Part 2 at page 11.17). This document, dated 15 November, 1999, was produced by the Council for Scientific and Industrial Research ("CSIR").

<sup>48</sup> Under the Forest Act, 122 of 1984, and as that expression is now defined in the National Forests Act, 84 of 1998.

## **1.4b Legal status**

The legal status<sup>49</sup> of the component parts that make up each of the eight spatially separate protected areas is described in detail in section 4 of each chapter dealing with a specific protected area. Reference is made, in each of those sections, to the law, regulation or proclamation, which confers a particular legal status on that area. Local management authorities and their roles and responsibilities are also described in those sections of this nomination.

Set out below is a general analysis of the rights and obligations in law that attach by virtue of a particular protected area being afforded a particular legal status.

### **1.4b(i) Provincial nature reserves**

Provincial nature reserves are defined in the Nature Conservation Ordinance as “a provincial nature reserve established in terms of section 6(i) of that Ordinance”. Provincial Nature Reserves can only be established by the Provincial Minister responsible for nature conservation. In the Western Cape Province, the responsible provincial minister is the Minister for Environmental and Cultural Affairs and Sport. In the Eastern Cape Province, it is the Minister for Economic Affairs, Environment and Tourism.

Provincial nature reserves are established by Proclamation. In the Western Cape the management, control and development of every Provincial Nature Reserve vests in the Board,<sup>50</sup> which is a statutory body with legal personality.

The Board's powers, functions and duties are articulated in the Western Cape Nature Conservation Board Act.<sup>51</sup> In particular, the Board must carry out these functions in the province's protected areas although, as mentioned above, the Board's functions are not limited to formally proclaimed reserves.

The Board's powers and duties are stipulated in the Western Cape Nature Conservation Board Act.<sup>52</sup> The (ten member) Board has been assigned the power to administer different national and provincial natural resource and protected area laws within the Western Cape Province. They include the Mountain Catchment Areas Act, the Sea-shore Act, and Western Cape Nature Conservation Laws Amendment Act, read with the Nature Conservation Ordinance.<sup>53</sup>

The Western Cape Nature Conservation Board Act also entitles the Board to make recommendations to the provincial Minister in the province regarding the proclamation and de-proclamation of nature conservation areas. Powers granted to the Board to achieve nature conservation are wide-ranging.<sup>54</sup>

One of the most significant implications of the Board's establishment is that it is entitled to spend the funds raised by it in accordance with the provisions of the Western Cape Nature Conservation Board Act. This provides opportunities for more effective mobilisation of funds for conservation and for the development of an effective corporate culture.<sup>55</sup>

In the Eastern Cape Province, the Eastern Cape Tourism Board within the provincial Department of Economic Affairs, Environment and Tourism is responsible for the management of provincial nature reserves. Day-to-day management functions outside protected areas are carried out by the Chief Directorate: Environmental Affairs.

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<sup>49</sup> For example, Crown Land that was later transferred to the Republic of South Africa on independence in 1961 and that subsequently acquired other legal status (for example, State land).

<sup>50</sup> Which was established in terms of section 2 of the Western Cape Nature Conservation Board Act, 15 of 1998.

<sup>51</sup> Section 9 of the Western Cape Nature Conservation Board Act, 15 of 1998.

<sup>52</sup> Act 15 of 1998.

<sup>53</sup> The relevant assignments are listed in Schedules 2 to 4 of the Western Cape Nature Conservation Laws Amendment Act, 3 of 2000.

<sup>54</sup> Section 9(1)(a)-(y) of Act 15 of 1998. The expression “nature conservation” is defined in the Western Cape Nature Conservation Board Act to mean the conservation of naturally-occurring ecological systems, the sustainable utilisation of indigenous plants and animals and the promotion and maintenance of biological diversity within these systems, with due regard to the need to preserve objects of geological, archaeological, historical, ethnological, educational, oceanographic or scientific interest.

<sup>55</sup> Refer Appendix 5: CAPE Report at pages 2.27 and 3.34.

The Nature Conservation Ordinance<sup>56</sup> envisages the establishment of provincial nature reserves in the Eastern Cape province on any land under the Minister's control or management<sup>57</sup> or any land under the control or management of a State department.<sup>58</sup>

For both provinces, in the case of a nature reserve to be established on land under the control or management of a State department the relevant legislation obliges the Minister to consult (and conclude an agreement with) the relevant State department before the reserve is established. The agreement must confirm consensus between the Minister and that Department on different topics, including the terms and conditions on which the nature reserve is to be established and the manner in which it is to be managed, controlled and developed.<sup>59</sup>

For both provinces, the de-proclamation of any nature conservation area or land forming part of a nature conservation area can only be effected by the responsible part designated under the relevant statute. . In the Western Cape the procedure is stipulated in the Western Cape Nature Conservation Board Act.<sup>60</sup> This involves the Board giving notice of the proposed de-proclamation and the reasons for it, to the municipality in whose area the land is situated, and calling for its comments and recommendations regarding the proposed de-proclamation. The Board is also obliged to publish a public notice regarding the intended de-proclamation and to serve notices on affected landowners, where this is reasonably practicable. The Board must then consider any objections received and decide whether or not to recommend the proposed de-proclamation.

In the Eastern Cape province, the process of deproclamation is regulated mainly by the provisions of the Nature Conservation Ordinance.

#### **1.4b(ii) State forests**

State forests are established and regulated under the National Forests Act, which repealed and replaced the Forest Act.<sup>61</sup> Both statutes are described in detail in section 1.4c of this chapter.

State forests are defined in the National Forests Act<sup>62</sup> as:

- (i) "State land, other than trust forests, acquired or reserved for forestry in terms of this Act or any previous forest legislation, unless it has been released under section 15 (3);
- (ii) State land, other than trust forests, designated as demarcated State forests or a similar designation in terms of any previous legislation, unless it was withdrawn from demarcation and is no longer used for forestry;
- (iii) Trust forests; and,
- (iv) includes –
  - (i) State plantations, State sawmills and State timber preservation plants;
  - (ii) Land controlled and managed by the Department for research purposes or as a tree nursery;
  - (iii) Areas protected in terms of section 8(1)(a) and (b);
  - (iv) An area of State land which has been set aside in terms of previous legislation for the prevention of soil erosion or sand drift;
  - (v) An area referred to in paragraph (a) or (b)(i) –(iv), the ownership or control of which is transferred to a person or organ of State contemplated in section 53(2)(g)(i)."

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<sup>56</sup> In the Western Cape, the Western Cape Nature Conservation Laws Amendment Act has replaced the Nature Conservation Ordinance, 19 of 1974.

<sup>57</sup> Section 6(1)(a) of the Nature Conservation Ordinance, 19 of 1974

<sup>58</sup> Section 6(1A)(a) of the Nature Conservation Ordinance 19 of 1974.

<sup>59</sup> Section 6(1A)(b) of the Nature Conservation Ordinance 19 of 1974.

<sup>60</sup> Section 9(3) of the Western Cape Nature Conservation Board Act (Act 15 of 1998).

<sup>61</sup> Act 122 of 1984.

<sup>62</sup> Section 2.

“State land” is defined in the National Forests Act to mean:

“land which vests in the national or provincial government –

- (a) including land held in trust by the Minister of Land Affairs or the Ingonyama referred to in the KwaZulu Ingonyama Trust Act<sup>63</sup>; but,
- (b) excluding land belonging to a municipality.<sup>64</sup>

The rights to use, manage, control and operate State forests (as well as ownership in forestry products produced in these areas) vests in national government, represented by the Minister of Water Affairs and Forestry. These rights are subject to certain statutory provisions; some are contained in the National Forests Act and others flow from other national Acts of Parliament.<sup>65</sup> The ownership of State forests (other than trust land) also vests in the State.

Management of State forests in the Western Cape province was previously delegated to the then Department of Nature Conservation (“the Department”) within the erstwhile provincial administration.<sup>66</sup> In terms of that delegation the Department had assumed management responsibility for a total State forest area in the western and southern portions of the Western Cape Province, of approximately 525 000 hectares. That management function is now undertaken in the province by the Board, which has succeeded the Department and the latter’s successors-in-title.

In the Eastern Cape, State forests were also previously managed by the provincial administration under the same delegation. Responsibility for their management now rests with the Chief Directorate: Environmental Affairs within the provincial Department of Economic Affairs, Environment and Tourism.

#### **1.4b(iii) Wilderness areas**

Wilderness areas were previously proclaimed under the Forest Act.<sup>67</sup> The sections of that Act defining wilderness areas and prescribing the procedure for their declaration were repealed by the provisions of the National Forests Act (refer section 1.4c(ix)). The latter statute nonetheless saved all declarations of wilderness areas previously made under the Forest Act.<sup>68</sup> Accordingly, they retain their legal status as State-owned protected areas.

The National Forests Act now provides for the declaration of land with different legal status (State forest, or any land purchased or expropriated by the State, or private land where the owner has requested or consented to the declaration)<sup>69</sup> as a specially protected area. Specially protected areas declared under the National Forests Act can be recognised in one of three categories. They are first, a forest nature reserve; second, a forest Wilderness Area; and third, “any other type of protected area which is recognised in international law and practice”.<sup>70</sup>

The legal effect of setting aside a protected area under the Act is two-fold. First, damage to any forest produce in a protected area is prohibited,<sup>71</sup> and second, the decision to declare a protected area may not be revoked, nor may a State forest be sold, nor may a servitude over a protected area be granted without the Minister first following the same procedure as that required for declaring the protected area. In addition, Parliament must approve the revocation by resolution.<sup>72</sup>

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<sup>63</sup> Kwazulu-Natal Act, 3 of 1994.

<sup>64</sup> The definition of State land is contained in section 2 of the National Forests Act, 18 of 1998.

<sup>65</sup> The rights are subject to two other statutes and the rights contained in them; they are firstly, the Restitution of Land Rights Act, 22 of 1994) and secondly, the Interim Protection of Informal Land Rights Act, 31 of 1996.

<sup>66</sup> *Assessment of State forest management by provincial authorities: Western Cape* (by R.C. Bigalke) page 1. The assignment was contained in Proclamation No. 96 of 1992 in *Government Gazette* 14246 dated 21 August 1992.

<sup>67</sup> Act 122 of 1984.

<sup>68</sup> Section 74 of the National Forests Act, 84 of 1998

<sup>69</sup> Section 8(1)(a) – (c) of the National Forests Act, 84 of 1998.

<sup>70</sup> Section 8(1)(iii). of the National Forests Act, 84 of 1998.

<sup>71</sup> Section 10(1). of the National Forests Act, 84 of 1998.

<sup>72</sup> Section 10(2)(a) and (b) of the National Forests Act, 84 of 1998.

The Minister is responsible for:<sup>73</sup>

- managing the protected area in a manner which is consistent with the purpose for which it was established; and,
- making rules for the management of the protected area so as to achieve the purpose for which the area has been protected, unless suitable rules already exist for the area.

Since the concept of a Wilderness Area entails management towards a pristine environment, *in situ* biodiversity conservation and limits to numbers of visitors, *etc.*, Wilderness Areas effectively enjoy the highest conservation status and management objectives.

Management of Wilderness Areas within the Eastern Cape province is undertaken by the Eastern Cape Tourism Board and in the Western Cape, by the Western Cape Nature Conservation Board.<sup>74</sup>

#### **1.4b(iv) Private nature reserves<sup>75</sup>**

The legal status of private nature reserves is conferred on them by the provisions of the Nature Conservation Ordinance read with the Western Cape Nature Conservation Board Act and the Western Cape Nature Conservation Laws Amendment Act. Private nature reserves are managed by the person(s) who established them.

#### **1.4b(v) Conservancies**

The status of conservancy land reflects the voluntary co-operative environmental management of an area by its community and users and in respect of which registration has been granted by the relevant provincial nature conservation agency. Three categories of conservancy are recognised; rural, urban and industrial conservancies. The establishment and membership of conservancies is voluntary. Although they may receive limited government support, conservancies are not afforded a particular legal status. They may be subject to (voluntary) land use controls by their members, who may agree to restrictive conditions in their title deeds in order to bind successors-in-title.

#### **1.4b(vi) Biosphere reserves**

Biosphere reserves<sup>43</sup> are formally recognised under the UNESCO “Man and the Biosphere Programme”, but have not yet been afforded a particular legal status in South African law. These reserves usually incorporate a core area or areas, which are designated for long-term protection and a buffer zone(s), which surround the core area. In the buffer zone, only activities compatible with the conservation activities in the core zone may take place. In the outer transition area, which falls outside the buffer zone, the promotion and development of sustainable resource management practices must accord with the objectives of the reserve as a whole. There should be a management policy or plan for the reserve and a designated authority or mechanisms for implementing the plan.<sup>76</sup>

Under the National Forests Act, biosphere reserves can now be afforded a particular legal status as a “specially protected area”<sup>77</sup> in the category of a “protected area, which is recognised in international law or practice”.<sup>78</sup>

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<sup>73</sup> Section 11(2)(a) and (b) of the National Forest Act, 84 of 1998.

<sup>74</sup> Which was established under the Western Cape Nature Conservation Board Act, 15 of 1998. *Pers. comm.* with Mr Fanie Bekker on 16 August 2000.

<sup>75</sup> Private nature reserves, conservancies and biosphere reserves are also subject to laws of general application (refer to section 1.4c), including the National Environmental Management Act, the Environment Conservation Act and Environmental Impact Assessment Regulations promulgated under the latter Act.

<sup>76</sup> UNESCO 1996 (refer to Appendix 5: the CAPE Report Part 2 at page 11.18 - 19).

<sup>77</sup> Section 8 of the National Forests Act, 84 of 1998.

<sup>78</sup> Section 8(1)(c)(iii) of the National Forests Act, 84 of 1998.

### **1.4b(vii) National Parks**

National Parks are established by proclamation under the National Parks Act (57 of 1976). Details of the legal status of the Cape Peninsula National Park are provided in section 2.4b.

### **1.4c Protective measures and means of enforcing them**

In this analysis of applicable South African environmental laws (whether of general or more specific application) the brief description of the law's aims and objectives is supplemented by an analysis of the extent to which that law enables or promotes biodiversity protection. The analysis also seeks to describe whether or not these laws are implemented effectively. This section first analyses laws with general application and then focuses on laws that are aimed at biodiversity and natural resource protection within a particular area, such as a provincial nature reserve, a State forest, a wilderness area or a mountain catchment area.

With the exception of areas that remain under the management and control by the national tier of government (for example, national parks<sup>79</sup> and national botanical gardens<sup>80</sup>), implementation and/or enforcement or protective measures for protected areas and the preservation of biodiversity are delegated to the provincial conservation authorities by the relevant National Government departments.<sup>81</sup> In both the Western and Eastern Cape provinces, the provincial conservation authorities, in co-operation with other relevant departments, are tasked with implementation and enforcement of protective legislation and agreements. Where the provincial administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

## **A) LAWS OF GENERAL APPLICATION**

### **1.4c(i) The Constitution**<sup>82</sup>

South Africa's Constitution is the law against which all other laws applicable in the country (whether common law or statutory) must be measured. To the extent that those laws are in conflict with the Constitution they will, as a general principle, be deemed invalid if subjected to a court challenge.<sup>83</sup>

The Constitution contains an environmental right in the Bill of Rights.<sup>84</sup> All three spheres of government (national, provincial and local) have a correlative duty to ensure that the environment is not harmful to a person's health or well-being.<sup>85</sup> The spheres of government are also obliged to introduce legislative and other measures to prevent pollution and ecological degradation, to promote conservation and to secure ecologically sustainable development and use of natural resources (while promoting justifiable economic and social development).<sup>86</sup>

Like all of the other fundamental human rights articulated in the Bill of Rights, the environmental right is not unlimited. The Constitution provides that any of the rights contained in the Bill of Rights may be limited by law of general application if a two-part test is satisfied.<sup>87</sup> Limitation is appropriate first, "to the extent that the limitation is reasonable and justifiable in an open and democratic society

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<sup>79</sup> Proclaimed under the National Parks Act, 15 of 1976.

<sup>80</sup> Proclaimed under the Forest Act, 122 of 1984.

<sup>81</sup> These include permitting procedures, for example for collection of plant material or game translocation, as well as the regulation of change in land use, or other activities that may affect biodiversity (that is, through the enforcement of the EIA regulations).

<sup>82</sup> Act 108 of 1996.

<sup>83</sup> Constitutional challenges have been mounted against different laws that appeared to, or actually did, infringe on the fundamental rights contained in the Constitution, since its enactment in 1996. These challenges are heard by the Constitutional Court, which is the forum of final hearing on constitutional matters in South Africa.

<sup>84</sup> Section 24 of the Constitution, Act 108 of 1996.

<sup>85</sup> Section 24(a). of the Constitution, Act 108 of 1996.

<sup>86</sup> Section 24(b). of the Constitution, Act 108 of 1996.

<sup>87</sup> Section 36 of the Constitution, Act 108 of 1996.

based on human dignity, equality and freedom” and second, provided that all relevant factors are taken into account. Some of these factors are mentioned in the Constitution,<sup>88</sup> but these are not the only ones that need to be taken into account in every case. The Constitution provides that, with the exception of the limitations clause or any other Constitutional provision, no other South African law may purport to limit any right that is entrenched in the Bill of Rights.<sup>89</sup>

National government has the exclusive power to enact legislation on certain areas identified in the Constitution, including laws regulating national parks, national botanical gardens and marine resources. It also has a duty to assist provinces (and municipal authorities) to develop the required administrative capacity to exercise their powers and perform their functions effectively.<sup>90</sup>

From the perspective of biodiversity protection, the Constitution must be seen as the primary enabling and facilitating Act of Parliament which entitles government at different levels (sometimes exclusively and sometimes concurrently) to pass laws to protect further the identified Constitutional imperatives. Many of South Africa’s statutes that regulate biodiversity conservation make explicit reference (either in the preamble or within the Act itself) to the overarching supremacy of the Constitution, and to the specific Act’s objectives in achieving the aims of the Constitution. Obviously, this can only be said of statutes enacted after the inception of the Constitution.

#### **1.4c(ii) World Heritage Convention Act**<sup>91</sup>

This Act provides for the incorporation of the Convention Concerning the Protection of the World’s Cultural and Natural Heritage, 1972 (“the Convention”) into South African law, as well as its enforcement and implementation.<sup>92</sup>

The Act recognises that highly dynamic, sensitive, vulnerable or stressed ecosystems, such as coastal shores, dolomitic land and ridges, estuaries, wetlands, and similar ecosystems require specific attention in management and planning procedures, especially where they are subjected to significant human usage and development pressure. It also provides that for the purposes of applying the Act, sustainable development of World Heritage Sites must include the avoidance (or mitigation, where avoidance is impossible) of unnatural disturbance of ecosystems and loss of biodiversity.

The Act seeks to create a legal framework that allows government in South Africa to:

- strengthen the powers of bodies currently managing areas to be listed as World Heritage Sites, where appropriate;
- establish new institutions, called Authorities, to provide for the cultural and environmental protection and responsible development of inscribed sites;
- create an Advisory Board to oversee the Authority and an executive staff component responsible for the day-to-day management of the Authority;
- provide for the preparation of integrated management plans as required by the Convention;
- provide for proper auditing and financial controls and the preparation of annual reports outlining the activity of each Authority; and,
- ensure that State of Conservation Reports are prepared, as required by the Convention.

Each specific site proclaimed under the Convention and regulated by the World Heritage Convention Act will in due course be managed by a proclaimed Authority, which will manage it in conjunction with other national, provincial and local role players with jurisdiction over the site or any part of it.

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<sup>88</sup> Section 36(1)(a) to (e) of the Constitution, Act 108 of 1996.

<sup>89</sup> Section 36(2) of the Constitution, Act 108 of 1996.

<sup>90</sup> Section 125(3) of the Constitution, Act 108 of 1996.

<sup>91</sup> Act 49 of 1999

<sup>92</sup> South Africa acceded to the Convention on 10 July 1997.

### **1.4c(iii) National Environmental Management Act<sup>93</sup> (“NEMA”)**

NEMA's primary aim is “to provide for co-operative environmental governance”.<sup>94</sup> It makes reference to achieving its aims in concert with the Constitutional provisions described above. NEMA seeks to achieve its primary aim through three main elements. These are first; establishing principles for public decision-making on environmental matters; second, establishing public institutions that promote co-operative governance;<sup>95</sup> and third, establishing procedures for the co-ordination of environmental functions.<sup>96</sup>

Of specific relevance from the perspective of biodiversity protection is the NEMA principle that stipulates that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied.<sup>97</sup> Also relevant is the NEMA principle which provides that sensitive, vulnerable, highly dynamic or stressed ecosystems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.<sup>98</sup> The principles bind the activities of all organs of State that may significantly affect the environment.

An obvious weakness in NEMA is that it does not provide for practical protection of biodiversity. This omission is problematic for at least two reasons. The first is that in its present form, NEMA does not provide sufficient regulation of, or capacity for, biodiversity protection. The second is that in its present form, NEMA does not ensure that South Africa gives effect to its obligations under the Convention on Biological Diversity. However, a regulatory reform process (which will include a new law regulating biodiversity protection) is presently underway, and the revised NEMA will contain a chapter dedicated to biodiversity conservation.

Given that the day-to-day management and conservation of protected areas is governed by other laws that impose specific controls for biodiversity protection (for example, the Nature Conservation Ordinance, the Western Cape Nature Conservation Board Act and the Mountain Catchment Areas Act) the lack of specific regulation in NEMA is not regarded as an impediment to the protection of South Africa's biodiversity. Enforcement of NEMA is a concurrent national and provincial responsibility.

### **1.4c(iv) Environment Conservation Act<sup>99</sup> (the “ECA”)**

The ECA is the forerunner to NEMA. It, in turn, replaced its predecessor (and South Africa's first dedicated statutory environmental law), which was a 1982 Act of the same name.<sup>100</sup> While many of the ECA's provisions have been repealed by NEMA, the ECA still regulates certain areas (and in some cases, human activities that negatively affect or could affect the environment) that fall within the proposed nomination sites. The administration of many of the key provisions of the ECA have been delegated to the provinces.<sup>101</sup> In the Western Cape these are undertaken either by the Western Cape Nature Conservation Board or by directorates within the Department of Environment, Cultural Affairs and Sport (DECAS).<sup>102</sup> In the Eastern Cape, they are undertaken by the Chief Directorate Environmental Affairs; Eastern Cape, the Eastern Cape Tourism Board or by the relevant directorates within the Department of Economic Affairs, Environment and Tourism.

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<sup>93</sup> Act 107 of 1998

<sup>94</sup> Preamble to NEMA.

<sup>95</sup> The Committee for Environmental Co-ordination (CEC) and the National Environmental Advisory Forum.

<sup>96</sup> The requirement that identified organs or state prepare Environmental Implementation Plans (EIPs) and Environmental Management Plans (EMPs), well as a chapter regulating Integrated Environmental Management (IEM) procedures.

<sup>97</sup> Section 2(4)(a)(i). of NEMA.

<sup>98</sup> Section 2(4)(r) of NEMA

<sup>99</sup> Act 73 of 1989.

<sup>100</sup> Act 100 of 1982.

<sup>101</sup> Proclamation R 29 in *Government Gazette* 16346 dated 7 April 1995.

<sup>102</sup> Specifically, environmental impact assessments for activities scheduled under the EIA Regulations are assessed by the Environmental Impact Management Unit within the Department.



Different policies have been produced under the ECA.<sup>103</sup> The policies survived the repeal of the section under which they were initially published. In a recent judgment in the Cape of Good Hope Provincial Division,<sup>104</sup> the continued relevance of the policies was affirmed, in the exercise by public authorities of their decision-making powers. This has the direct effect of obliging public authorities to consider the effect of the policies where a decision to be made by them could, or will, impact biodiversity conservation.

The 1994 General Policy promulgated under the ECA<sup>105</sup> is directly relevant to biodiversity protection; it provides for the preparation of a national nature conservation plan, including the compilation of a complete inventory of (and a classification system for) protected areas. The nature conservation plan was to be developed further by the national Department of Environmental Affairs and Tourism (DEAT) to ensure the maintenance of South Africa's biodiversity resources. The objective of the plan was the establishment of a representative system of protected areas with a "rational coverage and distribution to include the various vegetation types, biomes and land forms".

Also promulgated under the ECA was a *General Policy for the Classification of Terrestrial and Marine protected areas*.<sup>106</sup> Some of the categories recorded in that Policy expressly refer to biodiversity conservation; for example the objectives for scientific reserves (established under Category 1 in the Policy) are recorded as the maintenance of essential ecological processes, the preservation of biodiversity and the protection of special cultural resources in an undisturbed state, in order to have representative examples of the natural environment and/or special cultural resources available, for different reasons. These reasons include scientific study, environmental monitoring, and the maintenance of genetic resources in a dynamic and evolutionary state.

An ECA General Policy<sup>107</sup> aimed at the control of vehicles in the coastal zone also makes reference to biodiversity protection as one of its aims. It provides for the closure of certain areas on the beach including ecologically sensitive areas and protected areas. The former category includes estuaries, and bird and turtle nesting areas, while the latter includes national parks, nature reserves and Wilderness Areas.

The ECA also provides for the declaration and management of areas as protected natural environments, special nature reserves and limited development areas. These declarations act as mechanisms to assist in achieving biodiversity protection.<sup>108</sup>

In addition to the different policies promulgated under it, the ECA provides for Environmental Impact Assessment regulation (in the so-called "EIA Regulations") of different activities.<sup>109</sup> Some of the scheduled activities are likely to impact on the biophysical environment generally and specifically on biodiversity and accordingly, fall under regulation of the EIA Regulations. The application of these EIA regulations is an effective tool in controlling activities that may impact on the environment, as well as change in land use, both within and outside formally proclaimed areas. This is particularly significant for privately-owned land, which is not as well protected as a formally proclaimed nature reserve, for example.

Developments in South African environmental law have moved beyond the (somewhat narrow) focus of the ECA. For example, the articulation of contemporary international legal principles such as the "polluter pays", the "precautionary principle" and the "principle of preventive action" are not

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<sup>103</sup> Section 2 of the ECA

<sup>104</sup> *Save the Klein Hangklip Association v The Minister of Planning Administration and Culture of the Province of the Western Cape and Others* (Unreported judgment delivered in the Cape of Good Hope Provincial Division of the High Court of South Africa on 3 November 2000.)

<sup>105</sup> In *Government Gazette* 15428 dated 21 January 1994.

<sup>106</sup> In *Government Gazette* 15726 dated 9 May 1994.

<sup>107</sup> Promulgated in *Government Gazette* 15655 dated 29 April 1994.

<sup>108</sup> See sections 16, 18 and 23 of the ECA respectively. Areas deemed protected natural environments by section 44(2) of the ECA. Areas previously declared natural areas under section 4(1) of the Physical Planning (Act 86 of 1967) include the so-called "Cape District Nature Area". The Cape Peninsula Protected Natural Environment bounds the area of the Cape Peninsula Park and is approximately double the size of the latter.

<sup>109</sup> Promulgated in *Government Gazette* 18261 dated 5 September 1997.

found in the ECA but do appear in NEMA.<sup>110</sup> Once NEMA's provisions adequately regulate areas covered by those parts of the ECA that are still extant, the need for the ECA and its policies will be largely removed and its remaining sections will probably be repealed. Appropriate regulation under NEMA will be created in part through the present regulatory reform process, which includes redrafting the Act, itself, and through regulations made under NEMA.

Implementation and enforcement of the ECA and regulations is a concurrent national and provincial responsibility. Responsibility for granting approvals under the EIA regulations is assigned to the provincial environmental departments in the respective provinces.

#### **1.4c(v) National Water Act** <sup>111</sup>

This statute aims to achieve the proper protection, use and control of South Africa's water resources, and it establishes appropriate institutions to ensure this aim. The National Water Act makes national government the public trustee of South Africa's water resources and gives it the power to regulate all fresh water in South Africa.<sup>112</sup> The Act's scope of application includes rivers, lakes, wetlands, aquifers and places where fresh and marine water occur together (in estuaries and coastal wetlands).

The National Water Act provides that water management must be guided by a national water resource strategy which applies to the whole country, and more specific catchment management strategies which will be applicable to part or all of a designated water management area. Elements of the national water classification system include ascertaining "the Reserve" and resource quality objectives. "The Reserve" includes the quantity and quality of water required to satisfy contemporary or (near) future basic human needs and "to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource".<sup>113</sup> The Act's purpose includes ensuring that in controlling the nation's water resources, aquatic and associated ecosystems and their biodiversity are taken into account.<sup>114</sup>

The Act contains various provisions that will have a positive impact on biodiversity protection. Some of the positive impacts will result from new, more representative structures, which must make joint decisions on how best to use and conserve the resource; others will result from the broader approach that the drafters of the Act took in regard to its scope of application. Wetlands are explicitly included within the scope of the Act and it follows that they should receive greater legal protection as a result, because in addition to being defined in the Act, wetlands are regarded by the Act as watercourses and must be taken into account in determining water management areas.<sup>115</sup> Remedying the effects of damage to wetlands is also possible under the Act.<sup>116</sup> Many activities, which previously impacted negatively on wetlands, such as draining or cultivating them, or allowing livestock to graze on them, are now controlled by the Act and in many cases will require licensing.<sup>117</sup> "Water use" is also defined to include impeding or diverting the flow of water in a watercourse and altering its bed or characteristics.<sup>118</sup>

Institutionally the Working for Water Programme ("WfW"), established in 1995 by the Department of Water Affairs and Forestry ("DWAF"), is in a position to contribute significantly to the protection of aquatic and terrestrial biodiversity through increasing the availability of water in catchment areas that were previously choked with alien invasive vegetation. Eradication of this alien vegetation and the creation of employment opportunities through the WfW have been highlights of the DWAF administration of the new Act.

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<sup>110</sup> Section 2 of NEMA.

<sup>111</sup> Act 36 of 1998.

<sup>112</sup> National government acts through the Minister of Water Affairs and Forestry (section 3).

<sup>113</sup> Section 2(g) of the National Water Act, 36 of 1998.

<sup>114</sup> Section 2(g). of the National Water Act, 36 of 1998.

<sup>115</sup> Section 6(2) of the National Water Act, 36 of 1998.

<sup>116</sup> Section 19(2) of the National Water Act, 36 of 1998.

<sup>117</sup> See generally, the provisions of chapter 4 of the National Water Act, 36 of 1998.

<sup>118</sup> Section 21(c) and (i) of the National Water Act, 36 of 1998.

While implementation and enforcement of the National Water Act are primarily the function of the National Department of Water Affairs and Forestry, water user associations (also established under the Act) have as some of their primary functions, the protection of watercourses and the quality of the water in them.<sup>119</sup> If these duties are properly discharged then this will have as one of its effects, the protection of aquatic and terrestrial biodiversity. The implementation of “the Reserve” and the development of Catchment Management Plans provide significant measures for protection of riverine, riparian and catchment biodiversity.

#### **1.4c(vi) Mountain Catchment Areas Act**<sup>120</sup>

Mountain Catchment Areas surround most of the eight protected areas described in this nomination. Mountain Catchment Areas are set aside under that Act with several objectives. They include water and soil conservation, and appropriate management of alien invasive vegetation. Both the Western Cape Nature Conservation Board and the Chief Directorate Environmental Affairs; Eastern Cape, perceive their role in Mountain Catchment Areas to be the management and conservation of areas declared under the Act in an integrated way, such that biodiversity and ecological processes are maintained.

The Mountain Catchment Areas Act provides for the conservation, use, management and control of land situated in Mountain Catchment Areas. Mountain Catchment Areas are declared by proclamation in the *Government Gazette*. Previously they were declared at the national level but since 1995 and the administration of the Act being assigned to the provinces, this situation has changed. A number of Mountain Catchment Areas also fall within the proposed protected areas.<sup>121</sup>

The Act provides for biodiversity protection within Mountain Catchment Areas by different measures. One of these is the establishment of fire protection committees and the preparation of fire protection plans, to ensure that a proper management regime regulates the activity of preparing and maintaining firebreaks within Mountain Catchment Areas. The National Veld and Forest Fire Act<sup>122</sup> provides that a fire protection committee established under the Mountain Catchment Areas Act may be recognised and registered as a fire protection association (“FPA”) under the former Act.

The Mountain Catchment Areas Act also empowers the provincial authority responsible for administering it to prescribe management measures for catchment areas. The competent national or provincial authority may give binding directions to owners and occupiers of land situated within these areas in order to achieve the Act’s objectives. The directions may relate among other things to the prevention of soil erosion and the protection of natural vegetation within the area.

#### **1.4c(vii) Conservation of Agricultural Resources Act**<sup>123</sup> (CARA)

As its title implies, this Act focuses on agricultural resource protection. Apart from the EIA Regulations, CARA is one of the primary pieces of national legislation that regulates control of invasive alien plant species, although the original reason for control stems from the potential negative impact that these species might have on agricultural activity, rather than attempts to preserve indigenous biodiversity resources. Interestingly, the provisions of this Act that regulate weeds and invader plants are deemed to apply to urban as well as agricultural land.<sup>124</sup>

A wide range of control measures may be prescribed by the (national) Minister of Agriculture; these include measures regulating the cultivation of virgin soil, the utilisation and protection of water resources within agricultural land, and the utilisation and protection of burnt vegetation, which comprises agricultural land.

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<sup>119</sup> Schedule 4 of the National Water Act, 36 of 1998.

<sup>120</sup> Act 63 of 1970.

<sup>121</sup> For example, different areas proclaimed in Clanwilliam, Caledon, Worcester and Paarl, as well as different areas in Divisions of the Clanwilliam and Ceres districts (the latter is known as the Sederberg Mountain Catchment Area). These were declared by Proclamation in different Government Notices in 1978 and 1981.

<sup>122</sup> Act 101 of 1998.

<sup>123</sup> Act 43 of 1983.

<sup>124</sup> Section 2(2)(a) of CARA, Act 43 of 1983.

Regulations proposed under CARA have replaced Regulations 15 and 16 of the General Regulations previously enforced under that Act.<sup>125</sup> The CARA regulations aim to combat declared weeds and invader plants on a more sustained and proactive manner than did their predecessor.<sup>126</sup>

The lists of declared weeds and invader plants in the CARA regulations include the alien vegetation species that predominate in South Africa. The measures to reduce alien invaders include prohibiting their importation,<sup>127</sup> obliging landowners to control them,<sup>128</sup> and prohibiting their cultivation.<sup>129</sup>

Prescribed control measures in the CARA regulations include uprooting, felling, cutting or burning weeds or invader plants,<sup>130</sup> treatment with a herbicide, biological control carried out in accordance with relevant national legislation<sup>131</sup> as well as any other method of treatment that will control those invader plants or weeds. The control methods must also be applied to seeds, seedlings, other propagating material and the re-growth of the weeds or invader plants concerned.

The implementation and enforcement of this Act is undertaken by the National Department of Agriculture, which has offices in each of South Africa's nine provinces.

#### **1.4c(viii) National Heritage Resources Act<sup>132</sup> (NHRA)**

This Act has various aims, all of which are geared towards the preservation of South Africa's cultural heritage. With the latter as its primary focus, the NHRA has an important role in the preservation of cultural heritage and cultural landscapes found within the spatially separate protected areas that comprise this nomination. That heritage includes Table Mountain, San rock art in the Cederberg Wilderness Area and important palaeontological sites, including Khoi and San sites in De Hoop Nature Reserve.

Some of the National Heritage Resources Act's aims will have the indirect effect of preserving biodiversity because they involve checks and balances that must be exercised before an area or object with a heritage value can be affected by human conduct. In assessing these effects, effects on natural heritage may also come into consideration. The main aim of the NHRA however, is to introduce an integrated and interactive system for natural heritage resource management and to promote good governance at all levels. Biodiversity protection is incidental to that aim.

Implementation and enforcement of the National Heritage Resources Act is undertaken by the South African Heritage Resources Agency (SAHRA), which has offices in each of South Africa's nine provinces.

#### **1.4c(ix) National Forests Act<sup>133</sup> (NFA)**

The National Forests Act recognises that natural forests and woodlands form an important part of the natural environment and require conservation and development according to sustainable management principles. It also recognises that plantation forests often have a negative impact on the environment and need to be appropriately and sustainably managed.

This law is one of the few South African laws that attempts to define biological diversity. The Act defines that expression to mean "genetic diversity, species diversity and ecosystem diversity".<sup>134</sup>

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<sup>125</sup> The General Regulations were published in GNR 1048 dated 25 May 1984 (as amended).

<sup>126</sup> The relevant plants are listed in schedules to the CARA regulations.

<sup>127</sup> Regulation 15B of the CARA regulations.

<sup>128</sup> Regulation 15C of the CARA regulations.

<sup>129</sup> Regulation 15D of the CARA regulations.

<sup>130</sup> Of the kinds specified in column 1 of Table 3 to the CARA regulations.

<sup>131</sup> In particular, the Agricultural Pests Act, 36 of 1983, and the ECA.

<sup>132</sup> Act 25 of 1999.

<sup>133</sup> Act 84 of 1998

<sup>134</sup> Section 2 of the National Forests Act, 84 of 1998.

The expression “ecosystem” is defined to mean a system made up of a group of living organisms, the relationship between them and their physical environment”.<sup>135</sup>

The Act lists principles that must guide the decisions of public authorities where these decisions affect forests. When applying the principles, organs of State are obliged first, to take into account the differences between natural forests, woodlands and plantations; second, to recognise that conservation of biodiversity within plantations should be promoted in a way that is consistent with the primary economic purpose for which the plantation was established; third, to apply only those principles which it considers relevant to the decision or action which is contemplated; and fourth, to give the appropriate weight to each principle.

The National Forests Act also makes provision for the establishment of protected areas and gives ministerial prerogative to the declaration of a tree, group of trees, woodland or species of trees for their protection. The Minister (of Water Affairs and Forestry) is also empowered to intervene in the prevention of deforestation and to ensure the rehabilitation of deforested areas.

Implementation and enforcement of the National Forests Act is undertaken by the national Department of Water Affairs and Forestry (which has offices in each of South Africa’s nine provinces) and where powers were assigned under the Act’s forerunner (the 1984 Forest Act) by either the Western Cape Nature Conservation Board (in the Western Cape Province) or by the Chief Directorate Environmental Affairs in the Eastern Cape Province.

#### **1.4c(x) National Veld and Forest Fire Act<sup>136</sup> (“the Veldfire Act”)**

This Act’s main aim is to impose a statutory duty on landowners to prepare and maintain firebreaks that have a reasonable opportunity of preventing or allowing for the control of a veld (vegetation) fire. Landowners are also obliged to make sure that the firebreak does not cause soil erosion and that it is free of inflammable material.

The “Veldfire Act” promotes shared management responsibility for areas prone to vegetation fires. This can be achieved through the fire protection association (“FPA”) concept established by the Act. By sharing information and co-ordinating strategies (both to prevent vegetation fires and to react effectively to them when they do break out) and by informing landowners of their rights and obligations under the relevant laws, FPAs can reduce risks and consequently, the potential for legal liability.<sup>137</sup>

Another innovation introduced by the “Veldfire Act” is that it provides a powerful inducement to join FPAs. In summary, the “Veldfire Act” retains the presumption contained in earlier legislation regulating vegetation fires (which originated in common law).<sup>138</sup> The codified presumption holds that if a person who brings civil proceedings proves that he or she suffered loss from a vegetation fire which was caused by another person or which started on or spread from land owned by that person, then the latter person (the defendant in the litigation) is presumed to have been negligent in relation to the fire, until the contrary is proved. The practical implication of the presumption is that the defendant has to rebut a presumption before the plaintiff proves the other elements of his or her case. However, the innovation introduced by the “Veldfire Act” is that the presumption of negligence against the defendant will not operate if the defendant is a member of the relevant FPA in the area where the fire occurred.

Both the “Veldfire Act” and the regulations under the Conservation of Agricultural Resources Act (refer to section 1.4c(xv)) are the two most appropriate statutory mechanisms for use in preventing and managing vegetation fires.

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<sup>135</sup> Section 2 of the National Forests Act, 84 of 1998.

<sup>136</sup> Act 101 of 1998.

<sup>137</sup> FPAs are established under sections 3 – 8 of the Veldfire Act, 101 of 1998.

<sup>138</sup> Section 34 of the Veldfire Act, 101 of 1998.

The net effect of the “Veldfire Act” is that if it is properly applied and landowners comply with their duties, then the risk of environmental damage caused by vegetation fires should diminish and accordingly, threats to biodiversity occasioned by regular vegetation fires should be reduced.

The implementation and enforcement of this Act is undertaken by the national Department of Water Affairs and Forestry, which has offices in each of South Africa’s nine provinces.

#### **1.4c(xi) The Marine Living Resources Act<sup>139</sup> (“the MLRA”)**

The MLRA applies to the living marine resources found in the sea-shore, internal waters and territorial waters that comprise portions of the De Hoop Nature Reserve and the Boland Mountain Complex, respectively.

As one of its objectives (and in accordance with the principles according to which the Minister and any organ of State must exercise any power under the Act) the MLRA seeks to preserve marine biodiversity. The MLRA also recognises the need to protect the marine ecosystem as a whole, including protecting particular species that are not targeted for exploitation. The MLRA also articulates the need to apply a precautionary approach to the management and development of marine living resources.<sup>140</sup>

With respect to protected area management, the MLRA provides for fisheries management areas, which can be “any area of the South African waters”<sup>141</sup>, and marine protected areas.<sup>142</sup> Marine protected areas may be declared for three specific purposes. They are:

- (a) for the protection of fauna and flora or particular species thereof and the physical features on which they depend;
- (b) to facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, and providing pristine communities for research; or,
- (c) to diminish any conflict that may arise from competing uses in the area.

Regulations promulgated under the MLRA<sup>143</sup> aim to protect biodiversity by the use of different control measures, such as imposition of closed seasons, species restrictions and areas closed to fishing.

The MLRA is implemented and enforced by the national Department of Environmental Affairs and Tourism and specifically, its Chief Directorate: Marine and Coastal Management, which is based in Cape Town.

#### **1.4c(xii) The Sea-shore Act<sup>144</sup>**

The Sea-shore Act applies to the sea-shore, internal waters and territorial waters that, for the purposes of this nomination, comprise portions of the De Hoop Nature Reserve and the Boland Mountain Complex respectively.

Regulation of the provisions of the Sea-shore Act has been assigned to the coastal provinces (including the Eastern and Western Cape). The competent authority to whom administration of the Act has been assigned is empowered to lease any portion of the sea or of the seashore which is State-owned, provided that, in the opinion of the competent authority or minister, that lease is either in the interests of the general public or will not seriously affect the general public’s enjoyment of the seashore and the sea.

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<sup>139</sup> Act 18 of 1998.

<sup>140</sup> Section 2 of the MLRA, 18 of 1998.

<sup>141</sup> Section 15 of the MLRA, 18 of 1998.

<sup>142</sup> Section 43 of the MLRA, 18 of 1998.

<sup>143</sup> In *Government Gazette* 19205 dated 2 September 1998.

<sup>144</sup> Act 21 of 1935.

The competent authority, by notice in the *Provincial Gazette* or by regulation, may authorise any local authority to make regulations concerning the seashore and sea within or adjacent to its area of jurisdiction, provided that these regulations are not inconsistent with the provisions of the Act.

In the Western Cape, the relevant authority to which the management of the Sea-shore Act has been assigned is the Western Cape Nature Conservation Board. In the Eastern Cape, the Chief Directorate; Environmental Affairs has been assigned the relevant management and enforcement powers.

## **B) DRAFT LAWS OF GENERAL APPLICATION**

### **1.4c(xiii) White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity ("the Biodiversity White Paper")**

The South African Government has adopted this document as national policy<sup>145</sup> although it has not yet been translated into a detailed implementation strategy and action plan, nor has it yet been implemented through legislation. However, DEAT has initiated a regulatory reform process in terms of which a new national statute dealing with biodiversity is being prepared for inclusion in NEMA.

The *White Paper* articulates South Africa's policy and strategy towards achieving the objectives in the Convention on Biological Diversity.<sup>146</sup> It is structured around the requirements of the Convention, and contains different policies and strategies that are based on six goals and nineteen policy objectives. The White Paper identifies the following areas for priority action:

- drafting an action plan;
- obtaining political commitment from all relevant national and provincial Ministers towards achieving the policy objectives, by requiring Ministries to prepare approved sectoral plans and budgets;
- addressing existing fragmentation among nature conservation agencies in South Africa;
- securing the necessary funding for implementation of the White Paper;
- strengthening and rationalising South Africa's protected areas' system;
- establishing legislative and administrative mechanisms that control access to the nation's genetic resources;
- instituting a national biodiversity education and awareness plan; and,
- actively participating in the development of a Biosafety Protocol.

### **1.4c(xiv) Wetlands Conservation Bill**

A Wetlands Conservation Bill was introduced in Parliament as a private members bill in 1995.<sup>147</sup> This Bill aimed to implement the provisions of the Ramsar Convention but now seems unlikely to be passed in this form due to concern about its scope and focus. The national Department of Environmental Affairs and Tourism (DEAT) is currently in the process of securing funding to develop framework legislation of biodiversity and it is likely that this will incorporate wetland protection measures, if it proceeds.<sup>148</sup> DEAT and DWAF, in association with WfW, have also initiated a project, which will result in a protocol for the effective rehabilitation of degraded wetlands.

### **1.4c(xv) The National Coastal Management Bill**

The National Coastal Management Bill was drafted as a response to the *White Paper for Sustainable Coastal Development in South Africa*.<sup>149</sup> The Coastal Management Bill (which is to be

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<sup>145</sup> CAPE Report, page 2.21.

<sup>146</sup> South Africa signed the Convention on Biological Diversity in June 1993 and ratified on 2 November 1995.

<sup>147</sup> See <http://water.cwr.ac.za/wetlands/bill.htm>.

<sup>148</sup> Refer to Appendix 5, CAPE Report, page 6.1.

<sup>149</sup> Dated April 2000. It was published on 6 June 2000.

gazetted for public comment in the near future) seeks to manage South Africa's coastal resources and the interface between marine and terrestrial areas in a fundamentally different way to the manner adopted previously. This will involve the integration of all management activities and resource use in the coastal zone.

Other paradigm shifts in the new Bill include a wider definition of the expression "sea-shore", and the enshrining of public access to the sea and sea-shore.

Regarding biodiversity protection, the Bill aims to integrate the decision-making functions of those organs of State that issue permits for the use of resources (either living or non-living) in the coastal zone.

## **C) LAWS THAT HAVE SPECIFIC APPLICATION WITHIN THE EIGHT PROTECTED AREAS**

### **1.4c(xvi) Laws applicable to provincial nature reserves**

The Nature Conservation Ordinance, read with the Western Cape Nature Conservation Board Act and the Western Cape Nature Conservation Laws Amendment Act, provides for the proclamation of provincial nature reserves on any land under the control or administration of the relevant province. A similar declaration is permitted if land to be designated a provincial nature reserve falls under the control or management of a State department. Provincial nature reserves are managed, controlled and developed by the provincial authorities charged with nature conservation (and in the case of the Western Cape, with the concurrence of the Board). Those functions must be undertaken with a view to propagating, protecting and preserving the fauna and flora found there. Wide powers for the protection of fauna and flora as well as the power to further regulate their protection are stipulated. These may be drafted to apply generally (to all provincial nature reserves) or to apply to a specific reserve.

Local authorities, from both the Western and Eastern Cape Provinces, may, in terms of the Nature Conservation Ordinance, apply to the provincial authority for the establishment of so-called local nature reserves on land vested in that particular local authority or under its control or management.

### **1.4c(xvii) The National Forests Act**

The National Forests Act (described in more detail in section 1.4c(ix)) is underpinned by principles to be used by organs of State to guide decisions affecting forests.<sup>150</sup>

Important principles in the Act relating to biodiversity preservation are, firstly, that natural forests cannot be destroyed except in exceptional circumstances. These will arise in circumstances where, in the Minister's opinion, a proposed new land use is preferable in terms of its economic, social or environmental benefits. It has been suggested that it is inappropriate for such a degree of power to be concentrated in the hands of a single individual. The expression "environmental" must be construed in its widest possible sense (including related principles such as sustainability) in order for the Minister properly to contemplate a situation where other "environmental benefits" may trump the benefit of retaining natural forests, and then permit the destruction of those forests.

The National Forests Act also applies the principle that forests must be developed and managed in a way that conserves biodiversity, ecosystems and habitats. It provides further that forest management and development must be guided by the requirement that natural resources (especially soil and water) are conserved. The Minister is given the power to set aside protected areas and to categorise them either as forest nature reserves, forest Wilderness Areas or "any other type of protected area, which is recognised in international law or practice".<sup>151</sup> One of the effects of setting aside protected areas is a prohibition on the destruction or removal of any forest produce, which includes "any living organism, and any product of it, in a forest". Various exceptions

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<sup>150</sup> Section 3 of the National Forests Act, 84 of 1998.

<sup>151</sup> Section 8(1)(c)(iii) of the National Forests Act, 84 of 1998.



to this prohibition are created in the Act.<sup>152</sup> The Minister is responsible for the management of the protected area and may in that capacity, grant financial or other assistance to the owner of land outside a State forest that has been declared as a specially protected area. Similar protections are effected when the Minister declares a particular tree, or a group of trees, or a woodland, or a particular species, to be protected.<sup>153</sup>

#### **1.4c(xviii) De Hoop Wetland; the Ramsar site within De Hoop Nature Reserve**

De Hoop Wetland has been included in the List of Wetlands of International Importance. Although no domestic legislation regulates it at present, some protection for wetlands outside formally protected areas is provided by the National Water Act (NWA) and accordingly, these areas should receive more effective legal protection.

In addition to being defined in the NWA, wetlands are regarded by the Act as watercourses and must be taken into account in determining water management areas.<sup>154</sup> Remedying the effects of damage to wetlands is also possible under the Act.<sup>155</sup> Many activities, which previously impacted negatively on wetlands, such as draining or cultivating them, or allowing livestock to graze on them, are now controlled by the Act and in many cases will require licensing (through the Department of Water Affairs and Forestry).<sup>156</sup>

#### **1.4c(xix) National Parks Act<sup>157</sup>**

Please refer to section 2.4c for details relating to the National Parks Act.

### **D) LAWS THAT HAVE SPECIFIC APPLICATION IN THE SURROUNDING RESERVES**

State forests and provincial nature reserves surround the eight protected areas that have been included in this nomination. The laws that apply to the surrounding reserves with these legal designations have been outlined above in the relevant sections.

#### **1.4c(xx) Private nature reserves: the provisions of the Nature Conservation Ordinance, the Western Cape Nature Conservation Board Act and the Western Cape Nature Conservation Laws Amendment Act**

Any landowner may establish a private nature reserve with the approval of the provincial environmental authority. The establishment procedure and the rights and duties of landowners within this type of reserve are stipulated in the legislation. This also obliges landowners within a private nature reserve to manage, control and develop the fauna and flora within it. There are approximately 140 private nature reserves in the Western Cape Province and 33 in the Eastern Cape. Private nature reserves surround some of the protected areas (Figure 1.3.6).

#### **1.4c(xxi) Conservancies**

The conservancy concept is founded on the co-operative environmental management of an area by its surrounding community and users, which is undertaken on a voluntary basis. In order to be recognised, a conservancy must be registered with the relevant provincial nature conservation agency. As was mentioned in section 1.4b(v), three categories are recognised; rural, urban and industrial conservancies.

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<sup>152</sup> Section 10(1)(a) to (f) of the National Forests Act, 84 of 1998.

<sup>153</sup> Section 15 of the National Forests Act, 84 of 1998. The only exception to the prohibition is under licence granted by the Minister (s15 (1)(b)).

<sup>154</sup> Section 6(2) of the National Water Act, 36 of 1998.

<sup>155</sup> Section 19(2) of the National Water Act, 36 of 1998.

<sup>156</sup> See generally, the provisions of Chapter 4 of the National Water Act, 36 of 1998.

<sup>157</sup> Act 57 of 1976

The benefits of establishing a conservancy include more effective conservation and management of the fauna and flora occurring there through joint management and decision-making in relation to larger areas, as well as the sharing of management costs and an improved ability to market the natural features of that area.

#### **1.4c(xxii) Man and the Biosphere - Biosphere reserves**

These are formally recognised under the UNESCO "Man and the Biosphere Programme". Biosphere reserves normally include:

- a core area or areas with stringent controls on activities that would negatively affect the environment;
- a buffer zone or zones which surround the core area and where activities compatible with the conservation objectives are permitted; and
- outside the buffer zone or zones lies an outer transition area where sustainable resource management practices are developed and promoted.

#### **1.4d. Agency with management authority**

The South African National Parks Board manages the Cape Peninsula National Park in the spirit of co-operative environmental governance with other relevant national departments, such as the Department of Water Affairs and Forestry (DWAF), as well as provincial and local authorities. Refer to section 2.4d for more detail in this regard.

The Western Cape Nature Conservation Board manages the six provincially managed Western Cape protected areas selected for this nomination. These are the Cederberg Wilderness Area, Groot Winterhoek Wilderness Area, Boland Mountain Complex, De Hoop Nature Reserve, Boosmansbos Wilderness Area and the Swartberg Complex.

Specific responsibility for management of all nature reserves in the Eastern Cape Province is delegated to the Eastern Cape Tourism Board under the auspices of the Chief Directorate Environmental Affairs; Eastern Cape. The Eastern Cape Tourism Board is thus responsible (effective from 1 April, 2001) for management of Baviaanskloof. This arrangement is still in a transitional phase and the Eastern Cape Tourism Board is currently identifying and integrating resources for compilation and implementation of an appropriate and constructive management strategy and plan for conservation area management and an integrated environmental management system for the reserve network of the Eastern Cape Province.

For both provinces, this mandate for management of the protected areas is carried out in collaboration with the respective Provincial Administrations in accordance with legislation at national and provincial levels (refer to sections 1.4a and 1.4c(iii)) and also in the spirit of co-operative environmental governance with the relevant national departments including the Department of Water Affairs and Forestry (DWAF) and The Department of Environmental Affairs and Tourism (DEAT). The mandate for nature conservation in each province (not only for the protected areas and other formally proclaimed nature reserves, but also on privately owned land) is also the responsibility of the Provincial Authorities.

For both provincial authorities tasked with the implementation and enforcement of the protective legislation and agreements, where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

#### **1.4e. Level at which management is exercised**

Notwithstanding significant institutional transformations that have affected national and provincial conservation agencies over the past few decades (particularly within the past decade), the South African National Parks, Western Cape Nature Conservation Board and the Chief Directorate

Environmental Affairs; Eastern Cape, with the recently delegated management authority, the Eastern Cape Tourism Board, have strategically continued to influence and achieve the protection of the Cape Floral Region.

#### **1.4e(i) Western Cape**

Management of the Cape Peninsula National Park is exercised at the national level by South African National Parks. Please refer to section 2.4e for details in this regard.

Management, of the six remaining Western Cape Province protected areas (namely the Cederberg, Groot Winterhoek and Boosmansbos Wilderness Areas, Boland Mountain and Swartberg Complexes, and the De Hoop Nature Reserve), is exercised at the provincial level by the Western Cape Nature Conservation Board.

The Western Cape Nature Conservation Board is in the process of restructuring. This will be finalised early in 2003. The objective of the restructuring process is to create a more efficient and effective organisation.

The Chief Executive Officer of the Western Cape Nature Conservation Board, accountable to the Minister of Environmental, Cultural Affairs and Sport, is Mr David Daitz, based at the Board's Head Office in Cape Town. The Chief Executive is empowered to make day-to-day decisions in consultation with his executive staff. Major decisions and policy formulation are the responsibility of the Minister, and are based on the advice of the Western Cape Nature Conservation Board members.

Within each protected area is a Reserve Manager who is responsible for day-to-day management and is supported at several levels. An Area- and a Regional Manager are situated in each of four Regional Offices in the Western Cape Province and offer the Reserve Managers administrative and logistical support. These managers, together with representatives of the Scientific Services - and Communications Divisions, make up a reserve management committee, which is responsible for strategic reserve planning, decision-making and management. They are also supported by District Service Officers who work from the regional offices and who are responsible for law enforcement and extension in the broader area around the reserves (refer to Figure 1.4.1).

The administrative, financial and human resources sections are based at the Head Office in Cape Town. In addition, because of the initiative to collaborate widely with all relevant institutions, there is also a range of expertise from universities, research bodies, non-governmental organisations (NGOs), and branches of provincial and national government that provide support through ongoing collaboration in various forms including research and project work (refer to section 1.4h).

Details on Regional, District and Reserve Management for the Western Cape are provided in the relevant chapters for each protected area (refer to Chapters 2-9; sections 2-9.4e).

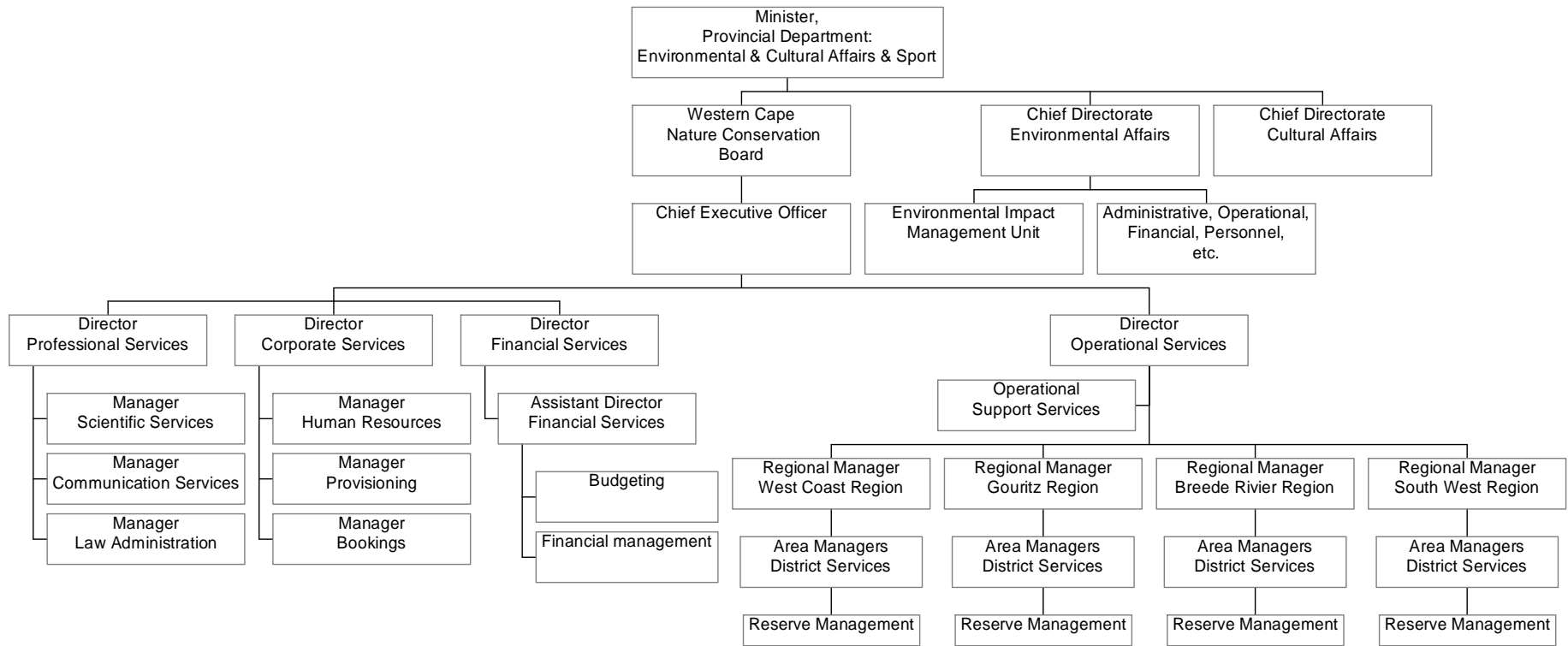


Figure 1.4.1 Outline of the structure of the Western Cape Nature Conservation Board

#### **1.4e(ii) Eastern Cape**

The Eastern Cape Tourism Board (as the delegated management authority<sup>158</sup> for the Chief Directorate Environmental Affairs; Eastern Cape) manages Baviaanskloof at the provincial level. The Chief Executive Officer of the Eastern Cape Tourism Board is Ms Nomkhitha Mona, who is directly accountable to the Minister of Economic Affairs, Environment and Tourism. Senior Conservation Manager for the Game Reserve Division of the Eastern Cape Tourism Board is Mr Wandile Mzazi. The region, incorporating Baviaanskloof, is managed by a Deputy Director and a Sub-Regional Manager. Three reserve managers are responsible for on-site management within Baviaanskloof (refer to sections 9.4e and 9.4k).

The final structure, roles and functions of the Eastern Cape Tourism Board as the managers of conservation and reserves for the Eastern Cape are still being drafted. While these will only be available during 2003, both levels of conservation management continue to ensure the conservation and functioning of conservation areas in the Eastern Cape.

The administrative, financial and human resources sections of the Chief Directorate Environmental Affairs; Eastern Cape are based at the Head Office in Bisho. As is the case for the Western Cape, because of the initiative to collaborate widely with all relevant institutions, there is also a range of expertise from universities, research bodies, non-governmental organisations (NGOs), and branches of provincial and national government that provide support to the newly delegated management authority, the Eastern Cape Tourism Board, as well as to the Chief Directorate Environmental Affairs; Eastern Cape through ongoing collaboration in various forms including research and project work (refer section 1.4h).

Details on Regional, District and Reserve Management are provided in the relevant chapter for Baviaanskloof (refer to section 9.4e).

#### **1.4f. Agreed plans relating to the protected areas**

Management plans, specific to each protected area, are detailed in the relevant chapters (Chapters 2-9).

##### **1.4f(i) Plans relating to all protected areas**

- **Cape Action Plan for the Environment**

Overall, the plan that relates best to protection of biodiversity in the Cape Floral Region is the Cape Action for People and the Environment (CAPE Project, Appendix 5). The result of a Global Environmental Facility (GEF) funded project, the CAPE Project is the single overarching plan for the protection of biodiversity in the Cape Floral Region. The CAPE Project further has the support of all relevant stakeholders. To view the CAPE Project go to:

<http://fred.csir.co.za/extra/cape/reports/reports.html>

- **Working for Water Programme**

The South African Government, through the Department of Water Affairs and Forestry (DWAF), launched the Working for Water (WfW) Programme in 1995 to deal with the problem of invading alien plants. It is one of the South African Government's most successful Reconstruction and Development initiatives, as it also addresses one of the greatest challenges facing South Africa, that of unemployment.

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<sup>158</sup> Management of reserves by the ECTB is delegated by Section 5(a) of the Eastern Cape Tourism Board Act, Act 9 of 1995, which states that: "...the objects and powers of the board, ...shall be deemed to include (a) the management of nature reserves, including the development of the infrastructure, resources and amenities of such reserves".

To do this the South African Government has committed about R600 million per year, over the next 20 years, to clear more than 10 million hectares of invaded land. Impoverished people are employed to clear invasive alien plants and then use the wood in secondary industries to produce charcoal, firewood, walking sticks, crafts, screens, benches, garden products and other curios.

The Working for Water programme is integrated across the eight protected areas. In the Western Cape Province the Western Cape Nature Conservation Board is the implementing agent for the programme, while in the Eastern Cape the Chief Directorate Environmental Affairs; Eastern Cape is the implementing authority.

The Working for Water programme is functional in the protected areas in this nomination and has been incorporated into the line functions of staff of the protected areas. Salaries for this programme have been assigned as an additional component to the budget of the provincial agencies (refer to section 1.4g). Further details of this programme are available from:

<http://www-dwaf.pwv.gov.za/wfw/>

- **Working for the Coast Project (CoastCare)**

CoastCare is a project, implemented by the national Department of Environmental Affairs and Tourism (DEAT), aimed at poverty alleviation through engaging coastal communities in sustainable development coastal projects. In particular, CoastCare involves the collection of waste from the beaches, and reusable items are sold to recyclers. While CoastCare does not currently affect provincial conservation management authorities (since it is managed by DEAT and is not a provincial responsibility), specific coastal area projects could in future be aimed at upgrading (through pollution removal) coastal areas of, for example, De Hoop Nature Reserve or the Boland Mountain Complex.

#### **1.4f(ii) Specific plans relating to provincial authority protected areas in the Western Cape**

- **Conservation and Action Plans**

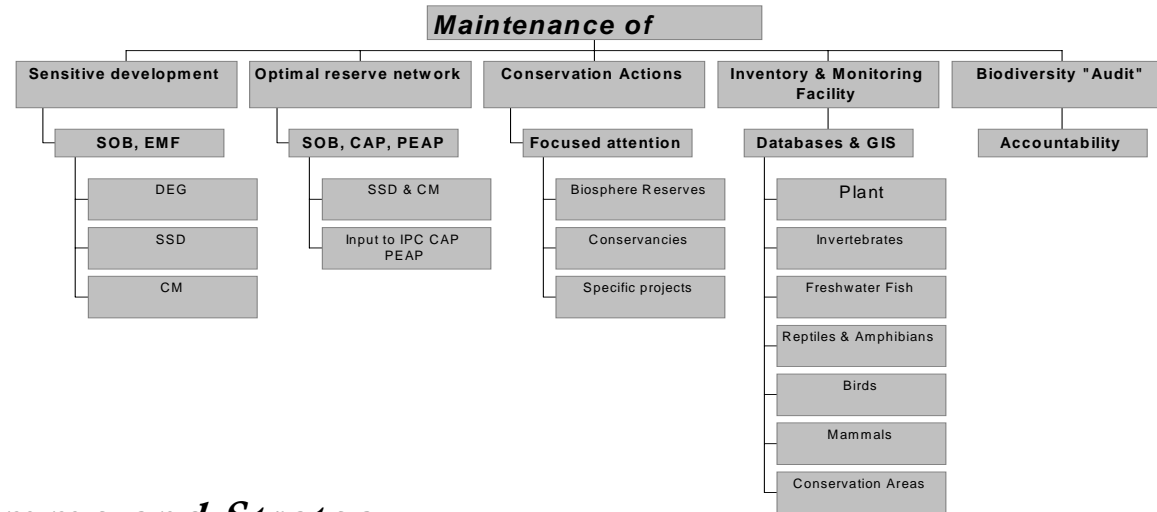
Conservation and action plans for conservation of threatened plant species are currently being discussed by the Western Cape Nature Conservation Board (WCNCB), the National Botanical Institute (NBI) and the Botanical Society of South Africa. These require the compilation of responsibility lists for each district; compilation of management and/or action plans for all sites containing threatened plants; ongoing monitoring of all the populations/sites; assisting landowners and responsible Nature Conservation officials to implement these plans through site inspections, liaison with other organisations and institutes on certain conservation projects; providing sites with threatened plants with a higher conservation status; and, through awareness-raising, assistance and co-operation ensuring that private landowners and the general public become partners with the provincial authorities in conservation.

It is the mission of the WCNCB to fulfil its obligation towards the maintenance of biodiversity in the Western Cape Province as required and prescribed by, amongst others, the White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity (1998).

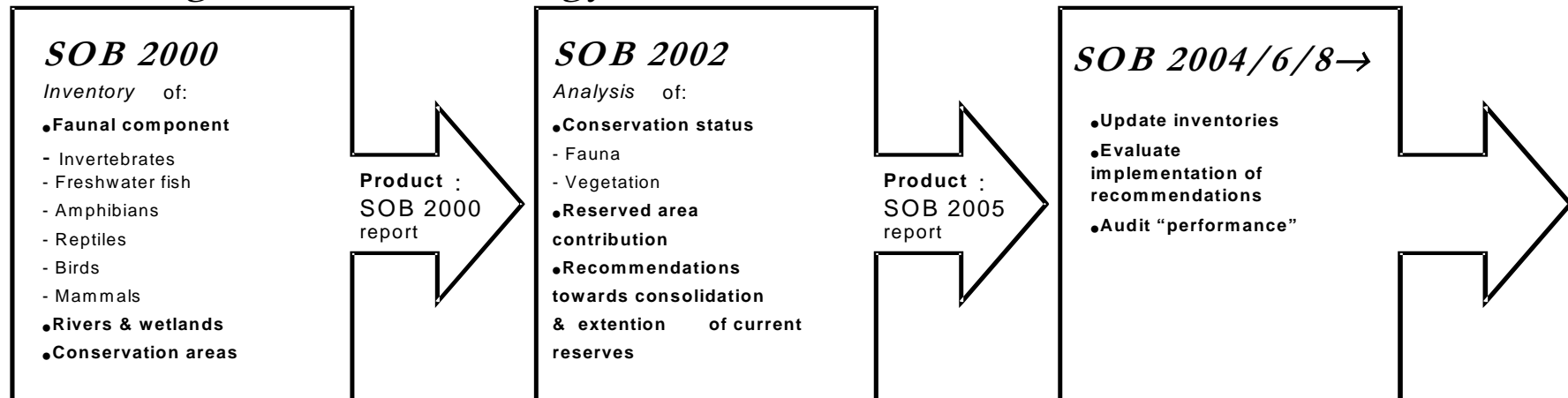
To this end, the aims of the State of Biodiversity programme include the establishment of an optimally placed constellation of representative conservation-related areas, both public and private, as well as co-operative management structures within the Western Cape boundaries; and, the evaluation of conservation performance, progress and achievements in the Western Cape Province.

The State of Biodiversity database is one of the most advanced state of biodiversity databases in southern Africa. In partial fulfilment of the obligations towards the Convention on Biological Diversity, this multi-sectoral programme (refer to Figure 1.4.2), co-ordinated by the WCNCB, lists among its objectives the capture, storage, retrieval and manipulation of current and future biological data on plant and animal species, as well as systems and processes, of the Western Cape, through an integrated, computerised database system and a Geographical Information System (GIS).

# Cape Nature Conservation's State of Biodiversity Programme



## SOB Programme and Strategy



SOB = State of Biodiversity; EMF = Environmental Management Framework; DEG = Development Evaluation Group; SSD = Scientific Services Division; CM = Conservation Management; IPC = Institute for Plant Conservation; CAP = Cape Action Plan; PEAP = Provincial Environmental Action Plan; GIS = Geographic Information System

Figure 1.4.2 Outline of the Western Cape Nature Conservation Board's State of Biodiversity Programme.

### 1.4g. Sources and levels of finance

For both the Eastern and Western Cape provincial authorities there is a move towards commercialisation of tourism (particularly nature-based or eco-tourism) opportunities for income generation. Both provinces are ensuring the links between conservation and sustainable natural resource management for eco-tourism development through the development and facilitation of appropriate provincial administrative structures.

Please refer to section 2.4g for details relating to the Cape Peninsula National Park.

#### 1.4g(i) Western Cape Nature Conservation Board

The Western Cape Nature Conservation Board Headquarters, based in Cape Town, administers 70 reserves. Budget details are provided in Table 1.4.1. Approximately R50 million is received from the South African Government plus a further R50 million for the Working for Water Programme (refer to section 1.4f) forming the bulk of the Western Cape Nature Conservation Board's financial base.

Other income to the Western Cape Nature Conservation Board is provided through reserve entry fee tariffs, accommodation and professional scientific services.

Table 1.4.1 Details of current and proposed budgets for the Western Cape Nature Conservation Board.

Programme Structure	Current		Capital		Medium-term framework	
	2000/01 R'000	1999/2000 R'000	2000/01 R'000	1999/2000 R'000	2001/02 R'000	2002/03 R'000
<b>Conservation Management</b>						
Nature Reserves	33453	32077	543	1221	35351	36392
District Services	2657	2866	21	81	4179	4307
Environmental Education	914	1092	18	20	979	1009
	37024	36035	582	1322	40509	41708
<b>Western Cape Nature Conservation Board</b>	945	450		50	945	945
Communication	1966	2152	66	206	2227	2275
Specialist Services	3562	3486	6	36	3963	4106
Support Services	7630	5755	270	279	7483	7483
<b>Total</b>	<b>51127</b>	<b>47878</b>	<b>924</b>	<b>1893</b>	<b>55127</b>	<b>56517</b>
<b>Increase (Decrease)</b>	<b>3249</b>	<b>6.79</b>	<b>(969.00)</b>	<b>51.19</b>		

#### 1.4g(ii) Eastern Cape Tourism Board

The Chief Directorate Environmental Affairs; Eastern Cape delegated management responsibility of all 27 of the provincially managed Eastern Cape Province's Nature Reserves and Game Reserves (including Baviaanskloof), to the Game Reserve and Conservation Division of the Eastern Cape Tourism Board, with effect from April 1 2001<sup>159</sup>. The details of this arrangement remain in process, and for the purposes of this nomination, while the Eastern Cape Tourism Board is responsible for

<sup>159</sup> Specifically, Sections 5(a-c) of the Eastern Cape Tourism Board Act, Act 9 of 1995, state that: "...the objects and powers of the board, ...shall be deemed to include (a) the management of nature reserves, including the development of the infrastructure, resources and amenities of such reserves, the performance of certain functions in nature reserves as assigned to the board under subsection (2); and the development of tourism and other economic potential of nature reserves on a sustainable yield basis".



the management of Baviaanskloof, the structure through which government finances and annual budgets are channelled remains the Chief Directorate Environmental Affairs; Eastern Cape.

The Province of the Eastern Cape receives an annual budget of approximately R78 million from the South African Government (refer to Table 1.4.2). The Member of the Executive Council for Finance and Provincial Expenditure (with the approval of the Provincial Legislature) determines the budget allocation to the Department of Economic Affairs, Environment and Tourism. This budget is then divided among four programmes<sup>160</sup>, of which the Chief Directorate Environmental Affairs is one. Other income for reserve management is generated through reserve entry fee tariffs, accommodation and game auctions. For example, the annual 2001 game auction generated a record R6.9 million for conservation coffers, more than double the income generated through the annual game auction in the previous year 2000.

A recent (2001) grant of one million dollars, for the conservation of the Baviaanskloof protected area, has been approved in principle by the Global Environmental Facility.

Table 1.4.2 Department of Economic Affairs, Environment & Tourism (Eastern Cape Province) proposed Budget for 2001/02, by Programme (in R million). The Environmental Affairs Programme refers to the Chief Directorate Environmental Affairs; Eastern Cape.

Programme	Amount allocated in 2000/01 R'000	Amount allocated in 2001/02 R'000	Increase/ Decrease in amount allocated R'000
Administration	20.183	31.261	+11.078
Research, Policy Planning and Information Systems	2.702	4.866	+2.164
Economic Affairs	106.790	134.317	+27.527
Environmental Affairs	68.161	78.372	+10.211
<b>TOTAL BUDGET</b>	<b>197.836</b>	<b>248.816</b>	<b>+50.980</b>

#### **1.4h. Sources of expertise and training relating to conservation and management techniques**

Please refer to section 2.4h for details relating to the Cape Peninsula National Park.

Collectively the provincial conservation bodies for both the Western Cape and Eastern Cape possess, and have ready access to, internationally recognized local expertise for "state of the art" conservation planning, management and research for the Cape Floral Region. Both conservation bodies employ highly qualified research and development personnel with decades of national and international experience in a diversity of conservation-research, -management and -planning fields.

There is an academic qualification guideline relating to the employment of staff in the Western Cape Nature Conservation Board. Managers are required to have a three-year tertiary diploma, or equivalent or a demonstrated ability to conduct the required work, while scientific personnel are required to have a four-year tertiary degree, or equivalent, or a demonstrated ability to conduct the required work.

In addition, there is a policy to increase the ability and qualifications of staff through continuous in-house training courses, encouragement of attendance at relevant symposia and conferences, a close co-operation and interaction between conservation and research staff of both Provinces and personnel at other biological, academic and conservation institutes (such as university research departments and institutes, Marine and Coastal Management, and the National Botanical Institute).

<sup>160</sup> The four programmes falling under the Ministry are: 1) Administration; 2) Research, Policy Planning and Information Systems; 3) Economic Affairs; and, 4) Environmental Affairs (refer to Table 1.4.2).

All reserve managers of each protected area, for both provinces, have at least a national diploma in Nature Conservation and many are studying further. These staff members are supported by the regional structures and district services that include area / or district- and regional managers and their staff.

In the Western Cape Province, additional support is provided by the Professional Services Section of the organisation made up of Scientific Services (with a minimum BSc. (Hons) degree), and the Communications and Legal Administration Services, while in the Eastern Cape additional support is provided by the Research, Policy Planning and Information Systems Programme as well as by the Administration Programme.

A Field Ranger Training Centre in Graaff-Reinet (Eastern Cape) offers a number of basic and advanced training and professional skills courses including Field Ranger- and Peace Officer Courses, as well as training in Financial Administration, Labour Relations and Management.

#### **1.4i. Visitor facilities and statistics**

The Cape Floral Region is a tourism destination for many international as well as regional and local visitors. Tourists from all over the world are drawn to the natural beauty of the Cape to view the spectacular spring flower displays, hike in the solitude and splendour of the mountains or spot Southern Right whales. A spectacular and worthy tourist destination, the region has good and developing infrastructure to facilitate the comfort, enjoyment and safety of the tourists.

All protected areas have diverse visitor facilities as well as control mechanisms for limiting visitor numbers. Refer to Chapters 2-9 for statistics relating to the individual protected areas.

#### **1.4j. Protected area management plans and statement of objectives**

Chapters 2 - 9.4j include the management objectives for the individual protected areas. Copies of a selection of management plans for the national and both provincial conservation authorities can be found in Volume 2, Appendix 2.

For the Western Cape Nature Conservation Board, there is a standardised format for all management plans in which specific projects are identified according to the needs of the specific protected areas and may include monitoring projects, management projects (alien plant eradication or roads and infrastructure maintenance), research projects, etc. which are listed according to priority (refer to Appendix 2). Not all of the management plans for all areas have been completed according to this structure or standardized format but these are currently being drafted and prepared by reserve management staff with support from the regional and area managers, as well as from the various research and scientific services of the Provincial Conservation Authorities.

#### **1.4k. Staffing levels**

Staffing capacity for each protected area varies according to the needs and sizes of the site. Each protected area has at least one Reserve Manager, overseeing a number of personnel who attend to day-to-day operations of the reserve including the conservation, maintenance, administration and technical aspects of reserve functioning. Refer to Chapters 2-9 for staffing levels in the specific protected areas.

## SECTION 1.5 FACTORS AFFECTING THE CAPE FLORAL REGION AND THE PROTECTED AREAS

### 1.5a Development Pressures

#### 1.5a(i) Current extent of land transformation and encroachment on natural areas

A vital requirement of baseline studies for the CAPE Project (Appendix 5) was a measure of the conservation status of the vegetation of the Cape Floral Region (Appendix 3). Assessments were made of transformation factors impacting on indigenous vegetation categorized according to Broad Habitat Units (BHUs) (Cowling *et al.*, 1999b). The results showed that since the start of European colonialism, about 26% of the original indigenous vegetation in the Cape Floral Region has been transformed. The most transformed habitats are on the lowlands, especially sand plain fynbos, renosterveld and dune pioneer vegetation.

Transformation was categorized according to three agents: urbanisation, agriculture/forestry, and alien plant invasion. Table 1.5.1 indicates the relative impacts of these agents on the transformation process, summarized according to mountainous habitats, and the remaining (largely lowland) Broad Habitat Units (refer also Figure 1.3.4).

Table 1.5.1 Extent of land transformation by different factors in three land class categories in the Cape Floral Region (From Cowling *et al.*, 1999b).

<i>Land class category</i>	<i>LAND TRANSFORMATION CATEGORY</i>					
	<i>Urbanisation</i>		<i>Agriculture/Forestry</i>		<i>Dense alien plants</i>	
	Area (km <sup>2</sup> )	%*	Area (km <sup>2</sup> )	%*	Area (km <sup>2</sup> )	%*
Mountain Complex BHUs	93.2	0.3	2 211.1	7.5	366.7	1.2
Lowland BHUs	1 274.0	2.2	18 011.4	30.8	1 027.6	1.8
Total (Cape Floral Region)	1 367.2	1.6	20 000.5	22.8	1 394.3	1.6

\* Data shown are the percentages of each corresponding land class category.

The major agent of transformation is agriculture/forestry, especially on the lowlands, where agriculture is responsible for 31% of land that has been transformed. This category of transformation is concentrated on the Coastal Renosterveld and Fynbos / Renosterveld vegetation (Lowland BHUs; Figure 1.3.4). Between 70 and 90% of the four Coastal Renosterveld Broad Habitat Units has disappeared under agriculture (Cowling *et al.*, 1999b).

Areas to the west of the Cederberg and Groot Winterhoek Wilderness Areas, and to a greater extent around the Boland Mountain Complex, are either transformed or vulnerable, limiting the westward expansion of these protected areas. A similar situation exists between the De Hoop Nature Reserve and Boosmansbos Wilderness Area. However, it is understood that the effects of agriculture do not impact severely on the protected areas.

Urban impacts are concentrated in the Greater Cape Town Metropole and in the Port Elizabeth area of the south-eastern Cape Floral Region. However, with the obvious exception of the Cape Peninsula National Park (refer to section 2.5a) and the possible exception of Boland Mountain Complex (refer to section 4.5a), the eight protected areas lie in more remote areas where urbanisation is not a major threat. The Boland Mountain Complex is, however, almost entirely surrounded by a network of reserves that provide a high level of protection for this area, while the Cape Peninsula National Park is the core protected area within a larger Protected Natural Environment, the Cape Peninsula Protected Natural Environment.

Of all eight protected areas, the Swartberg Complex and Baviaanskloof are least threatened by transformation of neighbouring land. This is because they occur in vast mountain areas and their northern boundaries lie close to the Karoo Biome that is less vulnerable than renosterveld to agricultural transformation. The mountainous protected areas, for the most part, are also not prone

to transformation by agriculture. Nonetheless, the protected areas are safeguarded to a large extent by adjacent reserves (Figure 1.3.6).

### **1.5a(ii) Illegal or unsustainable resource use**

Illegal or excessive water-abstraction, game-poaching and harvesting of wildflowers or firewood are just a few of the management challenges faced by conservation management authorities. An ongoing problem, the conservation agencies work in association with peace-officers and other relevant authorities to monitor and manage illegal exploitation of natural resources, both inside and outside of conservation-related areas. Public awareness raising through, for example, skilful use of the media and public workshops, has been one of the tools used to address this issue.

### **1.5a(iii) Threats due to non-sustainable activities outside the protected areas**

Many of the protected areas listed here for nomination could be vulnerable to activities outside the protected area including unsustainable agricultural practices. Co-operative projects and negotiation with neighbouring private landowners, to help them practice more environmentally responsible farming, are promoted in order to improve overall environmental sustainability of the protected areas and their supporting reserves and buffer zones. Examples include those in the Cederberg, promoting leopard management, and those in the Baviaanskloof promoting an increased awareness of the tourism potentials of a Wilderness Area.

Marine pollution is a threat to the coastal boundaries of the De Hoop and Boland Mountain protected areas.

## **1.5b Environmental Pressures**

### **1.5b(i) Alien invasive organisms**

One of the major factors affecting the Cape Floral Region, especially fynbos habitats, is the impact of invasive alien plants (Richardson *et al.*, 1992). Most severely impacted are the coastal dune Broad Habitat Units (Figure 1.3.4) although mountain catchment areas have also been extremely heavily impacted, affecting not only water regimes but also biodiversity. Trees and shrubs are the major invasive species and, for some invasive species, biocontrol agents have been introduced with some considerable success.

When alien species proliferate and cover large areas of land they increase the fuel load substantially, which results in intense and frequent fires. The resultant altered fire regime favours the growth of alien plant species to the detriment of fynbos. These alien plants outcompete indigenous flora and seriously threaten species diversity. Relative to fynbos plants, the aliens also use large amounts of soil moisture and have significant detrimental impacts on water catchments. Recognising this, the South African Government, through the Department of Water Affairs and Forestry, launched the Working for Water Programme (WfW) in 1995 to deal with the problem of invading alien plants (refer to section 1.4f; <http://www-dwaf.pwv.gov.za/projects/wfw/>). Not only is the programme highly successful on the ground, but public awareness regarding the problems caused by alien vegetation has also been heightened by a high profile media campaign, targeting all sectors of South African society.

Alien invasive fauna are not as extensive a problem as that posed by invasive plants, however the consequences to biodiversity (at a local or regional scale) by the invasion of certain fish species, for example, can be just as devastating to local habitats and populations of wild animals. Invasive fauna across the Cape Floral Region include a number of exotic fish species (most notably bass and trout) stocked by anglers. These highly predatory invasives have all but caused the extinction of a number of endemic fish species and have also, particularly in the case of bass, caused habitat degradation in streams, to the detriment of all biodiversity and natural processes. The two most widespread faunal invaders are the Argentine ant and the white dune snail, whose occurrence is clearly linked to human disturbance. Further invasion by the Argentine ant (*Linepithema humile*), however, could impact on plant survival by disrupting the ant/seed mutualism that exists between indigenous ant species and many fynbos plants that bear elaiosomes.

### **1.5b(ii) Fire**

While lightning is a significant fire hazard in some of the fynbos areas, wildfires started by humans that deviate far from the “natural” fire regime (determined by season, fire interval and intensity) are often a greater threat to fynbos processes and thus to fynbos survival. Most vegetation surrounding the eight protected areas is fynbos, with the exception of the arid karoo vegetation to the north of the Swartberg Complex and Cederberg Wilderness Area. Wildfires started by adjacent landowners have penetrated the protected areas in the past. Financial, labour and practical constraints make it difficult to control using firebreaks, hence co-operation among landowners is being developed (refer to section 1.4c(x)).

### **1.5b(iii) Climate change**

The worst-case scenario of climate change speculates that the Cape Floral Region could become warmer and drier in the west, and warmer and moister in the east (Rutherford *et al.*, 1999). Moreover, the entire region would start to receive rain in summer, rather than winter. Many typical fynbos species are sensitive to the season of rainfall and, under a summer rainfall regime, grasses will invade and displace Restionaceae species. The faster growing grasses would facilitate short rotation fires, instead of the much longer fire rotations under winter rainfall conditions that are required by fynbos (van Wilgen *et al.*, 1992). Thus, grasslands may expand and replace fynbos taxa (Rebelo, 1992a). Under this scenario, fynbos communities are likely to survive only in the high-lying areas of the Cape Fold Belt.

The fact that the protected areas included in this nomination are located in mountain regions with steep altitudinal gradients, with links to surrounding reserves at lower altitudes, provides opportunities for the altitudinal migration of species under the influence of climate change. Recognising this threat, the South African National Parks, Western Cape Nature Conservation Board and Chief Directorate of Environmental Affairs; Eastern Cape identified a number of reserves in the Cape Fold Mountains where fynbos would be protected. Eight of these areas are included here. Given that the impacts of global warming are predicted to be greater in the western, winter-rainfall and generally driest parts of the Cape Floral Region (Rutherford *et al.*, 1999), the Boosmansbos, De Hoop and, to a lesser extent, the Swartberg and Baviaanskloof protected areas may ultimately be the most secure.

### **1.5b(iv) Planning requirements for persistence: buffers and corridors**

To ensure the long-term conservation of the Cape Floral Region, a system of conservation areas must accommodate the natural processes that maintain and generate biodiversity (Cowling *et al.*, 1999b). As shown in Table 1.2.4, it appears that, on the basis of size at least, the essential ecological processes can be potentially accommodated in all protected areas (refer also to Cowling *et al.*, 1999a).

Six of the eight protected areas are large (25 000 – 100 000 ha) conservation areas (refer to Tables 1.1.1 and 1.2.1). The protected areas with the least inherent potential to accommodate these processes and, therefore, maintain biodiversity, are the relatively smaller Cape Peninsula National Park, Boosmansbos and Groot Winterhoek Wilderness Areas. All three of these protected areas are, however, safeguarded by the presence of significant corridors and surrounding reserves which link these protected areas with other conservation-oriented land. The areas with the greatest intrinsic potential for self-sufficient survival are the relatively large, environmentally and biologically heterogeneous Boland Mountain Complex, Swartberg Complex and Baviaanskloof.

Some of the protected areas preserve complete, or partially complete, systems within the protected area, for example, De Hoop Reserve encompasses an entire sand movement corridor, and a large area of the biologically important transition between limestone and acid habitats.

### **1.5b(v) Hybridisation**

Both fauna and flora are subject to the threats of hybridisation and consequent loss of genetic integrity. In the case of wild animals, animals such as domestic cats and mallard ducks, for

example, are threatening indigenous wild cat (*Felis lybica*) and yellowbilled duck (*Anas undulata*) populations respectively.

Cultivated plant hybrids and other horticulturally available indigenous garden plants, grown near to - or even within - protected areas, have been found to hybridise with some locally indigenous species. It is feared that in some instances, unsuitable genetic material may be entering wild gene pools to the detriment of otherwise sustainable wild populations<sup>161</sup>. Reserve management is facing up to this challenge by, for example, systematically destroying feral cats in reserves. Public education, awareness-raising programmes and collaboration with surrounding landowners have also been invaluable in informing and improving this management challenge.

## **1.5c Natural disasters and preparedness**

### **1.5c(i) Western Cape**

The primary disaster management objective in Western Cape protected areas is to ensure all people are clear of the disaster area. Protected area reserve offices have records of the location of all visitors in the protected area at any given time and there is formalized access to helicopter services. Reserve managers undergo annual Search and Rescue training with Cape Metropolitan Disaster Management and the Mountain Club of South Africa (for more information consult <http://www.cmc.gov.za/pht/disman.htm>). All reserve managers can request implementation of the Western Province Disaster Management Plan, which allows for declaration of a "disaster area", mobilizing support and funding in the event of disaster.

The only natural disasters considered potential threats to the protected areas are natural floods and fires that have shaped the environment for millennia. Fires that occur outside the natural fire regime are a source of threat to the natural biota. However, the GIS Fire Mapping Programme that is conducted in the six Western Cape protected areas (refer to section 1.6) enables managers to evaluate the degree of threat and take appropriate action. Further, there is legislation prohibiting fire at certain times of the year and regular fire training sessions are held with the staff in the protected areas in combination with helicopter crews from the South African National Defence Force.

Within the para-military Overberg Test Range, to the west of De Hoop Nature Reserve, is a Test Flight Development Centre where South African Air Force helicopters are stationed. These aircraft are available (by official arrangement) for use in emergencies within and around the protected area. A fire management plan for the protected area has been developed in conjunction with the Overberg Regional Services who are on standby during the fire season.

### **1.5c(ii) Eastern Cape**

A Disaster Management Committee for the Eastern Cape, of which the Department of Environment Affairs, Economics and Tourism is a member, includes the South African National Defence Force, South African Police Services, Local Government representatives, the Metro Rescue Service and the Mountain Club. This committee co-ordinates response to natural disasters, such as flooding or fires in the Eastern Cape Province, and is aided by officials and volunteers from the member organisation.

The only natural disaster, considered a potential threat to Baviaanskloof, is flooding. In the case of floods, the primary disaster management objective is to ensure all people in the protected area are cleared from the area. Reserve managers have records of the locations of all tourists in Baviaanskloof and, during a flood event, all visitors are readily located and removed from the protected area. No visitors are allowed into the area until the floods have subsided. In the case of a need for evacuation, access to helicopter services is available.

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<sup>161</sup> This is a particular problem where plant populations are small and isolated. For example, pollen from a garden plant - adapted to montane clay soils - pollinating a related species, or the same species, growing on limestone or sandy soils near the coast, could render the hybrid less adapted to local edaphic and climatic conditions.

Fire management (although a very limited threat in this area) is dealt with by conservation management authorities, in co-operation with local landowners.

### **1.5d Visitor and tourism pressures**

Refer to information provided on specific Visitor and Tourism pressures relating to each of the protected areas in chapters 2 - 9.

### **1.5e Number of inhabitants within the protected areas and buffer zones**

Refer to information provided in chapters 2 – 9 for specific details on the number of inhabitants in each protected area.

### **1.5f Other**

#### **1.5f(i) Funding**

As with many other conservation agencies across the globe, national and provincial conservation agencies in South Africa suffer from declining funding from central government. The South African National Parks and the Western Cape nature conservation authority have dealt with this reality by becoming statutory boards (SANParks and the Western Cape Nature Conservation Board respectively), which conferred greater autonomy and financial flexibility. Both boards have been key players in the CAPE Project, and the Eastern Cape authority has also bought into the Project. Amongst the benefits of the CAPE Project is the enhanced potential for financial backing and stability for the future conservation of biodiversity across the Cape Floral Region. This project has facilitated a collaborative effort among all parties involved in biodiversity conservation, both in the Cape Floral Region and nationally.

In the Eastern Cape, the delegation of conservation management to the Eastern Cape Tourism Board is expected to show increased funding returns for conservation (through reserve entry-tariffs, for example) as well as positive environmental spin-offs, as the benefits of eco-tourism (long espoused by the Eastern Cape Tourism Board) prompt more landowners to “buy-in” to a conservation-oriented scheme such as a Private Nature Reserve or Conservancy.

## **SECTION 1.6 CONSERVATION MONITORING**

This section provides an overall review of monitoring programmes by South African National Parks, Western Cape Nature Conservation Board and the Eastern Cape Tourism Board (under the auspices of the Chief Directorate, Environmental Affairs; Eastern Cape), which currently operate and manage the eight protected areas. The principles and rationale behind monitoring is outlined here and information specific to the protected areas is presented in Chapters 2 - 9.

A large proportion of the monitoring done within the eight protected areas forms part of the national monitoring programmes administered by NGOs and university research units. These include the South African Bird Ringing Project; the Birds in Reserves Project; the Southern African Frog Atlas Project; the Nest Record Card Scheme (all projects and schemes administered by the Avian Demographic Unit at the University of Cape Town (<http://www.uct.ac.za/depts/stats/adu/>)); the Black Oystercatcher Annual Census (part of the Oystercatcher Conservation Programme run by the Percy Fitzpatrick Institute of African Ornithology at the University of Cape Town (<http://www.uct.ac.za/depts/fitzpatrick/>)); the Crane Working Group (that monitors Blue Cranes); and, the Poison Working Group (that monitors the use of chemicals). The two latter working groups are administered by the Endangered Wildlife Trust (<http://www.ewt.org.za>), while the National Botanical Institute manages the Protea Atlas project, which aims to atlas all southern African Proteaceae (<http://protea.worldonline.co.za/>).

In addition, reserve-specific programmes include Fire Mapping (GIS-based, Geographic Information System), the Precis-based Information System for Endangered Plants (ISEP), alien plant eradication (Fynbos Working for Water Programme) and monitoring populations of threatened animals such as Cape mountain zebras, Cape vultures, leopards, geometric tortoises, and endemic fishes. Re-establishment of indigenous species into reserves are recorded, as are general sightings of plants and animals in each protected area using a palm-held computer which electronically links data with a GPS reading. This can be downloaded directly onto a computer database. This information is detailed in the separate chapters dealing with each protected area.

For the Western Cape Nature Conservation Board, the State of Biodiversity reporting structure (refer to section 1.4f(ii); Appendix 6) provides a monitoring framework, supported by an Ecological Auditing Procedure (refer to Appendix 7).

## **1.6a Key Indicators**

The concept of monitoring using key indicators is a fundamental principle of the Ecological Auditing Procedure (refer to section 1.6b) adopted by the Western Cape Nature Conservation Board. The importance of these indicators varies in each reserve. The Ecological Audit (Appendix 7) requires that each reserve identifies relevant indicators, monitors these using the most appropriate techniques, ensures that the data are current, and that the data are available for decision-making.

Information, on selected key indicators used for monitoring in the six provincial authority Western Cape protected areas, is provided in sections 3 - 8.6a. For information on the Cape Peninsula National Park and Baviaanskloof, refer to sections 2.6a and 9.6a respectively.

## **1.6b Administrative arrangements for monitoring**

Please refer to section 2.6b for details relating to the Cape Peninsula National Park.

### **1.6b(i) Western Cape**

The Western Cape Nature Conservation Board have designed a biennial State of Biodiversity reporting mechanism that includes planning and conservation actions based on inventory and monitoring (Appendix 6; refer also to Figure 1.4.2). The State of Biodiversity report co-ordinates the gathering of biological data from a range of institutions including the World Wildlife Fund, South African National Parks, National Botanical Institute, universities, museums, professional and amateur societies and relevant government departments. These data are then reported in terms of species statistics, analyses and conservation status of habitats, especially sensitive habitats, threats to biodiversity, economic opportunities as well as the accuracy and reliability of the data used. Each report concludes with a set of recommendations for the next two years.

The State of Biodiversity report (Appendix 6) is itself monitored through implementation of an Ecological Auditing (eco-audit) Procedure (Appendix 7) that ensures accountability of this process. Each reserve in the Western Cape is required to have a full eco-audit every two years, with an inspection by the Area Manager in alternate years.

Implementation by the Western Cape Nature Conservation Board of the Ecological Auditing Procedure was aimed at providing an open and efficient public service. Its basis is that the Western Cape Nature Conservation Board should be accountable for its financial expenditure through monitoring, and efficient use of income to carry out its mission, namely "The conservation of the natural heritage of the Western Cape for the benefit, well-being and enjoyment of present and future generations" (Table 1.2.5).

Details of this Ecological Auditing Procedure are laid out in Appendix 7. Briefly, the implementation involves assigning points to particular essential activities, depending on how well those activities are completed. The rationale is to provide reserve management staff the opportunity to compare their progress with previous records and to identify areas of weakness so that improvements can



be made. The aim is not to compare one reserve with another, but rather to standardize monitoring and thus to monitor progress within each reserve over time.

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within Western Cape conservation areas (such as Nature Reserves and Wilderness areas), depending upon the level of involvement of the Western Cape Nature Conservation Board within each monitoring programme.

Monitoring programmes undertaken by institutes or agencies, external to the Western Cape Nature Conservation Board, are linked to the Western Cape Nature Conservation Board through various means, including structured reporting channels as well as structured administrative requirements for data-capture (e.g. allowable number of specimens) and data-sharing. With respect to the latter, collection permits issued for collection of research material (e.g. plant- or animal specimens for identification or research purposes) stipulate that researchers must supply information on the specimen/s collected, locality, purpose for which taken, etc. in order to ensure that these data are adequately relayed to the central database of the Western Cape Nature Conservation Board.

The Western Cape Nature Conservation Board is currently ensuring that all data gathered in their reserves are stored in a digital database suitable for analysis using a Geographical Information System (GIS). A section, comprising three professional staff within the Scientific Services Division (refer to Table 1.4.1; Figure 1.4.1), is responsible for the maintenance of the GIS. The GIS Section is based at Jonkershoek, near Cape Town.

#### **1.6b(ii) Eastern Cape**

The Eastern Cape Tourism Board (in association with the Chief Directorate Environmental Affairs; Eastern Cape), which manages Baviaanskloof, aims to draw up a practical and realistic monitoring programme which examines aspects such as fire management, quality water provision, weed management impact, wildlife management and visitor impact.

Currently, all management activities are monitored and recorded by management staff in association with Provincial Department support structures and outside agencies, to enable managers to establish the long-term effect of these actions. Refer to section 9.6b for further detail relating to this Eastern Cape protected area.

#### **1.6c Results of previous reporting exercises**

For the national and both provincial conservation authorities, appropriate recording practices, facilities and means of access to regularly updated records are being formulated and improved in order to facilitate sound management of all conservation-related areas that fall under their jurisdiction. As suggested above, records for each reserve are kept and are available to reserve management for comparative purposes; for informing management- and budgetary decision-making; and, for improved focus with respect to e.g. prioritising research programmes.

Please refer to section 2.6c for details relating to the Cape Peninsula National Park.

For the Western Cape Conservation Board, these records are kept at the Scientific Services Headquarters in Jonkershoek Nature Reserve. A template of an Ecological Audit is provided in Appendix 7, while the State of Biodiversity overview for the Western Cape are furnished in Appendix 6. The Western Cape Nature Conservation Board uses an Internet-connected GIS facility (viewed on <http://www.cnc.org.za>) to update records and to ensure that all staff members have access to existing information as soon as it becomes available. This initiative has allowed improved data recording and access across all reserve and protected areas. All six Western Cape protected areas have GIS and Internet facilities and are able to record and access records as a matter of course.

The Eastern Cape Tourism Board (in association with the Chief Directorate Environmental Affairs; Eastern Cape) has Internet (<http://www.ectour.co.za>) and GIS facilities and steady progress is being made to improve recording facilities, data capture and access to existing records.

A number of broad studies and research programmes have contributed significantly to a variety of management strategies towards the conservation of ecological process and biodiversity within the Cape Floral Region. These include work on alien invasive species (e.g. Richardson *et al.*, 1989; Holmes & Cowling, 1997) and reserve planning (e.g. Rebelo & Siegfried, 1992; Cowling *et al.*, 1999a). Information provided through these, and a multitude of other intensive and far-reaching studies, have contributed immeasurably to the selection of target areas for conservation initiatives, as well as enhanced conservation management, throughout the Cape Floral Region.

In conclusion, published sources of information, resulting from previous reporting exercises, include an array of scientific and popular literature on various facets of the Cape Floral Region, many of which have been published in internationally recognised journals and/or publishing houses. Reference to a small selection of these may be found in the extended bibliography (section 1.7c).

## **SECTION 1.7 DOCUMENTATION**

### **1.7a Photographs and slides**

A Powerpoint presentation that illustrates the diversity and beauty of the Cape Floral Region as well as maps showing the location of the Cape Floral Region and the location of the protected areas, are attached to this nomination. In addition, photographs are provided in Appendix 5 and in Volume 3.

### **1.7b Copies of management plans relevant to the protected areas**

An example of the standardised format, used by the Western Cape Nature Conservation Board, for compilation of management plans is provided in Appendix 2. Two examples of management plans from the Western Cape Nature Conservation Board (De Hoop) and the Chief Directorate Environmental Affairs; Eastern Cape (Baviaanskloof) are provided in Appendix 2.

Copies of the Integrated Environmental Management System (IEMS); Environmental Information System (EIS); and, a brief overview of the recently initiated Heritage Resources Management Plan (HRMP) for the Cape Peninsula National Park are included in Appendix 2.

Management objectives for each of the protected areas are provided in sections 2 – 9.4(j).

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### **1.7c(i) Personal communications and unpublished data**

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|-------------------|---|
| Bekker, F         | Western Cape Nature Conservation Board.                   |
| Boyle, B.         | cited in Goldblatt & Manning, 2000.                       |
| Burgers, CJ       | Western Cape Nature Conservation Board.                   |
| Coetzee, D        | Western Cape Nature Conservation Board.                   |
| Hendey QB         | Natural Science Museum of Durban.                         |
| Impson, D         | Western Cape Nature Conservation Board.                   |
| Laros, MT         | Common Ground Consulting (Project leader: IEMS and HRMP). |
| Picker, M         | University of Cape Town.                                  |
| Trinder-Smith, T  | Bolus Herbarium, University of Cape Town.                 |
| Van der Merwe, SW | Dennis Moss Partnership, Stellenbosch.                    |

## 1.7d Address where inventory, records are kept

All records for the Cape Peninsula National Park are stored at the Cape Peninsula National Park offices, based at Westlake, Cape Town.

The address for the Cape Peninsula National Park is:

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All records for the Western Cape Nature Conservation Board are stored at Professional Services, GIS Section in Jonkershoek Nature Reserve.

The address for the Western Cape Nature Conservation Board is:

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Chief executive: Mr. David Daitz  
Internet address: <http://www.cnc.org.za/>

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Records dealing with the Baviaanskloof protected area may be obtained from:

**The Chief Directorate: Environmental Affairs; Eastern Cape**  
Private Bag X 0029  
BISHO  
5605

Telephone: +27 (040) 639 2001  
Internet address: <http://www.ecprov.gov.za/>  
Director: Mr. Albert Mfenyana  
Member of Executive Council: Mr. E Godongwana  
E-mail: [egodongw@eetmind.ecape.gov.za](mailto:egodongw@eetmind.ecape.gov.za)

**Eastern Cape Tourism Board**  
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## **CHAPTER 2: THE CAPE PENINSULA NATIONAL PARK**

The chapter describes the first protected area selected to represent the Cape Floral Region for World Heritage Status. The Cape Peninsula National Park lies within the Western Cape Province, at the juncture of the Atlantic and Indian Oceans, at the southwestern limit of the tip of Africa. Situated close to the north / south axis of the Cape Fold Belt (refer to Figures 1.1.1 & 1.1.2), to the north lies the West Coast coastal plain and to the east the South Cape coast.

This protected area conserves a remarkable biodiversity of endemic fynbos plants and insect taxa. Mountain peaks and coastal habitats are world recognized by tourists visiting for recreation and conservation-oriented opportunities. The Cape Peninsula provides a breathtaking setting to this spectacular national park which, some 60 km in length, spans from Signal Hill in the north overlooking Robben Island, through the fynbos-covered landscapes of the Table Mountain massif and extending to the sheer seaboard cliffs of Cape Point in the south. The core protected area, the Cape Peninsula National Park, is complemented by adjoining conservation-orientated areas allowing the operation of natural large-scale processes and ensuring the sustainability and future of this magnificent area.

Justification is given for the inclusion of the Cape Peninsula National Park in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is provided.

### **SECTION 2.1 IDENTIFICATION OF THE PROPERTY**

#### **2.1a Country**

Republic of South Africa.

#### **2.1b Province**

Western Cape Province.

#### **2.1c Name of property**

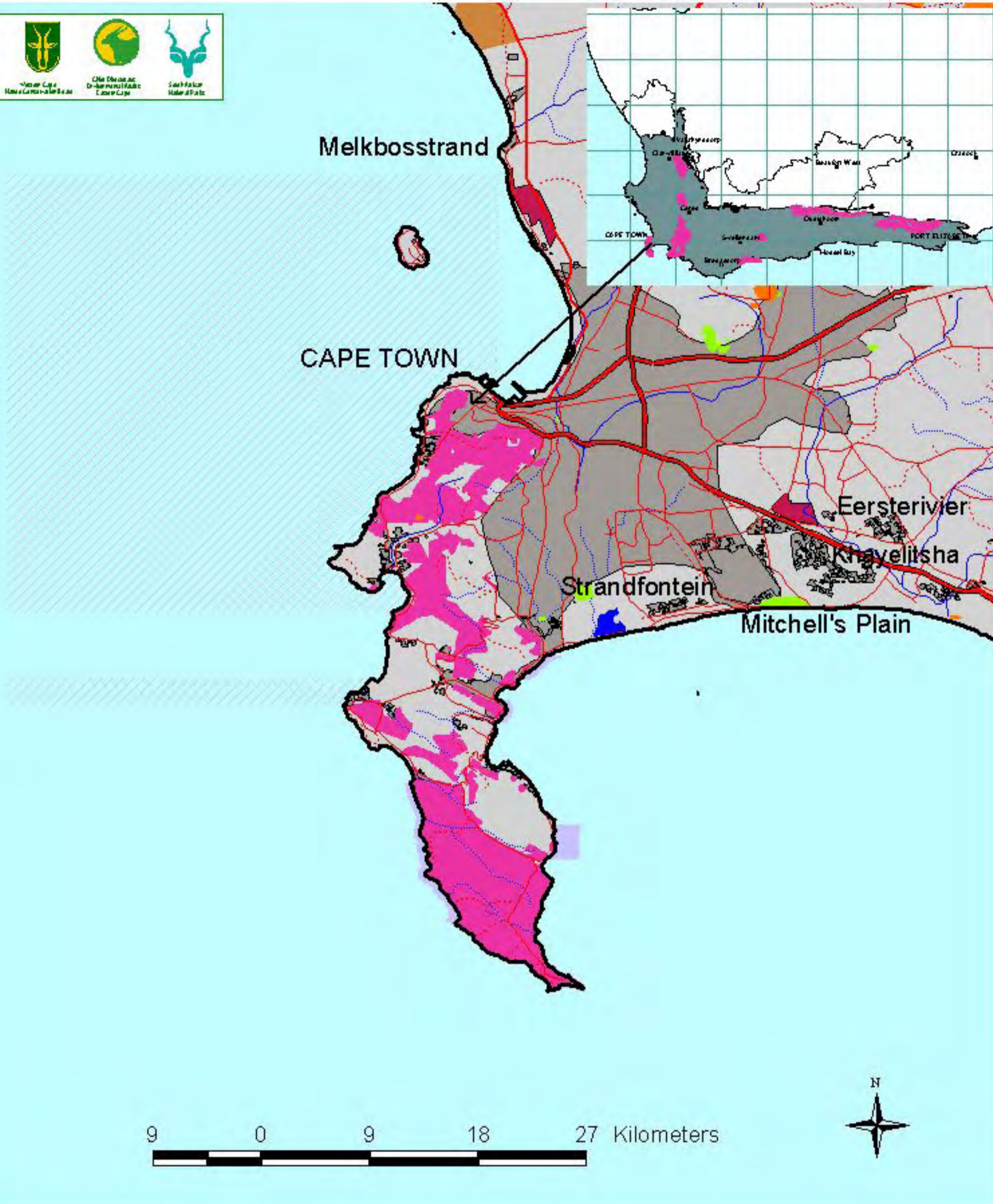
Cape Peninsula National Park.

#### **2.1d Location on map and identification of geographical co-ordinates**

The Cape Peninsula National Park occurs entirely within the boundaries of the City of Cape Town, within a declared Protected Natural Environment called the Cape Peninsula Protected Natural Environment. The geographic co-ordinates are listed in Table 1.1.1. The Cape Peninsula National Park and the Cape Peninsula Protected Natural Environment are illustrated in Figure 2.1.

#### **2.1e Maps and plans showing boundaries of the Cape Peninsula National Park**

The Cape Peninsula National Park spans some 60 km from Signal Hill in the northwest to Cape Point in the southeast. Refer to Figure 1.1.1 for an overall view of the location of the Cape Peninsula National Park in relation to the other protected areas in this nomination. Figures 2.1 and 2.2 provide a closer view of the protected area. Maps at scales of 1:50 000 and 1:500 000 are provided in Appendix 1.

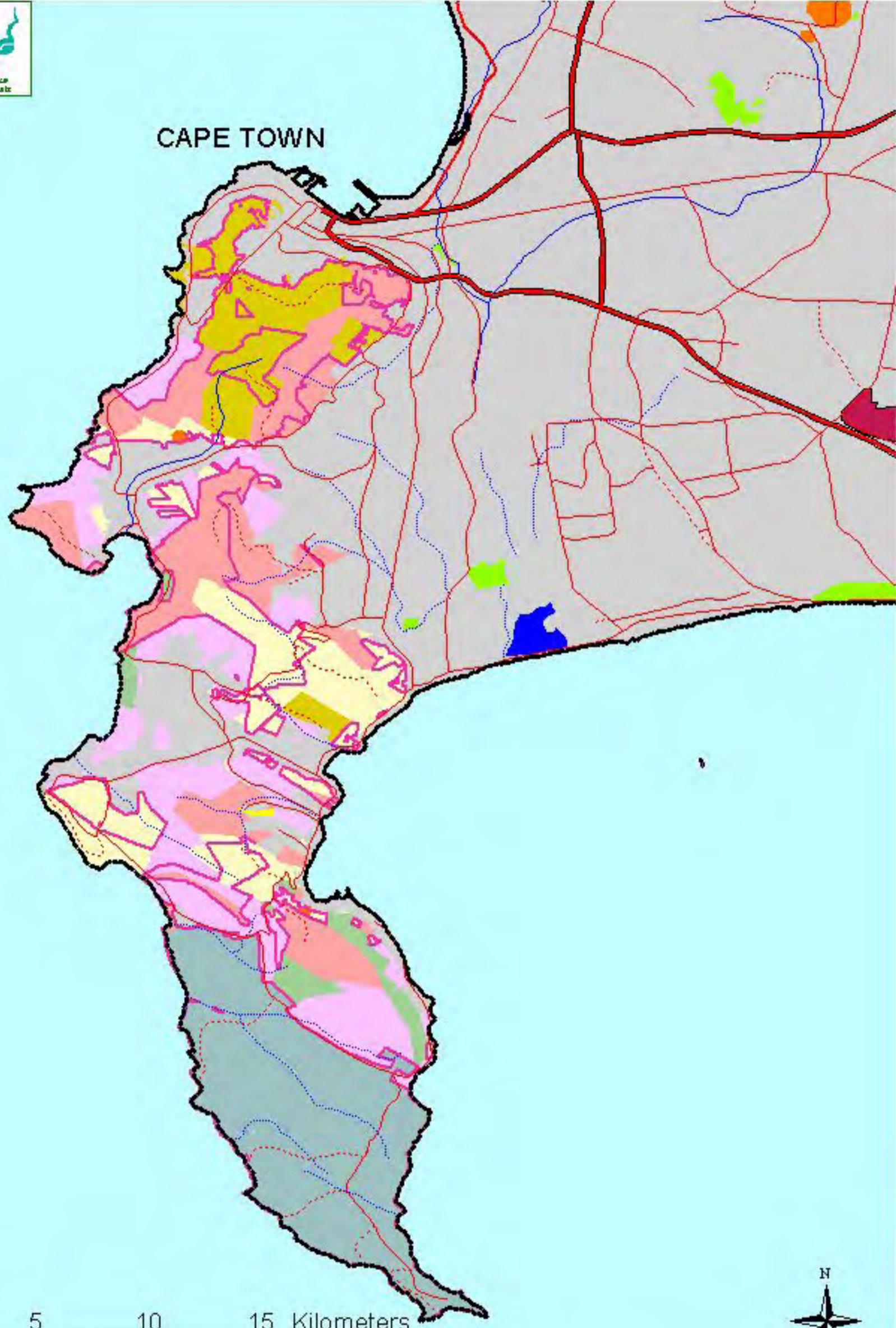


LEGEND			
	Rivers		Local Authority Nature reserves
	Roads		Provincial Nature Reserves
	Dams		Private Nature Reserves
	Towns		Marine reserves
			Rock Lobster sanctuary
			Conservancies
			Proposed conservancies
			SA Natural Heritage Sites
			Mountain Catchment Areas
			Cape Peninsula National Park

**FIGURE 2.1**  
Cape Peninsula National Park and surrounding reserves



CAPE TOWN



5 0 5 10 15 Kilometers



LEGEND

- |        |                                 |   |
|--------|---------------------------------|---|
| Rivers | Local Authority Nature reserves | City of Cape Town                         |
| Roads  | Provincial Nature Reserves      | Cape Metropolitan Council                 |
| Dams   | Cape Peninsula National Park    | Provincial Administration of Western Cape |
|        |                                 | Private                                   |
|        |                                 | South Peninsula Administration            |
|        |                                 | State                                     |

FIGURE 2.2

Land ownership of the Cape Peninsula National Park

## 2.1f Area of the Cape Peninsula National Park

The extent of the core area of the declared Cape Peninsula National Park (CPNP) is 17 254ha. A further 5 707ha is public land, under management of the Park authorities, pending proclamation. For the purposes of this nomination, this public land is considered to be part of the buffer zone and not part of the CPNP (Figure 2.2).

The full extent of the Cape Peninsula Protected Natural Environment (CPPNE), which includes the CPNP (and the yet unproclaimed public land), is 31 734ha. The CPPNE is made up of public land (State and municipal land totalling 25 404ha or 80% of the CPPNE) and private land (totalling 6 330ha or 20% of the CPPNE). The buffer contributes 14 480ha (Figure 2.2). Marine Protected Areas contribute an additional buffer area of approximately 1 600ha.

## SECTION 2.2 JUSTIFICATION FOR INSCRIPTION

### 2.2a Statement of significance

Representing the Southwestern Phytogeographic Centre of endemism, together with the Boland Complex (refer to Chapter 4), the Cape Peninsula Protected Natural Environment is considered by Cowling (1995) to be "the jewel in the Cape Floristic Region's crown". This Protected Natural Environment is situated at the extreme southwest of the Cape Floral Region, and covers over 30 000 hectares, of which the core protected area, the Cape Peninsula National Park, is the primary component.

Conserving over 50% of the original extent of the Cape Peninsula Mountain Fynbos Complex BHU, the Cape Peninsula National Park is a spectacular mixture of 15 vegetation types (Cowling *et al.*, 1996a; Appendix 9) owing to a rich geology and an exceptional altitude range from marine and coastal environments to mountain peaks. The Cape Peninsula has the richest topographic and climatic diversity of any area in southern Africa, resulting in a spectacular richness of habitats for plants and animals. Rainfall gradients are exceptionally steep and annual rainfall ranges from a mere 400mm at Cape Point to well over 2 000mm on parts of Table Mountain. The Cape Peninsula flora is one of the richest for any similar-sized area, both in the Cape Floral Kingdom and elsewhere in the world. An endemic hotspot within the Cape Floral Region, this relatively small area supports some 2 285 plant species of which at least 90 are endemic to the Peninsula. Latest estimates indicate that 6 % of the Cape Peninsula's flora (141 species) is threatened (Trinder-Smith *et al.*, 1996). While primarily renowned for the floral biodiversity, the Peninsula is also home to at least 114 endemic, as well as 23 Red Data Book animal species. The recent establishment Cape Peninsula National Park has been able to ensure the sustainable conservation of most of this exceptional biodiversity.

The area's exceptional beauty reflects the topographic diversity of the Peninsula, the product of millions of years of differential erosion of resistant and more yielding sediment. The Peninsula is home to two scenic landmarks of international renown: Table Mountain and Cape Point. Between these two charismatic tourist destinations are a magnificent mosaic of wetlands, rivers and waterfalls, towering cliffs and expansive mountain plains covered with fynbos, Afro-montane forests, dunes and thicket vegetation. This diversity of habitats hosts plant species such as the South African national tree, the real yellowwood (*Podocarpus latifolius*), and the magnificent King Protea (*Protea cynaroides*), the South African national flower. The near endemic, Rare silver tree (*Leucadendron argenteum*) graces the slopes of Table Mountain. The Peninsula also supports a remarkable diversity of terrestrial orchids, including 21 Red Data Book orchid species, while the symbol of all Western Cape sports teams, the red disa (*Disa uniflora*) orchid may be found along watercourses on the upper mountain plains. The exquisite but threatened endemic diamond eyes (*Staavia dodii*) may be seen at Cape Point and no less than 29 endemic heath (*Erica*) species are found on the Cape Peninsula, occupying niches from coastal to high mountain peak habitats (Appendix 9).

These varied habitats, which include a complex and well-studied cave system in many of the cliffs and peaks along the Peninsula mountain chain, play host to a surprising faunal diversity. While few large mammals remain of the myriad which roamed the shores and slopes of the Cape many centuries ago, well-managed breeding programmes have ensured the survival of the magnificent eland (*Taurotragus oryx*) as well as several other large herbivores on the coastal plains at Cape Point. Secretive caracal (*Felis caracal*) and Cape otter (*Aonyx capensis*) are present, particularly towards the south of the Peninsula, while chacma baboon (*Papio ursinus*) troops are regular tourist attractions. Agile klipspringer (*Oreotragus oreotragus*) have recently been re-introduced to the Cape Point section of the Cape Peninsula National Park. In total, one Red Data Book mammal, eight Red Data Book bird, two Red Data Book reptile and four Red Data Book amphibian species are numbered among the diverse faunal component of this protected area. The endemic, Critically Endangered Table Mountain ghost frog (*Heleophryne rosei*) is found only in streams on Table Mountain.

It is, however, for the microfaunal element that the Peninsula becomes highly notable with respect to animal species. In total, 111 macroinvertebrate endemics, including one of the flightless stag beetles (*Colophon westwoodi*) (refer to section 1.3a(v)) have been identified to date (Appendix 9). The camel cricket (*Speleiacris tabulae*), one of a number of endemic invertebrates, which reflect Gondwanan distribution patterns, is but one of 14 endemic invertebrates supported by the extensive cave network in the Peninsula Mountain chain. Endemism on the Peninsula is particularly notable in the harvestmen (Opiliones) where a remarkable 67% of 21 species recorded within the CPPNE are endemic to the Cape Peninsula.

The total area of the declared Cape Peninsula National Park, is 17 254ha. A further 14 480ha of buffering conservation-oriented land (including State land, public land, private nature reserves and private land declared national park) provides protection to the core protected area, offering a safe haven to the remarkable biodiversity found in this protected area. Of this 14 480ha, over a third (5 707ha) is public land in the administrative process of being declared national park.

## **2.2b Comparative analysis**

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

## **2.2c Authenticity / integrity**

The natural areas of the Cape Peninsula were declared a Protected Natural Environment in 1989. Part of this Protected Natural Environment was proclaimed as the Cape Peninsula National Park, managed by South African National Parks (SANParks), in May 1998 (refer to sections 1.4b and 2.4b).

The core protected area encompasses the public land declared as part of the Cape Peninsula National Park (CPNP). As further land is acquired, or contracted into, the national park and when the details of a marine component to the national park have been finalised, a further submission will be made for an extension of the boundaries of this core area.

The private land declared national park, private nature reserves and public land within the CPPNE, as well as the five current Marine Protected Areas comprise the buffer area of this natural property. The full extent of the boundaries of the core and buffer area is illustrated in Figure 2.2.

The biodiversity of the Cape Peninsula has been considerably affected by various factors since European settlement in 1652. Urbanisation and agriculture have transformed 37% of the original area of natural vegetation. Lowland vegetation types have been worst affected, with almost half of the transformation occurring in one of the 15 recognised vegetation types (Appendix 9). Vegetation at high altitudes has been little affected by urbanisation and agriculture, but in places alien trees and shrubs have provided a threat to biodiversity in these areas. The Ukuvuka Firestop Campaign (<http://www.ukuvuka.org.za/> - aided by GEF funding) has made a significant contribution to clearing of alien vegetation on the Cape Peninsula and particularly within the Cape Peninsula National Park and Cape Peninsula Protected Natural Environment.

Trinder-Smith *et al.* (1996) analysed how effectively the public land within the CPPNE conserves the Cape Peninsula's plants, animals and ecosystems. They concluded, amongst other, that:

- The CPPNE is sufficiently large (over 30 000ha) to discount the possibility of species loss owing to habitat fragmentation. Cowling and Bond (1991) emphasised the importance of area size to ensure genetic viability of Cape fynbos species (refer also to Table 1.2.4).
- A total of 2 034 species (97%) have over 50% of their historical recorded distribution conserved, and 901 species (43%) fall completely within the boundary of this protected area. Only 13 species remain unconserved, and only eight species have between 1-30% falling within this protected area. In terms of animal species, only two remain unconserved: the amphipod *Paramelita auricularis* and the gastropod *Trachycystis cosmia*.
- Only one vegetation type has less than 33% of its existing area, and less than 10% of its original area, conserved (vlei vegetation)<sup>162</sup>. The remaining 14 have over 73% of their existing area conserved and over 17% of their original area conserved.

Potential challenges in the current extent of the CPPNE with regard to conserving biodiversity are that:

- There is no formally protected link between the northern and southern zones of the Cape Peninsula. A break in the mountain range, the Fish Hoek gap, creates a natural division between the northern and southern Peninsula. The recent purchase of key private properties has created a semi-natural corridor via the Noordhoek Wetlands, as proposed in the Draft Urban Edge Study for the City of Cape Town.
- There are only a few instances where there are connections between high altitude zones (above 300m) and the coast on the eastern side of the Peninsula (False Bay). Coast-to-crest conservation is important for both the aesthetic value it affords and also to protect a complete set of ecotonal and habitat changes which occur along such steep gradients. There is one instance where such additional protection is possible, along sections of the coastline between Simon's Town and Smitswinkel Bay. There are many instances where entire mountain streams - important for animal endemics - are conserved, though the major rivers (Silvermine, Disa and Elsie's) are formally conserved only in the upper parts of the catchment.

With regard to a buffer, large portions of public and private land abutting this core protected area are not suitable for development or agriculture, due to their topography, and thus rate highly with regard to their conservation value. SANParks are actively implementing mechanisms to enable inclusion of these areas into the CPNP.

A number of plans inform management of the CPNP and CPPNE (refer to section 2.4j).

## 2.2d Criteria under which inscription is proposed

The Cape Peninsula National Park is being nominated as one of eight protected areas on the basis of three criteria.

**CRITERION 44(a)(ii): Outstanding examples representing significant ongoing ecological and biological processes in evolution**

The Cape Peninsula is a microcosm of the Fynbos Biome of the CFR (refer to Figure 1.3.2) with regard to the significant ongoing biological and ecological processes in evolution described in section 1.2d. All of the significant ecological and biological processes covered in that section, with

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<sup>162</sup> Subsequent to this study, a significant tract of the Noordhoek wetland system has been bought for conservation and is now owned and managed by the CPNP authorities (although not yet declared national park), bringing the vlei (wetland) vegetation totals under conservation up considerably.



respect to evolution in the CFR, except patterns of geographical species replacement (which occurs on a larger scale), apply equally to the Cape Peninsula and are not repeated here.

The area of the Cape Peninsula National Park is sufficiently large to support physical and biological processes important in the maintenance of natural populations (Table 1.2.4), thereby ensuring the maintenance of evolutionary pathways and processes along ecological corridors (particularly along a north-south axis but also from the False Bay coastline to the Atlantic Ocean) for species migration (*i.e.*, gene flow, dispersal, pollination, *etc.*). Buffered by the remaining portions of the Cape Peninsula Protected Natural Environment, a total area of close to 30 000ha, the core protected area is sufficiently large to ensure the maintenance of essential natural processes such as natural fire and water flow regimes.

**CRITERION 44(a)(iii): Superlative natural phenomena or areas of exceptional natural beauty**

Much has changed since the English explorer Sir Francis Drake penned his now famous eulogy as he sailed past the Cape Peninsula during his 15<sup>th</sup> century voyage of discovery: "A most stately thing and the fairest cape in the whole circumference of the globe". Yet his sentiments are still echoed by modern-day visitors and residents as they gaze at – or from – some of the world's best known and most spectacular landmarks, located within the legal entity of the CPPNE. These landmarks include:

- **Table Mountain**, which rises majestically above Cape Town and which has become the city's premier environmental and cultural icon;
- **Cape Point**, the rugged promontory and spectacular meeting place of the Indian and Atlantic Oceans below sea-cliffs which rank among the highest and most dramatic in the world;
- **Chapman's Peak**, the precipitous, awe-inspiring route carved from the cliff-face along the Cape Peninsula's western seaboard;
- The "**Sentinel**" rock outcrop, which guards the entrance to exquisitely beautiful Hout Bay; and,
- **Kirstenbosch**, one of the world's great botanical gardens, where some 4 000 indigenous plants are conserved in an incomparably glorious physical setting below Castle Rock and other buttresses of Table Mountain.

All of these superlative natural features occur within the CPPNE and all but the two latter sites fall inside the Cape Peninsula National Park, which enjoys the highest possible conservation status, that of national park. There are continuous efforts to include those remaining areas not yet in the national park (refer to section 2.4b).

**CRITERION 44(a)(iv): The most important and significant natural habitats for in situ conservation of biological diversity**

The Cape Peninsula National Park is nominated on the basis of its high plant species richness, floral endemism, richness in palaeogenic faunal groups, and high levels of faunal endemism. Some 10% of threatened plant taxa in the CFR are restricted to this area. Six percent (141 threatened species and infra-specific taxa) of all the plant species on the Peninsula (2 285 species) are threatened (Trinder-Smith *et al.*, 1996), which makes the need for International recognition and conservation of this area crucial. Among the threatened species, members of the typical fynbos families Restionaceae, Proteaceae, Ericaceae and Orchidaceae are over-represented. At least 90 plant species (Trinder-Smith *et al.*, 1996a) are considered to be endemic but, according to recent estimates, as many as 160 species (Trinder-Smith, pers. comm.) may in fact be endemic.

The Cape Peninsula is home to 2 285 plant species, or more than one quarter of all of the species in the CFR. The area has more plant species than the whole of the British Isles (with 1 443 species in an area 600 times the size of the Peninsula) or New Zealand (with 1 996 species in an area 530 times the size of the Peninsula).

Supporting at least 114 endemic faunal species, these include three vertebrates (the Table Mountain ghost frog (*Heleophryne rosei*), the black girdled lizard (*Cordylus niger*) and the Cape chirping frog (*Arthroleptella lightfooti*)) and the unique camel cricket (*Speleiacris tabulae*). Blind depigmented Onychophora, and a host of other palaeoendemics, contribute to the exceptional faunal composition of the Peninsula (refer to section 2.3a). There are no Red Data Books for the majority of South African invertebrate species. The 111 invertebrate endemics (section 2.3a) would all be likely candidates for such a Red Data Book (Picker, pers. comm.).

The Cape Peninsula provides habitat for the following Red Data Book species: eight birds, two reptiles, four amphibians (Picker & Samways, 1996), and five butterflies (Picker, pers. comm.). With the exception of butterflies, there are no Red Data Books for invertebrate species. The 111 invertebrate endemics (section 2.3a) would all be likely candidates for such a Red Data Book (Picker, pers. comm.).

The Peninsula comprises a great range in habitats and has both lowland and Mountain Fynbos sites. It appears that historically the Cape Peninsula offered numerous refugia for relictual groups. It is especially rich in palaeogenic groups, which contribute significantly towards its high levels of endemism.

## **SECTION 2.3 DESCRIPTION**

### **2.3a Description of the Cape Peninsula National Park**

The Cape Peninsula, located at the southwestern extremity of Africa, comprises a region of internationally renowned scenic beauty and exceptional biodiversity. The Peninsula is girdled by one of South Africa's fastest growing metropolises, the greater Cape Town area.

The principal feature of the physiography of the Cape Peninsula is pronounced topographical heterogeneity and resultant spectacular scenery; great diversity of nutritionally impoverished soils; and wide variation in local climatic conditions.

The biological characteristics of the Cape Peninsula are typical of the southwestern portion of the CFR where summer drought, infertile soils, strong winds and especially, periodic fire (at 4-40 year intervals) are the driving variables for ecological patterns and processes (Cowling, 1992).

#### **2.3a(i) Physical features**

The Cape Peninsula forms part of the Cape Folded Belt, an L-shaped band at the southwestern corner of Africa of erosion-resistant, quartzitic sandstone mountains alternating with plains and valleys underlain by softer shales, and mantled at the coastal margin with young siliceous and calcareous sediments (Deacon *et al.*, 1992). The sandstones and shales of the Cape Supergroup, the predominant rocks of the Folded Belt, were deposited on earlier sediments and intruded granites at the margin of an inland sea, between 450 and 340 Mya.

These earlier rocks (Malmesbury shales and Cape Granite Suite) are exposed at many places along the lower slopes of the Peninsula mountains. The Sea Point contact is one of the only places in the world where the contact between shales and granite can be easily viewed.

Cape Folded Belt landscapes are ancient, having changed little during the past 60My, and having been spared extreme climatic conditions (including glaciation) during this period (Deacon *et al.*, 1992).

On the Peninsula, the Cape Supergroup is represented by Graafwater and Peninsula Formations. The former comprise a narrow bed (up to 65m deep) of medium-grained sandstones and mudstones, while the latter (and predominant rocks of the region) comprise a massive bed (up to 1 200m deep) of almost pure quartzitic sandstones (Deacon *et al.*, 1992). These sediments were uplifted during a period of orogeny between 280 and 215Mya and substantially eroded during the Mesozoic. Geological stability during the Tertiary has resulted in slow denudation of the hard sandstones, principally along fault lines and fractures, resulting in remnant massifs (e.g. Table Mountain) surrounded by extensive colluvial deposits on gentler slopes underlain by the older, softer rocks (Theron, 1983).

Tertiary deposits are poorly developed on the Peninsula: they comprise only some fossil-rich Miocene clays in the Noordhoek Valley. The Quaternary is represented by occasional patches of alluvium and extensive areas of siliceous (older) and calcareous (younger) sands that mantle most of the Cape Flats and other coastal areas.

The Cape Peninsula has the highest topographical diversity of similar-sized areas in southern Africa (Cowling *et al.*, 1996) and has two landscape features of international renown - Table Mountain and Cape Point. The impressive mountain chain traversing the Peninsula is separated from the north-south trending Folded Belt on its eastern margin by the relatively warm waters of False Bay and the narrow sandy isthmus of the Cape Flats; on its western margin it plunges, sometimes precipitously, into the cold waters of the Atlantic Ocean. The topography is dominated by sandstone plateaus and ridges, which reach a maximum altitude of 1 085m on Table Mountain. These ridges drop steeply to the debris-covered and gentler slopes underlain by softer sediments. The mountain chain is interrupted by several gaps, most of which are covered by Quaternary deposits. The north-eastern sector of the Peninsula comprises part of the featureless and sand-mantled Cape Flats. Towards the south, the landscape comprises a low (<150m) sandstone plateau, occasionally interrupted by narrow dunes of Quaternary sand.

Like other landscapes of the Cape Folded Belt, the soils of the Cape Peninsula are mainly sandy and nutrient-poor. The most impoverished soils - shallow, grey, acidic, leached sands deficient in all nutrients - are associated with the sandstone plateau, summits and upper slopes. These soils are mostly well-drained, but extensive areas of impeded drainage in the wet winter months occur on the more-or-less level plateau on Table Mountain and in the southwest. High-lying ground (>600m) subject to high winter rainfall and south-east cloud precipitation during summer, supports very acidic sands with high levels of organic matter. The deep soils of the colluvial slopes that are underlain by shale or granite, are heavier, orange to red in colour, less acid and richer in nutrients than the residual, sandstone-derived soils. Signal Hill, in the northwest, is comprised entirely of Malmesbury shale and lacks a colluvial overburden: soils are predominantly the moderately fertile duplex forms typical of the agriculturally transformed coastal plain (Swartland), north of Cape Town. Soils associated with the older Quaternary deposits are mainly deep, moderately acid sands that are marginally more fertile than those derived from sandstone. The younger sands along the coastal margin are poorly consolidated and highly alkaline.

### **2.3a(ii) Climate**

The Cape Peninsula experiences a Mediterranean-type climate, characterised by cool, wet winters and warm, dry summers. Winter rain is associated with frontal depressions budded off from the circumpolar westerly belt. In summer, the climate is influenced by the ridging cell of high pressure over the South Atlantic Ocean; the resultant south-easterly winds blow offshore along South Africa's southwest coast, and in the process lose whatever moisture they may have picked up over the warm Indian Ocean, as mist precipitation on the barrier peaks of the north-trending Folded Belt. However, up to 25% of the Peninsula's rain falls in the summer months (October to March) and much of this is associated with post-frontal conditions when the ridging high pressure cells advect moist air from the south and south-east.

The rainfall recorded in different parts of the Peninsula shows remarkable variation for so small an area (400-2 270mm/year). Rainfall gradients are exceptionally steep and are influenced not only by altitude but also by aspect and other topographic features that serve to trap rain-bearing winds. These gradients may be even steeper than the rainfall data suggest, since precipitation from south-east cloud in the summer months is substantial at elevations greater than 600m.

Spatial and temporal variations in temperature are not pronounced on the Cape Peninsula (mean annual temperature of 18-20<sup>0</sup>C) owing to the ameliorating influence of the ocean on the narrow land mass as well as the relatively low maximum altitudes of the mountain chain. The difference between mean maximum and mean minimum temperatures is slight (average 6-10<sup>0</sup>C). Frost and snow are rare, never persisting for more than a day or two.

A distinctive feature of the Cape Peninsula's climate is its strong wind regime. In winter, northwesterly winds frequently exceed gale force and have mean speeds ranging of 20-30 km/hr. Summer southerly and south-easterly winds may blow at gale force a week or more at a time with mean speeds of 20-40 km/hr.

### **2.3a(iii) Vegetation, habitats and plant species**

Three major vegetation types are represented on the Cape Peninsula (Appendix 9): these are the predominant fynbos shrubland, the rare Renosterveld shrubland with associated grasslands, and the patches of forest and thicket. Representing the Southwestern Phytogeographic Centre of endemism (refer to Table 1.3.1; Figure 1.3.4), together with the Boland Mountain Complex, the Cape Peninsula National Park also conserves a significant portion of the Cape Peninsula Mountain Complex BHU.

The flora of the Cape Peninsula is typical of areas in the southwestern Cape Floral Region (Cowling and Holmes, 1992). The five largest families represented on the Peninsula are Asteraceae (286 spp.), Iridaceae (168 spp.), Fabaceae (162 spp.), Poaceae (141 spp.) and Ericaceae (112 spp.) (Trinder-Smith *et al.*, 1996). These floras typically have a number of extremely speciose genera; those in the Peninsula include *Erica* (112 spp.), *Aspalathus* (55), *Senecio* (47), *Oxalis* (28) and *Ficinia* (37) (Trinder-Smith, 1996a).

Biogeographically, the Peninsula flora is unusual in that it includes species typical of strictly winter-rainfall portions of the CFR as well as species whose ranges extend eastwards, where more rain falls in summer. This biogeographical mixing may contribute to explaining the very high richness of the Peninsula's flora (Simmons & Cowling, 1996).

The Peninsula has exceptionally high plant species richness (2 285 species and infraspecific taxa), numbers of endemic (at least 90: 88 species and two infraspecific) and threatened (141:138 species and three infraspecific) taxa (termed species from here on). These endemic and threatened plant species include the delicate, Endangered *Erica fairii* and the beautiful but Endangered *Gladiolus aureus*. Numerous threatened and endemic orchids, proteas and other fascinating plant species grace the slopes and plains of this protected area (Appendix 9).

A high level of similarity exists between families with threatened, and families with endemic, species (Trinder-Smith *et al.*, 1996). A frequency analysis of the biological traits of both endemic and threatened species by Trinder-Smith *et al.* (1996) has shown that low-growing shrubs dispersed by ants are over-represented in both groups. Endemics are most likely to be non-sprouters, but threatened plants do not have a specific post-fire regeneration strategy. Threatened species have higher frequencies of geophytes, sprouters and wind-dispersed species compared to endemic species. Numbers of endemic and threatened species are not randomly distributed with regard to occurrence in vegetation types and patterns are similar for both groups.

### **2.3a(iv) Fauna**

The Peninsula's fauna is less well known than the flora, however, available information indicates that at least 114 faunal species in 47 families are endemic to the Cape Peninsula (Appendix 9). These endemics are clustered in several, largely montane nodes and palaeogenic (palaeoclimatically stable) zones typically located in upper reach forest streams, riverine forests and caves (the latter supports 14 endemics).

The general pattern for vertebrate groups is moderate species richness and low endemism, while certain invertebrate groups are very speciose and have exceptionally high levels of endemism.

The Cape Peninsula provides habitat for 23 Red Data Book species of vertebrate fauna and invertebrates. Approximately 42 mammal species have been recorded, or are likely to occur on the Cape Peninsula (Skinner and Smithers, 1990), one of which, the honey badger, appears in the South African Red Data Book for Mammals (Smithers, 1986). The Peninsula supports 155 regularly breeding bird species. Of these, eight are listed in the South African Red Data Book for Birds (Hockey *et al.*, 1989).

Three larger animal species have become locally extinct on the Peninsula in recent times. They are the Rare leopard (*Panthera pardus*); klipspringer (*Oreotragus oreotragus*), a small antelope recently re-introduced to the Cape of Good Hope; and, the Endangered lammergeier (*Gypaetus barbatus*) a large bird of prey.

Forty-eight snake, lizard and tortoise species have been recorded from the Peninsula (Branch, 1988). Among the reptiles, two snakes, which occur on the Peninsula (*Psammophis leightoni leightoni* and *Lamprophis fuscus*), are listed in the South African Red Data Book for Reptiles and Amphibians (Branch, 1988). Two indigenous fish species present (*Galaxius zebratus* and *Sandelia capensis*) occupy low-elevation waterbodies on the periphery of the Peninsula. More pronounced patterns of endemism appear in the amphibia. Of the 17 species recorded from the Peninsula, four are listed in the Red Data Book for Reptiles and Amphibians (Branch, 1988). These are *Xenopus gilli*, *Capensibufo rosei*, *Breviceps gibbosus*, and the palaeogenic Peninsula endemic *Heleophryne rosei*.

Strong patterns of endemism are evident among well-collected macroinvertebrate groups, where 111 endemics were identified (Picker & Samways, 1996; Appendix 9). In many instances, a very high percentage of the Peninsula representatives of certain taxa are endemics (Picker & Samways, 1996; Appendix 9). Although some of these have a dispersed distribution on the Peninsula, many are clustered, with the highest concentration of endemics occurring around Table Mountain. Less important clusters of endemics occur on mountains of the southern Peninsula. The same areas have been identified as hotspots for plant endemics (Trinder-Smith *et al.*, 1996).

The majority of the endemic species inhabit typical palaeogenic zones: upper reach forest streams, riverine forest and caves (14 of the endemics live in caves). Of particular note are a number of extant representatives of ancient lineages. Thus the cavernicolous camel cricket, *Speleiacris tabulae*, is the only African representative of the family. *Peripatopsis* species are also representatives of relict groups having a southern hemisphere distribution. The crustacean *Spelaeogryphus lepidops* is a remarkable palaeoendemic: this African species is one of only two extant members of the class Spelaeogryphacea (the other species occurring in Brazil). It survives in two very small cave streams.

Five butterfly species, which occur on the Peninsula, are listed in the Red Data Book for Butterflies (Henning & Henning, 1989). These species are: *Aloeides egerides* and *Lepidochrysops oreas oreas*, and the three Peninsula endemics *Thestor yildizae*, *Argyrocupha malagrida malagrida*, and *Poecilmitis nigricans nigricans*. Two species of Onychophora, *Peripatopsis alba* and *P. leonina* are listed as vulnerable and extinct, respectively (Groombridge, 1993).

### **2.3b History and development of the Cape Peninsula National Park**

This subsection briefly summarises documentation compiled on the history and development of the Cape Peninsula for the first phase of the nomination (Anon, 1999) (refer to Appendix 9). A recently initiated Heritage Resources Management Plan (HRMP) for the CPNP will provide a significant tool for the collation and management of information and heritage resources for this exceptional natural and cultural heritage area (section 2.4j). Appendix 2 provides a brief overview of the background, purpose, aims and objectives of the HRMP.

The Cape Peninsula has a long history of human settlement and it is likely that the ecosystems of the area were not 'pristine' when the Dutch established an outpost here in 1652. Evidence, for human occupation of the Peninsula, dates back to at least 200 000 BP (Deacon *et al.*, 1992). Stone tool artifacts, dating from the Early Stone Age, reflect the presence of people on the Cape Peninsula at a comparatively early date.

Table 2.1 summarises key events in the history of the Cape Peninsula National Park and environs. For more detailed information relating to the conservation of various land units of the CPPNE; a chronological sequence of events relating to the CPPNE; and, the process of establishing the CPNP, refer to Appendix 9.

Table 2.1 A summary of major events in the history of the Cape Peninsula National Park.

<b>Year / period</b>	<b>Description of historical incident or occasion.</b>
200 000 BP	Evidence of early human occupation of the Peninsula.
20 000 BP	Hunter-gatherer San inhabit the Peninsula and practice fire-stick farming.
2 000 BP	San displaced by Khoikoi, pastoralists of sheep and cattle.
1488	Bartholomew Dias lands at, and names, Hout Bay area the "Cape of Good Hope".
6 April 1652	Jan van Riebeeck leads a group of Dutch settlers to settle in the Cape.
17-19 <sup>th</sup> Century	Tree-planting programmes, agriculture and urban expansion bring about extensive changes to ecosystems in the Cape Peninsula and environs.
1914	Road built linking Simon's Town and Cape Point lighthouse.
1938	Cape of Good Hope Nature Reserve established (further consolidated 1964).
1950's	Planning guideline (Rule) of no development above 152 m adopted and extended during 1971 to the southern Peninsula.
1958	Table Mountain declared a National Monument.
1964	Table Mountain Nature Reserve proclaimed.
1965	Silvermine Nature Reserve proclaimed.
1967	Forced removals of "Coloured" people from farms on Peninsula (under Group Areas Act) reduces population in the higher areas of the Peninsula.
1983	Cape Peninsula Nature Area (CPNA) declared under the Physical Planning Act.
1989	Cape Peninsula Protected Natural Environment (CPPNE) declared under the Environmental Conservation Act.
1996	Table Mountain Project Team established, tasked by the then SA National Parks Board (now SANParks) to establish the National Park on the Cape Peninsula, using the CPPNE as the core of the future National Park.
1998	Cape Peninsula National Park declared (Government Notice 18916, 29 May 1998).

### **2.3c The most recent records of the Cape Peninsula National Park**

The CPNP maintains extensive records of the national park and the CPPNE relating to the physical environment, biota, cultural resources, management activities, land tenure, park facilities and infrastructure, financial data and research projects undertaken.

Monitoring data are recorded at appropriate intervals. Monitoring data are maintained in specially developed software (ZIZO) as part of an Integrated Environmental Management System (IEMS) based on the International Standards Organisation (ISO) 14001 series. In brief:

- All geo-referenced data is maintained in a Geographical Information System (GIS) database;
- Financial information is maintained in corporate financial system/s; and,
- The park maintains a library of all planning reports/ information/ publications/ research reports/ legislation relating to the park.

A personal computer-based Environmental Information System (EIS) - founded on commercial GIS and database software - enables park staff to access park information. The system:

- Allows park personnel to report on the status of the park;
- Assists park staff with strategic day-to-day decision making;
- Makes information on the park widely available to rangers, managers, researchers, visitors and the public; and,
- Improves the efficiency of gathering, storing and managing data about the park.

Records and data not stored and maintained in the CPNP are easily accessible from local research institutions and the local authorities (City of Cape Town; South Peninsula Administration). The CPNP maintains a web page (<http://www.cpnpc.co.za/>) providing public access to a wide variety of information about the National Park.

### **2.3d Present state of conservation of the Cape Peninsula National Park**

The core protected area, the Cape Peninsula National Park, incorporates most of the undeveloped public land within the CPPNE (section 2.4b). The recent establishment of the CPNP has consolidated land ownership, and designation as a national park has afforded these natural areas the highest national conservation protection. SANParks have initiated a number of long-term management interventions to maintain and restore the biodiversity of the Cape Peninsula (refer to section 2.4f).

The biodiversity of the Cape Peninsula has been considerably affected by various factors since European settlement in 1652 (refer to section 2.3b and Appendix 9). Urbanization and agriculture have transformed 18 172 ha (37%) of the original area of natural vegetation of the Cape Peninsula. Almost half of the urbanization has occurred in one vegetation type (sand plain proteoid fynbos) and almost all the rest in another five types that occur mainly on level areas at low altitudes. Similarly, 90% of agricultural transformation has occurred in three lowland vegetation types (Richardson *et al.*, 1996).

On the other hand, vegetation types that occur predominantly at high altitudes have been little affected by agriculture and urbanization, and more than 90% of their original area remains. The CPNP conserves much of the undeveloped and relatively pristine tracts of vegetation remaining on the Cape Peninsula, and the area remains ecologically functional, supporting an extremely high biodiversity.

The CPNP authorities concentrate on the maintenance and management of indigenous vegetation and fauna, and on providing controlled recreation for visitors and users, as well as educational services for all communities. Although under different ownership, the remaining public land in the CPPNE is managed with similar goals, with programmes of prescribed burning (the survival of fynbos being dependent on random fire events – refer to section 1.2d(i)) and the removal of alien vegetation. SANParks currently take full or concurrent management responsibility for much of the state, provincial and local authority land not yet proclaimed as National Park. This land is managed on the same basis as the proclaimed National Park.

Challenges arise with the co-ordination of fire management plans, containing wildfires, and the eradication of alien vegetation, primarily in the buffer areas surrounding the core protected area. Some landowners, particularly private owners, do not always have the resources for effective conservation measures such as alien plant removal and fire-break maintenance.

The Cape Peninsula forms part of the Greater Cape Town Metropolitan Area which is experiencing extremely rapid urbanisation and population growth: the population of this area was 2.2 million in 1998, reaching some 3.5 million by the year 2000 and is projected to reach 6.2 million by 2020, an annual increase of between 4 and 5 percent (Richardson *et al.*, 1996). The definition of a statutory urban edge will further contain urban expansion. The Peninsula Urban Edge Study has recently been adopted by the City of Cape Town and submitted to the Provincial Administration of the Western Cape (PAWC) for approval as structure plans in terms of LUPO (1985).

Portions of the demarcated State Forests, Tokai and Cecilia, are managed for timber production by a state company, Mountain to Ocean (MTO)<sup>163</sup>. Negotiations are currently underway to include the forests into the CPNP to be managed as part of the national park.

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<sup>163</sup> MTO was formerly known as South African Forestry Company Limited (SAFCOL).

## **2.3e Presentation and promotion of the Cape Peninsula National Park**

The policies and programmes related to the presentation, promotion and transmission of the Cape Peninsula to future generations are addressed in two sections, namely social ecology, and marketing and communication.

### **2.3e(i) Social ecology**

The Cape Peninsula National Park is in essence a 'people's park'. It is largely surrounded by a bustling metropolitan area and most of it remains unfenced. In the light of this context, the ultimate goal of conservation can only be achieved with the establishment of strong partnerships with the surrounding communities.

SANParks has pioneered an interdisciplinary approach that is participatory, community oriented and developmental in nature. So-called 'social ecology' seeks to facilitate mutually beneficial partnerships between the Park and local communities adjacent to the Park, which is also ensuring the development of a sense of ownership and shared responsibility in managing our natural and cultural heritage. There are several ways in which social ecology is being facilitated in the Cape Peninsula:

#### **Economic empowerment programmes:**

Alien plant clearing provides a platform for the development of entrepreneurial capacity from disadvantaged communities. This 'platform' allows for their further development and diversification as entrepreneurs who are successfully able to identify and exploit economic opportunity. Through partnerships with Banks, Non-Government Organizations (NGOs), Government and others, the network of support for these emerging contractors will expand so that they can become independent entrepreneurs and generators of jobs.

The range of economic empowerment opportunities is expanding as the Park develops. Other opportunities for developing contractors include the maintenance of footpaths and picnic sites, catering, crafts, transport and field guiding.

#### **Volunteer initiatives:**

The park is committed to supporting volunteer initiatives, and placed in a metropolitan area, it has an outstanding opportunity to maximise volunteer involvement in a meaningful way. Existing volunteer groups active within the area are involved in a range of programmes supported by the Park. In addition, new volunteer programmes to meet specific needs have been initiated, offering a range of opportunities for people or groups to become actively involved in the Park. Just one such example is the volunteer fire-fighting group, which has been invaluable in combating wildfires during the dry summer months.

#### **Environmental education:**

The park provides a range of opportunities for schools, youth, environmental and other groups, students and other interested parties to further their education. Programmes focussing on conservation are offered. The park also provides opportunities for other disciplines, such as sociology, anthropology and organisational psychology to a range of users. The park provides a range of facilities and venues for these purposes.

#### **Partnerships:**

Examples of active community partnerships include the following:

- The public are represented in the affairs of the Park through the establishment of a 15 member Park Committee.
- The park management meets on a regular basis with NGOs and Community Based Organisations.
- The park has established liaison forums, which meet on a regular basis with representatives from various local communities.
- The park has established bilateral forums with the two local authorities to deal with issues of mutual interest.



### **2.3e(ii) Marketing and communication**

The CPNP supports a Marketing and Communications Department. The role of the department is to be the guardian and promoter of SANPark's and the CPNP's image, profile and good name, internationally, nationally and within the organisation.

This objective is achieved through a deliberate, consistent and professional communication programme that creates awareness of the national parks and natural heritage and promotes visitor programmes and investments. Corporate affairs provides professional communications support in the following ways:

- Externally through media liaison to enhance and promote the profile and public awareness of SANParks in the most beneficial light.
- Internally through the internal communications, whose role is to provide all CPNP employees with clear reliable information that is aligned to the SANParks vision and enhances their service excellence and individual performance.
- Nationally and internationally in the role of investment relations providing a centralised fundraising function for projects and programmes undertaken by the various CPNP departments.

Refer to Volume 3 for promotional material on the Cape Peninsula National Park.

## **SECTION 2.4 MANAGEMENT**

### **2.4a Ownership**

Ownership of the core protected area of the Cape Peninsula National Park lies with the State (State land) and local authorities (public land) and the core area is designated in law as a National Park under the National Parks Act (57 of 1976).

Land within the remainder of the CPPNE is owned by a variety of public and private landowners. Public land (including the CPNP) forms the largest proportion (80%) of the CPPNE and is distributed amongst various national, provincial, regional and local authorities. The 20% of land in private ownership is divided amongst about 174 landowners, and includes some private nature reserves. Details of the major areas controlled and owned are given in sections 2.4d and 2.4e.

SANParks currently manages 6 282ha, which are not yet declared as part of the Cape Peninsula National Park.

### **2.4b Legal Status**

The core protected area, the Cape Peninsula National Park, is a proclaimed National Park under the National Parks Act<sup>164</sup> (refer to section 2.4c(i)). The CPNP falls within the large tract of undeveloped land within the Cape Peninsula, grouped into a land category known as a Protected Natural Environment (PNE), as defined in the Environment Conservation Act<sup>165</sup> (refer to section 1.4c(iv)). It is the intention of SANParks to eventually incorporate all the remaining public landholdings and the high priority private landholdings within the Cape Peninsula Protected Natural Environment (CPPNE) into the CPNP.

In 1996, a process was initiated to consolidate the land holdings within the CPPNE under one conservation-management authority, SANParks, and to proclaim the majority of land within the

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<sup>164</sup> Act 57 of 1976

<sup>165</sup> Act 73 of 1989, Part III, Sections 16 and 17

CPPNE a National Park in terms of the National Parks Act. After a lengthy process of negotiation with the various authorities and with the public of the City of Cape Town, the first portions of the Cape Peninsula National Park were proclaimed during May 1998. To date, some 18 026ha is proclaimed<sup>166</sup> while a further 5 707ha of public land is currently managed by the CPNP but not yet proclaimed as National Park. It is hoped that all public land will eventually be proclaimed and that the owners of much of the private land within the CPPNE will agree to contract their land into the park.

The process leading to the establishment of the CPNP is provided in Appendix 9 and the current extent of the National Park in relation to the CPPNE is depicted in Figure 2.2. Private land has been, or will be, incorporated into the park on a 'willing buyer / willing seller' basis, or by a contractual arrangement in terms of the National Parks Act<sup>167</sup>.

The process of SANParks acquiring land, negotiating change of vesting of state land, negotiating transfer of municipal land and entering into contractual agreements with private land owners is ongoing. Changes in land ownership and management will mean that the information presented in section 2.4a and sections 2.4d-e will change over time with the expansion and consolidation of the CPNP.

The buffer area of the CPNP includes five Marine Protected Areas: Melkbos Point to De Josie; Cape of Good Hope; Castle Rock; Jagers Walk to Glencairn; Neptunes Corner to St James; and St James to Kalk Bay. A revised and enlarged maritime park, with six exclusion zones, is in the final stages of development.

## **2.4c Protective measures and means of enforcing them**

The National Parks Act (57 of 1976), the Environment Conservation Act (73 of 1989) and the Marine Living Resources Act (18 of 1998) are the primary applicable operational legislation within the proclaimed core protected area of the Cape Peninsula National Park, however, the following laws, as amended, are applicable to the conservation of the surrounding land and the Cape Peninsula Protected Natural Environment, as well as to issues arising within the national park that fall outside operational management of the park:

The Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), the National Water Act (section 1.4c(v)), the Conservation of Agricultural Resources Act (section 1.4c(vii)), the National Heritage Resources Act (section 1.4c(viii)), the National Forests Act (section 1.4c(ix)), the National Veld and Forest Fire Act (section 1.4c(x)); the Marine Living Resources Act (section 1.4c(xi)), the Sea-shore Act (section 1.4c(xii)) and the Western Cape Nature Conservation Laws Amendment Act (section 1.4c(xvi)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

Further statutes which have particular relevance to the CPPNE include the Land Use Planning Ordinance (15 of 1985; a subsidiary of the repealed Physical Planning Act); the Rhodes' Will (Groote Schuur Devolution) Act (9 of 1910); the Defence Act (44 of 1957) and a number of Municipal and Regional Council Regulations. These Acts, ordinances and regulations currently apply to the various sections of the CPPNE depending on the land ownership.

Where specific details pertaining to statutory protection of the national park and the surrounding Protected Natural Environment are relevant (or where these might differ from those of the Provincially managed protected areas) these are provided below. The remaining statutes pertinent to the legal protection of the national park, the CPPNE and other buffer areas are covered in section 1.4c.

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<sup>166</sup> This total includes the 17 254ha of State and public land declared as national park (referred to in section 2.1f) as well as 771ha of private land declared as national park – but not included in the core protected area since it is privately owned.

<sup>167</sup> Act 57 of 1976, Section 2B(1) (b)

### **2.4c(i) The National Parks Act<sup>168</sup>**

This legislation supersedes most of the legislation referred to in section 1.4c within the National Park. In areas excluded from the National Park, the legislation referred to continues to be applicable.

The National Parks Act, administered by the SANParks Board established under section (s) 5 of the Act, is a significant legal vehicle for the protection and management of proclaimed national parks or areas designated for proclamation as a national park. It not only provides the legal authority for a number of existing and well known national parks throughout the country (listed and described in a schedule to the Act) but has also been amended relatively recently to provide for the management of land in private hands following the conclusion of a binding contract with the landowner, referred to here as contractual parks. The amendment also provides for the National Parks Board to be the registered owner of land acquired in future by the Board (not the State).

The Act sets out the object of a park as follows:

*"The object of the constitution of a park is the establishment, preservation and study therein of wild animal, marine and plant life and objects of geological, archaeological, historical, ethnological, oceanographic, educational and other scientific interests and objects relating to the said life or the first-mentioned objects or to events in or the history of the park, in such a manner that the area which constitutes the part shall, as far as may be and for the benefit and enjoyment of visitors, be retained in its natural state" (s4).*

Historically, the traditional approach was to establish parks by demarcating tracts of state land to be reserves or parks. However, in the last decade or so it has been recognised that the concept of habitat conservation should be widened to impose some reserve status on appropriate, or particularly sensitive, private land. This concept is relevant to the Cape Peninsula. The relevant section in this regard provides:

*"The Minister (of Environmental Affairs and Tourism) may by notice in the Gazette declare... subject to any agreement entered into between the Board... and the owner of any land, whereby that land is made available for the purposes of a national park, that land... to be a park, or declare such land to be part of a park..."*

It is under this section that privately owned land has been proclaimed as a contractual national park. Examples of private land included into parks under this contractual arrangement include the West Coast National Park, the CPNP, the Cape Agulhas National Park and the Richtersveld National Park.

### **2.4c(ii) The Environment Conservation Act<sup>169</sup> (the ECA)**

Parts of the Cape Peninsula are currently included in a Protected Natural Environment (PNE) declared under Part III (sections 16 and 17) of the Act. Although the Act as a whole is administered by the Minister of Environment Affairs, sub-sections 16 and 17 empower the Premiers of the different provinces to declare and manage PNEs. The Environment Conservation Act replaced the now repealed Physical Planning Act (88 of 1967), under which the Cape Peninsula was proclaimed a Nature Area in 1983.

Under this Act, land use can no longer be 'frozen' for the purposes of conservation. Instead, the onus is now on the Premier to issue directions "in respect of land or water in a protected natural environment in order to achieve the general policy and objects" of the Act. The Premier may issue directions only after providing a copy to all landowners who may be affected. The Premier must obtain the concurrence of each Minister who, in the opinion of the Premier, is charged with the administration of any law which relates to a matter affecting the environment in that area (s16(2)(b)) before issuing directions.

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<sup>168</sup> Act 57 of 1976. Refer to section 1.4c(vi).

<sup>169</sup> Act 73 of 1989

The Act empowers the Premier to establish a management advisory committee to advise him/her with regard to the control and management of a declared PNE (s17). Management of the CPPNE fell under provisions of this Act's predecessor, namely the Environment Conservation Act (100 of 1982). The statute envisaged management to be effected by the issuing of directions. For the Cape Peninsula two sets of such directions were issued - one under the repealed Act but still valid under saving provisions in the repealing Act, the second under the current Act (Notice No 1786 in Government Gazette No 9889 dated 9 August, 1985 and PN No 845/1991 in Provincial Gazette No 4727 dated 13 December 1991).

The first directive comprises of two short statements: (i) that *"measures should be taken to eradicate the following plant species...and any other exotic plant species which has proliferated in the area to such an extent as to threaten the survival of the indigenous plant species in the area"*. Four plant species, namely three species of *Acacia* and one of *Hakea* are listed; and (ii) that *"Measures should be taken to combat soil erosion in the area"*.

The second directive is more substantial. It provides that the Premier's approval is required before any land in a PNE is subdivided or building erected on it or altered. All such applications are referred to the Management Advisory Committee (MAC) for a recommendation before the Premier will consider issuing a permit.

Refer to section 1.4c(iv) for a general description of the Environment Conservation Act.

#### **2.4c(iii) The Land-Use Planning Ordinance<sup>170</sup> (LUPO)**

The provisions of this legislation currently relate to the areas administered by the local, regional and provincial authorities. This Ordinance is used by the Provincial, regional and local authorities to regulate the development of property and the erection of buildings on all private and municipal land.

All subdivisions or new structures within the CPPNE are, in addition to approval from the local authorities, further subject to a permit issued by the Premier of the Western Cape in terms of the PNE and EIA directions on the basis of regulations promulgated in terms of the Environment Conservation Act, 1989.<sup>171</sup>

#### **2.4c(iv) The Nature Conservation Ordinance, the Western Cape Nature Conservation Board Act and the Western Cape Nature Conservation Laws Amendment Act**

The provisions of these statutes, administered by the Western Cape Nature Conservation Board, are applicable to many of the areas in the CPPNE. Apart from containing detailed provisions safeguarding fauna and flora in the Province, and related matters, they empower the Premier to declare provincial nature reserves and also provides for the establishment of reserves by private landowners.

Refer to sections 1.4a(v), 1.4b(iv), 1.4c(xvi) and 1.4c(xx) of this nomination.

#### **2.4c(v) The National Heritage Resources Act<sup>172</sup> (NHRA)**

The NHRA (and its predecessors, including the National Monuments Act, 28 of 1969) was used for the proclamation and management of national heritage resources and sites (national monuments) such as Table Mountain, Tokai Arboretum and the geological contact at Sea Point. Refer to section 1.4c(viii) for further information on the NHRA.

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<sup>170</sup> Act 15 of 1985 (a subsidiary of the repealed Physical Planning Act).

<sup>171</sup> Refer to section 1.4c(iv) for more information on the EIA regulations.

<sup>172</sup> Act 25 of 1999.

#### **2.4c(vi) The Rhodes' Will (Groote Schuur Devolution) Act<sup>173</sup>**

*"To provide for the surrender of the Groote Schuur Estates to the Government of the Union of South Africa in accordance with the Will of the late Cecil John Rhodes and for the release of the Trustees thereunder from all responsibility in connection with the said Estates and for other purposes."*

This Act is currently used exclusively for the control and development of Groote Schuur Estate and also part of Tokai forest. The Act bestows upon the Prime Minister of South Africa the rights to reside in the manor house and open part of the grounds for a public park. It also provides for the protection and conservation of the whole property. The whole of the Groote Schuur Estate was handed into the custody of the State.

#### **2.4c(vii) Municipal and Regional Council regulations (various)**

These regulations currently apply to land administered and managed by the regional and local authorities. Regulations determined by Municipal and Regional Councils that are important for the CPPNE, are those created to control outdoor activities, such as recreation (e.g. picnic sites and littering). These are numerous and are mostly based on regulations determined by existing Acts and Ordinances.

#### **2.4d Agency with management authority**

The South African National Parks manages the core protected area, the Cape Peninsula National Park, as well as some of the land in the CPPNE buffer zone. Other authorities with management authority for components of the CPPNE buffer zone include State Bodies (National Botanical Institute, Mountain to Ocean, and the South African National Defence Force) and the City of Cape Town.

The names and addresses of agencies with management authority, as well as the areas which they are responsible for managing (in both the core protected area and the buffer areas of the CPPNE), are provided in Table 2.2.

#### **2.4e Level at which management is exercised**

The Cape Peninsula National Park is managed by three area managers, Paddy Gordon, Gavin Bell and Roy Ernstzen, who are responsible for the northern-, central- and southern sections respectively. Each section manager is assisted by section rangers with further administrative, research and logistical support from the Head Office at Westlake.

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<sup>173</sup> Act 9 of 1910.

Table 2.2 Names and addresses of authorities controlling publicly owned land within the Cape Peninsula National Park and Cape Peninsula Protected Natural Environment.

<b>Responsible Agency</b>	<b>Address</b>
<b>CORE AREA</b>	
South African National Parks	Chief Executive Officer Mr Mavuso Msimang P.O. Box 787 Pretoria 0001
<b>BUFFER AREA</b>	
South African National Defence Force (Klawer Valley)	Chief of the National Defence Force Rear Admiral Visser Private Bag X 319 Pretoria 0001
National Botanical Institute (Kirstenbosch)	Chief Director Prof Brian Huntley Private Bag X7 Claremont 7735
City of Cape Town (Chapman's Peak Scenic Drive, Witsands, Soetwater, Millers Point)	Acting City Manager Mr. David Daniels P.O. Box 298 Cape Town 8000
Department of Environmental Affairs and Tourism (Marine Protected Areas)	Chief Inspector Chief Directorate: Marine and Coastal Management Mr Pat Stacey Private Bag X9154 Cape Town 8000
Mountain to Ocean (MTO) formerly South African Forestry Company Limited (SAFCOL) Tokai and Cecilia Forests	The Regional Director Mr Braam du Preez Private Bag X5024 Stellenbosch 7600

Information regarding the level of management of the CPPNE is provided below for the core and buffer areas.

#### **2.4e(i) South African National Parks (core area)**

Management of the CPNP and additional areas of the CPPNE in the process of formal proclamation, is exercised by SANParks, who are responsible for the management of 18 National Parks with a surface area in excess of two million hectares. SANParks management is structured as illustrated in Figure 2.3.

The SANParks Board' functions include:

- Determining the overall SANParks vision and mission;
- Overseeing the management and financial accountability of the Chief Executive and Directors, approving their management objectives and assessing their performance;
- Formulating regulations for approval by the Minister of Environmental Affairs and Tourism and promulgation of such regulations; and,
- Approving annual reports and financial statements.

The role of the Chief Executive (currently Mr Mavuso Msimang) is to provide overall leadership of SANParks at executive level. The Directors are responsible for executing SANParks strategies in their area of responsibility. The Park Manager of the CPNP, currently Mr. Howard Langley, is accountable to the Director: Parks (currently Mr. J. van der Merwe).

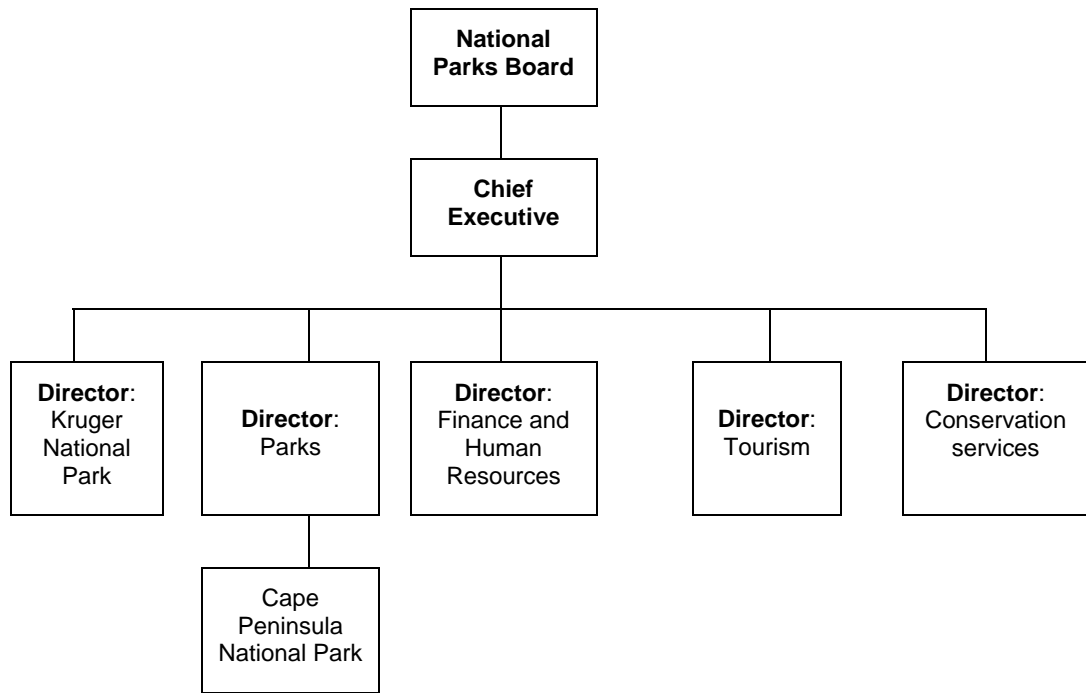


Figure 2.3. Organogram of South African National Parks structure

#### **2.4e(ii) City of Cape Town (buffer area)**

The City of Cape Town administers Soetwater and Miller's Point resorts. The Manager of the Amenities Department (Directorate: Community Services) is Ms. Christa le Roux.

*Ad hoc* conservation work and fire protection measures are implemented in the CPPNE by the Parks and Recreation Department (Directorate: Community Services) with Ms. Christa le Roux designated as the responsible person.

#### **2.4e(iii) South African National Defence Force (SANDF) (buffer area)**

The South African Navy manages the high security munitions facility in the Klawer Valley. The natural areas surrounding the infrastructure are registered as the Klawer Valley Natural Heritage Site. The natural areas of Klawer Valley are administered by the Environmental Service Officer, Captain Kwak who is accountable to the commander of the Simon's Town Naval Base, Admiral J. Louw. SANParks are negotiating with the SANDF to take over operational management of these areas.

#### **2.4e(iv) Mountain to Ocean (MTO)<sup>174</sup> (buffer area)**

Tokai and Cecilia are commercially managed plantations within the boundaries of the CPPNE. MTO's environmental policy supports the principles of *Caring for the Earth* and the *International Forestry Stewardship Council*. MTO is currently developing an Environmental Management System based on the ISO14001 standard. The contact person for Tokai and Cecilia is the ecotourism manager Mr. Chris Botes who is accountable to the Regional Manager Mr. Braam du Preez. SANParks is currently negotiating to take over management of these areas.

#### **2.4e(v) Department of Environmental Affairs and Tourism (buffer area)**

The five Marine Protected Areas (MPAs) around the Cape Peninsula are administered by the Chief Directorate: Marine and Coastal Management of the Department of Environmental Affairs and

<sup>174</sup> Formerly South African Forestry Company Limited (SAFCOL).

Tourism. The Directorate has four stations on the Cape Peninsula - Kalk Bay, Kommetjie, Hout Bay and Green Point. The responsible manager (Chief Inspector) for these MPAs is Mr. Pat Stacey.

#### **2.4e(vi) National Botanical Institute (buffer area)**

The National Botanical Institute (NBI) is an autonomous, statutory organisation formed by the amalgamation of the National Botanical Gardens and the Botanical Research Institute in 1989. The NBI curates eight National Botanical Gardens situated throughout the country in five of South Africa's six different biomes. Kirstenbosch, the most famous of the Gardens, was founded in 1913 to preserve the country's unique flora. The curator of Kirstenbosch Estate, currently Mr. Philip Le Roux, is accountable to the Chief Executive of the NBI, Prof. Brian Huntley.

#### **2.4f Agreed plans related to the Cape Peninsula National Park**

The regional plans affecting the CPPNE, plans focused on the National Park, as well as other initiatives affecting the conservation and management of the park for recreation and tourism, are addressed in separate sections below.

#### **2.4f(i) Regional plans**

Due to the CPPNE's proximity to the metropolitan area of Cape Town, there are a large number of plans adopted by local, provincial and national agencies which have, directly and indirectly, influenced the way the CPPNE is developed, conserved, used, visited and promoted as a tourism venue. Table 2.3 provides a summary of each plan in terms of its effect on the CPPNE.

Table 2.3 Summary of recent regional plans affecting the Cape Peninsula Protected Natural Environment.

TITLE & YEAR	SUMMARY OF RECOMMENDATIONS RELATING TO THE CPPNE
Hout Bay Structure Plan (1986)	Identifies opportunities for tourism development
Noordhoek Valley Draft Structure Plan (1987)	Recommends: <ol style="list-style-type: none"> <li>a) development of Peninsula hiking trail</li> <li>b) establishment of a Regional Recreation Area</li> <li>c) the formal protection of the Noordhoek wetlands</li> </ol>
Constantia-Tokai Valley Growth Management and Development Plan (1992)	Identifies opportunities in the mountains and riverine areas for multiple productive and recreational purposes
Smitswinkel Bay to Simon's Town Local Structure Plan (1993)	Identifies the need to: <ol style="list-style-type: none"> <li>a) upgrade the scenic drives</li> <li>b) establish "gateways" to the mountain</li> </ol>
Chapman's Peak Coastal Structure Plan (1993)	Recommends: <ol style="list-style-type: none"> <li>a) establishment of a coastal walking trail</li> <li>b) upgrading and landscaping of picnic sites off scenic drives</li> <li>c) Interpretive facilities at sites of cultural historic interest</li> </ol>
Victoria Road Coastal Structure Plan (1993)	Recommends: <ol style="list-style-type: none"> <li>a) the protected area should run from mountain to sea</li> <li>b) Apostle Battery to be developed for its tourist/amenity value</li> <li>c) establishment of a coastal walking trail</li> </ol>
Bakoven to Llandudno Local Structure Plan (1993)	Identifies a land use framework
South Peninsula Sub-Regional Plan (1996)	Identifies the need to: <ol style="list-style-type: none"> <li>a) strategize the acquisition of land which is considered to be threatening or an obstacle to the conservation status of the area</li> <li>b) implement a footpath system with controllable access points</li> <li>c) implement measures to protect the wilderness qualities of the more remote areas</li> </ol>



TITLE & YEAR	SUMMARY OF RECOMMENDATIONS RELATING TO THE CPPNE
South Peninsula Spatial Development Framework (ongoing)	Identifies the need for: <ul style="list-style-type: none"> <li>a) a statutory mechanism to ensure the conservation of it's natural attributes and the sustainability of its nature-based recreational and tourism role</li> <li>b) a programme of action to obtain the willing participation of all landowners in a joint conservation management initiative</li> <li>c) a programme of action to regularise all existing land usage</li> <li>d) a programme of action to improve the recreational facilities and support facilities along the scenic drives</li> </ul>
Metropolitan Spatial Development Framework (1996)	Identifies the need to create a continuous linked network of open spaces (Metropolitan Open Space System) which forms an integral part of resource conservation, use and management
Simon's Town Structure Plan (1996)	Recommends zoning of Primary Natural Areas and Special Recreation Areas with ecotourism/recreational centres sited within these areas.
Hout Bay River Local Structure Plan (1996)	Identifies the need to create a linked open space and trail system along the Hout Bay river, with linkages to the mountain and urban areas.
City Bowl Development Area: Growth Management Strategy (1998)	Identified strategies to address the mountain/urban interface and the tourism/recreational demands and needs.
Scarborough and Misty Cliffs Draft Land Use Framework (1998)	Identifies a land use framework
Strategic Plan: Ward 21 (1999)	Identifies a land use framework
Urban Edge Study (1999)	Identifies: <ul style="list-style-type: none"> <li>a) the limit of urban residential development into the natural areas</li> <li>b) the legal mechanisms to enforce an urban edge</li> </ul>
Environmental Policy: Cape Metropolitan Area (ongoing)	Develops a participative environmental policy for the Cape Metropole
Cape Town Municipal Development Framework (ongoing)	Identifies a land use framework

#### **2.4f(ii) Plans focused on the Cape Peninsula National Park and CPPNE**

Prior to the establishment of the National Park, a number of local area planning documents and strategies had been formulated by the different management agencies. The establishment of the CPNP has, subsequent to this, resulted in a number of holistic, park-wide planning initiatives, which attempt to consolidate and build on previous planning initiatives. Table 2.4 summarises recent plans, their primary objectives and/or recommendations in terms of the conservation of the CPNP and CPPNE.

Table 2.4 Summary of recent conservation planning initiatives relating to conservation of the Cape Peninsula National Park and Cape Peninsula Protected Natural Environment.

TITLE & YEAR	Summary of primary recommendations of plan
<i>Cape Peninsula National Park: Integrated Environmental Management System (IEMS) (completed in 2001, but ongoing)</i>	Develops: a) a vision, policies and management plan for the park b) an Environmental Management System, based on ISO14001, for the park
<i>Cape Peninsula National Park: GIS-based Environmental Information System (EIS) (completed in 2001, but ongoing)</i>	Develops: a) a well structured and well maintained digital database for the CPPNE b) a graphic user interface and associated applications for the park management and officials to access the database
<i>Conservation Development Framework</i>	Identifies: a) a spatial framework for recreation use of the Cape Peninsula b) Visitor sites for providing visitor facilities
<i>Cape Peninsula National Park Heritage Resources Management Plan (ongoing)</i>	Objectives: a) to develop a heritage resources management plan that complies with the ISO 14001 accreditation criteria of the South African Bureau of Standards (SABS); b) to build on existing CPNP policies and information, e.g. SANParks' Corporate Plan, Initial Environmental Impact Assessment (EIA) for the National Park's Cape Peninsula Biodiversity Project, the Integrated Environmental Management System (IEMS) and the CPNP Conservation Development Framework (CDF); c) develop a Heritage Resources Plan that can evolve together with the CPNP as a growing National Park; and, d) develop a plan that retains the critical support and ownership of all stakeholders.
<i>Boulders Management Plan (2002)</i>	Recommends policies to manage the multipurpose use of the area

The CPNP has recently developed an Integrated Environmental Management System (IEMS) (Appendix 2). The development process involved representatives from some 1 200 non-governmental and governmental organisations and was voted the 2001 "Project of the Year" by the International Association for Public Participation (IAP2). The development of the IEMS included the development of a Management Policy and a Strategic Management Plan (Appendix 2).

In response to the requirements of the recently promulgated National Heritage Resources Act (refer to section 1.4(viii)), as well as to meet one of the key strategies of the five-year Strategic Management Plan, SANParks has (in consultation with the South African Heritage Resources Authority) commissioned a study that will result in the formulation of a Heritage Resources Management Plan (HRMP) for the CPNP. The purpose of this study is to develop an HRMP that fulfils relevant legal requirements, reflects international best practice and is functionally integrated into the IEMS and EIS management tools already developed for the Park (Laros, pers. comm.).

#### **2.4f(iii) Other initiatives affecting the Cape Peninsula National Park and CPPNE**

A number of other initiatives, which affect the management and conservation of the CPNP and surrounding buffer areas, are given in Table 2.5 below.

Table 2.5 Initiatives affecting the conservation and management of the Cape Peninsula National Park.

Initiatives	Brief description
<i>Alien clearing</i>	An intensive and large-scale five-year programme managed by SANParks, to clear the entire area of seeding invasive alien plants, is being finalised. This programme has been funded by the Global Environmental Facility (GEF), USAID, Agence Francaise de Developpement, the National Working for Water Programme and SANParks.
<i>Fire management</i>	The park has implemented a controlled burning programme for the fire-prone fynbos. Sophisticated resources and equipment supplemented by well-trained fire-fighting personnel are maintained during the fire season to deal with wildfires. Fire breaks or pre-ignition boundaries are maintained along the urban edge. Educational and information programmes complement the fire management programme
<i>Visitor user survey</i>	A one year project completed during 2001 established a baseline indicator of the visitor usage of the area and the current visitor profile.
<i>Table Mountain Fund</i>	The Table Mountain Fund, administered by the World-Wide Fund for Nature (SA) has a capital value of some R42m and generates annual interest/income in excess of R3m - this money is being used to fund conservation projects on the Cape Peninsula and the greater Cape Floristic Region.

## 2.4g Sources and levels of finance

The budget projections (5 year) for the Cape Peninsula National Park have been designed to accommodate the future inclusion of all the public land and key private properties in the CPPNE, as well as the Marine Protected Areas, into the CPNP.

The current (2002/2003) annual budget for the Cape Peninsula National Park estimates operating expenditure of R43 million. This expenditure is budgeted to be financed through revenues generated from:

Grants from overseas sponsors (GEF, Agence Francaise de Developpement)	R 14 million
Grants from City of Cape Town	R 10 million
Tourist entry fees (pay entry points and annual permits)	R 16 million
Income from concessionaires (CONCOR, Table Mountain Aerial Cableway Company (TMACC))	R 4 million
Other income (filming, leases, etc.)	R 1 million
<b>Total operating funding</b>	<b>R 45 million</b>

There is thus a budgeted surplus of R2 million. Based on the current operations of the CPNP, expenditure in real terms is estimated to reduce consistently over the following five years after which it should stabilise at approximately R31 million per annum.

On current operations, income from entry fees and tourism-related activities is forecast to increase by R10 to R15 million per annum over the following four years. Allowing for the income from both the overseas sponsors and the local authorities coming to an end over this period, operating income from current activities will enable the park to be cash flow neutral, possibly even generating a surplus.

The future growth of the Park – both in terms of increases in land areas and in the incorporation of a marine area - will be funded by developing a diverse range of income sources.

## 2.4h Sources of expertise and training

The staff of SANParks in general and the CPNP specifically - the managers of the core protected area - is skilled and highly trained in plant and wildlife management, protected area administration, the natural sciences, financial management, tourism management, education, communication,

social sciences, human resource management and information management. SANParks and CPNP are able to draw on both local and international experts located at universities or other government or non-government institutions for advice and assistance. SANParks and CPNP also 'buy in' expertise where it is more cost-effective to do so. In-house training is provided to increase the skills and capacity of park staff.

## 2.4i Visitor facilities and statistics

A variety of facilities and activities are offered within the core protected area and surrounding buffer areas (refer to Appendix 9 for a detailed listing). Most of the CPNP is unfenced and has multiple access points at which no entry fee is charged. It is conservatively estimated that at least one million visitors a year access the area without going through a pay point. The paying entry points are provided below in Table 2.6.

Table 2.6 Visitor numbers to the Cape Peninsula National Park during 2001/2002.

Pay point	Number of visitors during 2001/2002
Oudekraal:	30 000
Silvermine:	32 000
Boulders penguin colony:	352 000
Cape of Good Hope:	684 200

A recent introduction to the management of local visitors at these pay entry points has been the launch of a season permit, known as the "Go Green" card, which allows card holders free entry into Oudekraal, Silvermine, Boulders and Cape of Good Hope for a minimal yearly fee.

Other facilities for both local and international tourists include Environmental education facilities, information centres, restaurants, tea gardens and curio shops. A regular treat for tourists is a ride on either the cable car to the top of Table Mountain or on the funicular at Cape Point.

For outdoor enthusiasts, there are some 400 km of hiking trails catering to those wanting a leisurely stroll to those seeking a longer, more strenuous, outing. An overnight (2-day) trail is available at the Cape of Good Hope section. Mountain biking, horse riding, mountain climbing, abseiling, hang-gliding and parasailing are offered, by a variety of commercial operators, for more adventurous visitors.

Spectacular beaches abound for sun-seekers, surfing is possible year-round and a number of tidal pools provide safe swimming, three of which are managed by SANParks – Oudekraal, Bordjiesrif and Buffels Bay at Cape of Good Hope. The winds around the Cape Peninsula provide ample opportunity for wind-surfing and sailing. Angling is a popular pastime, and the clear waters of the Cape Peninsula coastline offer excellent scuba and snorkelling conditions, although a wetsuit is necessary to ward off the cold. Several commercial operators offer boat trips around the Peninsula.

Over 15 picnic and braai (barbecue) areas, readily accessible to the public, as well as caravanning and camping facilities, cater for those who enjoy communing in a more leisurely fashion with the spectacular splendours of the Cape Peninsula.

A number of unforgettable scenic drives allow visitors and locals to experience panoramas of mountain- and seascapes. From August to November Southern right whales (*Eubalaena australis*) entertain thousands of spectators each year as they come close to shore to calve and mate. Sightings peak during September and there are a number of view sites along the scenic drives. The Boulders penguin colony is home to a growing colony of the Vulnerable African, or jackass, penguin (*Spheniscus demersus*), easily viewed by visitors.

Numerous places and areas of special heritage interest include historical and natural features such as the Rhodes Memorial, various historical Coastal Defence sites (e.g. King's Blockhouse and the Apostle Battery), the internationally renowned Kirstenbosch Botanical Garden, Orangekloof

(access by permit only), a number of Moslem Kramats and numerous historical shipwrecks (e.g. the Kakapo and the Thomas T. Tucker).

## **2.4j The Cape Peninsula National Park management plan and statement of objectives**

Since the proclamation of the national park in May 1998 SANParks, and particularly the CPNP staff, have commissioned and collaborated on the formulation of four key management plans or systems, which are:

- A) An Integrated Environmental Management System (IEMS), 2001, which included the development of:
  - 1) A Management Policy, 2001; and,
  - 2) A Strategic Management Plan, 2002.
- B) An Environmental Information System (EIS), 2001.
- C) A Conservation Development Framework, 2001.
- D) A Heritage Resources Management Plan (initiated mid 2002 - ongoing).

Documentation relating to these key management plans and systems may be viewed in Appendix 2.

The IEMS sets the following vision for the CPNP:

### **A Park for All**

We see a National Park that is a world-renowned natural and cultural asset to Cape Town, the Western Cape, South Africa and the world, for today and the years to come.

We see a Park conserving and enhancing its unique biodiversity, and cultural, historical and scenic resources for the benefit of present and future generations.

We see a Park reaching out to surrounding communities and visitors, who in turn treasure and share all the benefits it provides and contribute to its ongoing success.

We see a Park that is financially sustainable, acknowledging that its important contribution to the local and regional economy depends on the long-term conservation of its unique natural and cultural assets.

We see a Park striving for excellence in management through continual improvement, accountability and co-operative partnerships.

We see a Park for all, forever.

Objectives and goals are set in the IEMS within each of the following themes:

- Park establishment and sustainability
- Biodiversity
- The park community
- Cultural heritage
- Conservation planning and development
- Visitor management
- Park-Metropolitan Area interface
- Awareness, education and training
- Research, monitoring and information management
- Legal and institutional requirements
- Managing operational impacts

Public access to all of these documents, Park information and other management initiatives is encouraged through the use of the Internet. Downloads, of various documents for comment or information, are readily available to the public on: <http://www.cnp.co.za/downloads/>.

## 2.4k Staffing levels for the Cape Peninsula National Park

Staffing levels for the CPNP have been planned to accommodate the future inclusion of all public land and key private properties in the CPPNE as well as the Marine Protected Areas, into the park. Staff members, stationed within the Park, are responsible for environmental management, social ecology, management of visitor facilities, environmental awareness, marketing and communication, information management, financial management, administration and planning.

The CPNP contracts out large portions of its operational activities as part of its economic empowerment initiatives. For example, over 350 jobs a year are created by one environmental management activity - clearing of invasive alien plants. The park also contracts out specialist studies where it is not cost-effective to support these skills in-house.

The total staff complement numbers 207 employees. Summarised below is the current organogram for the CPNP.

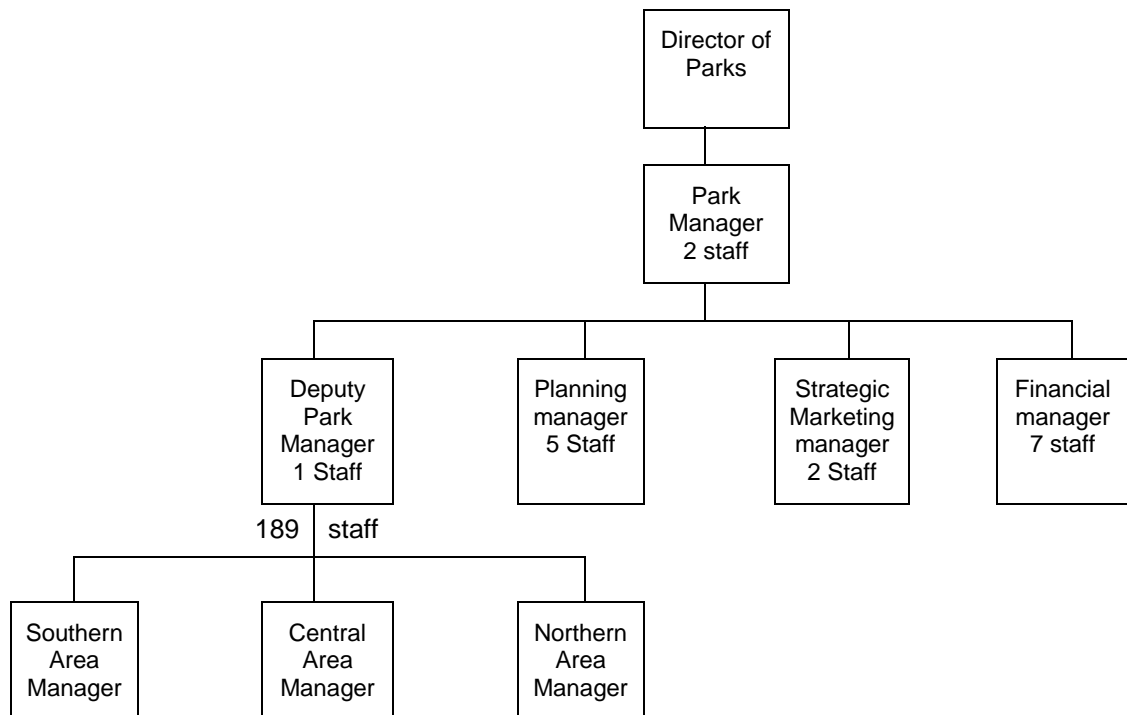


Figure 2.4. Summarised organogram for the Cape Peninsula National Park structure

## SECTION 2.5 FACTORS AFFECTING THE CAPE PENINSULA NATIONAL PARK

The ongoing processes of metropolitan growth and the associated need for recreation, tourist and economic activities, as well as land for housing and development, indicate that the Cape Peninsula National Park and surrounding natural areas are likely to be subject to significant continuing pressures.

Both the consolidation of conservation-worthy land on the Cape Peninsula into the Cape Peninsula National Park and the subsequent protection of these areas under the National Parks Act, 1976, have, and will, go a long way to addressing the immediate development pressures. Many of the threats referred to are, however, still relevant for much of the buffer area.

SANParks have accepted the challenge of the ongoing management of an open access area with an extraordinarily unique and rich fauna and flora and surrounded by a rapidly expanding urban

metropole. The Cape Peninsula National Park authorities have initiated management programmes (section 2.4j) and partnerships (section 2.3e) to address all the factors affecting the property.

## 2.5a Development Pressures

Development pressures and measures being taken to deal with them, are addressed in Table 2.7, below.

Table 2.7 List of development pressures and control measures for the Cape Peninsula National Park and Cape Peninsula Protected Natural Environment.

	<b>Development Pressure</b>	<b>Control Measures</b>
<b>Urban edge</b>	Increased rezoning and development of agricultural land changes the interface between natural/rural and urban areas.	Local authorities, with SANParks, have defined a fixed urban edge to prevent erosion of the CPNP. Land on either side of the urban edge is to be managed and/or regulated to control effects on the CPNP.
<b>Structures</b>	Inappropriate siting of roads, urban development, powerlines, telephone lines (etc) in visually or ecologically sensitive areas.  Various engineering practices have resulted in slope failure and promoted localised landslides, particularly on the northwestern slopes of the Peninsula mountain chain.  Urban development has curtailed the functioning of dune systems and negatively affected the inland waters and wetlands of the CPPNE (canalisation, impoundment, drainage, marina development, channel diversion, changes in runoff and infiltration). All rivers and streams of the Cape Peninsula are severely degraded for at least part of their channel (e.g. the Glencairn and Silvermine Rivers).	CPNP and other management authorities considering removal or phasing out of inappropriate facilities and introduction of environmentally friendly alternatives.  SANParks participate in and advise on all developments and engineering activities that could impact on the CPPNE. Where appropriate, SANParks have initiated rehabilitation projects.  SANParks have initiated a riparian rehabilitation project for areas in its jurisdiction and actively work with the CMC to manage catchment areas in their entirety.
<b>Housing</b>	Growth of formal and informal low-income areas directly next to natural areas, due to housing, service and facility backlog. Potential for illegal settlement in natural areas, although currently not a problem.  High demand for upmarket accommodation on the Atlantic and False Bay seaboard of the Cape Metropolitan Area (CMA). Many of the 'developable' natural areas are thus under intense pressure for development.	The situation is monitored and relocation of illegal inhabitants undertaken when appropriate. Planning authorities have established a legally defined urban edge which will determine urban growth patterns  SANParks have an excellent working relationship with local and provincial planning agencies to ensure that such areas are not inappropriately rezoned for development.
<b>Access</b>	Inequitable access to natural areas for recreation and environmental education across the CMA.	SANParks have instituted a number of initiatives to facilitate access by low-income communities to facilities in the CPNP.
<b>Poverty</b>	Poverty adjacent to natural areas often leads to inappropriate exploitation of natural resources and environmental degradation.	SANParks have initiated a number of community based programmes to create work opportunities and facilitate upliftment of neighbouring poor communities.
<b>Mineral exploitation</b>	Glass sand, kaolin, sandstone, granite, shale greywackes and phyllite are exploitable. Their exploitation permanently alters the appearance, geophysical and biotic base of the affected	Historically very little mineral exploitation has occurred in the CPPNE and no further mineral exploitation will occur in the CPNP.

	<b>Development Pressure</b>	<b>Control Measures</b>
	area.	
<b>Agriculture</b>	Many private landholdings in the CPPNE are zoned rural or agricultural, although not currently farmed. Their use for agriculture often implies transformation and loss of indigenous vegetation.	SANParks have embarked on a programme to include the remaining large privately-owned natural areas into the CPNP. SANParks are currently negotiating for the inclusion of the two commercial forestry plantations into the CPNP.
<b>Pollution</b>	In the surrounding areas, polluted groundwater seepage, treated wastewater, sewage, industrial effluents, oil spills, and especially stormwater from urban areas are chief contributors to a decline of water quality in both inland waters and the marine environment of the Cape Peninsula. Nutrient loading in False Bay and Table Bay is of particular concern, as the physical conditions of the bays are not conducive to good dilution and dispersion. In addition to these concerns, poor planning, the inadequate design and location of recreational facilities, and a growing population, are placing increasing pressures on coastal and marine environments.	Pollution of this nature does not affect the nominated property. SANParks have initiated a process to include the marine area into the CPNP and will initiate measures to address future coastal pollution problems. Refer to sections 1.4c and 2.4c for protective measures.
<b>Harvesting</b>	Overexploitation of marine and coastal species by fishermen and recreational anglers is common: stocks of rock lobster, abalone and reef fish seem to be severely depleted. Enforcement of regulations in marine protected areas is a problem.	SANParks have initiated a process to create and enlarged marine area into the CPNP with six exclusion zones for the protection of key species. Exploitation of marine resources will be effectively managed with the inclusion of this area into the CPNP. Refer to sections 1.4c and 2.4c for protective measures.

## 2.5b Environmental Pressures

The spread of alien invasive plants and fire constitute the two principal environmental pressures on the Cape Peninsula National Park and surrounding buffer areas. Table 2.8 details the pressures and the control measures applied by the CPNP management.

Table 2.8 Environmental pressures and control measures for the Cape Peninsula National Park and buffer areas.

	<b>Environmental Pressure</b>	<b>Control Measures</b>
<b>Alien plants</b>	Alien plants currently pose the most severe threat for the continued existence of fynbos ecosystems in conserved areas. Invasive alien plants have invaded large areas of the CPNP (section 2.3d, Appendix 9). Whereas no species extinctions in the CPPNE can yet be attributed to invasive alien plants, most rare plants are threatened by invasive aliens.  Dense stands of alien plants or piles of cleared aliens can produce very substantial fuel accumulation, resulting in high intensity fires. These are not only more difficult to control (and therefore more likely to damage people and property) but may also cause subsequent flooding and excessive soil loss.	SANParks are finalising an intensive 5-year clearing programme with the objective of removing all seed-bearing alien invasive plants from the CPNP. SANParks is liaising with, and assisting adjacent landowners to expand the alien clearing programme into other natural areas of the Cape Peninsula. Refer to sections 1.4c and 2.4c for protective measures.
<b>Fire</b>	Fire is intrinsically difficult to manage and has significant effects on the Cape Flora: There are considerable technical difficulties in predicting safe burning conditions, especially in the unpredictable Cape Peninsula weather systems. Fire	SANParks have implemented a comprehensive, well-resourced and scientific fire management



<b>Environmental Pressure</b>	<b>Control Measures</b>
<p>regimes that maintain biological diversity (high intensity, summer burns) conflict with fire regimes that ensure safety (low intensity, short rotation, spring or winter burns) causing a central paradox for fire management of the Cape Peninsula.</p> <p>Accidental fires pose problems with regard to fire suppression in mountainous terrain.</p>	<p>programme.</p> <p>A scientific fire management plan has been compiled and a volunteer fire-fighting group has been established.</p>

## **2.5c Natural Disasters and Preparedness**

Flooding, erosion and fire are considered to be natural factors that have operated over the past millennia. With the inclusion of the marine area into the park, future natural disasters, which will need to be managed are oil spills. National disaster contingency plans are however already in place for the marine areas.

The City of Cape Town in conjunction with CPNP management have collaborated in the establishment of an emergency radio-trunking system for the Cape Peninsula which enables communication links between all local authorities and the national park officials in the case of a natural disaster such as a wildfire. An emergency phone number for the City of Cape Town's disaster management unit allows instant notification in the event of any emergency within the greater City of Cape Town metropolitan area including the CPNP.

The GEF funded "Ukuvuka firestop" programme has been part of the proactive approach to preventing and reducing the intensity and frequency of fires within the Cape Peninsula National Park and environs.

## **2.5d Visitor/tourism pressures**

The Western Cape and the Cape Peninsula in particular are experiencing a rapid growth in tourism numbers and this increase is likely to continue. Seven of the top ten tourism attractions in South Africa are located within the Western Cape, and four of these are related to the Cape Peninsula (Cape of Good Hope, the Table Mountain Aerial Cableway, Boulders and Kirstenbosch Botanic Gardens). Cape Town is one of the top ten tourist destinations in the world and was rated number three by Harpers Travel. In 2001, 2 101 675 of foreign tourists to South Africa visited the Western Cape Province (specifically the Cape Town area) and contributed R11.5 billion to the economy, nearly 9.1% of the Western Cape's Gross Regional Product (GRP) (KPMG, 2001).

Despite the development of a number of new visitor facilities in recent years (new entrance and associated facilities at Kirstenbosch Botanic Gardens, a funicular at Cape Point, boardwalks at Boulders, major upgrade of the Table Mountain Cableway) the demand for additional facilities and services to serve the tourist market is huge. Some existing facilities (e.g. the restaurant at Cape Point) cannot cope with the demand, leading to a less than optimal visitor experience.

Amongst other impacts of visitors and tourists, uncontrolled use of the CPPNE for recreational purposes has led, in places, to the formation of gullies along tracks and paths, and the creation of new paths, which will erode with time. Cave systems in the sandstone have been negatively affected by accelerated erosion of access routes, vandalism of rock surfaces with graffiti, blackening of cave walls by illegal cooking fires and the removal of rock specimens.

To address the projected increase in tourists and visitors, and demand for facilities and services, whilst managing related impacts to safeguard the natural heritage of the Cape Peninsula, SANParks has compiled a Conservation Development Framework, which addresses, amongst others:

- The spatial definition of different user areas; and,
- Visitor sites at which visitor facilities will be developed.

In addition, SANParks have created a team of rangers to address the illegal activities and apply the measures given in sections 1.4c and 2.4c.

### **2.5e Number of inhabitants within the Cape Peninsula National Park**

Besides the staff housing, no private persons legally occupy the core area. There are three small communities - the established areas of Smitswinkel Bay (24 homes) and Castle Rock (6 permanent homes and 14 used as holiday accommodation) and the informal community of Red Hill (122 families) - living within the buffer area. The informal community have, after a process of consultation, agreed to be relocated (at the expense of the state) to the more convenient area of Simon's Town. There are no plans to increase the size of the Smitswinkel and Castle Rock communities.

## SECTION 2.6 MONITORING

### 2.6a Key indicators

The key indicators for measuring the state of conservation, together with details of such monitoring, are provided in Table 2.9 below.

Table 2.9 Key indicators for monitoring within the Cape Peninsula National Park.

Baseline data selected as an indicator to monitor the state of conservation of the site	Management activity/programme or environment/development pressure monitored	Sampling tool	Data storage format
Distribution and numbers of rare and endemic plants and animals	Fire management, alien vegetation management, tourism and recreation pressure	GPS Map grid reference	GIS
Distribution and population data for 'keystone' Proteaceae	Fire management, alien vegetation management	Protea Atlas project	GIS
Plant and animal structural and distribution data	Fire management, alien vegetation management, tourism and recreation pressure, development pressure, urban edge management	Permanent circle plots (vegetation) Aerial or vehicle counts (large mammals) Interval live trapping (small mammals) Point photographs	Database Digital images GIS
Distribution and density of alien plants	Alien vegetation management	Orthophotos GPS	GIS
Number and extent of wild fires	Fire management, education programmes, visitor pressures, urban edge management	Orthophotos GPS Satellite imagery	GIS
Visitor numbers, distribution and profile	Tourism and recreation pressure, access pressure, footpath management, infrastructure management	Questionnaires Digital access recording Visual counts Interviews	GIS Database Report
Water flow and water quality	Pollution pressure, urban edge management, fauna management, alien vegetation management, fire management, recreation pressure, development pressure.	Portable meters (water quality) Discharge calculation (water quantity) Box sampler (biota)	Database
Extent of erosion (man-induced and natural)	Recreation pressure, alien vegetation management, fire management, development pressure, urban edge management, path management	Aerial photographs	GIS
Land use	Development pressure, visual impacts, urban edge management, access control, pollution pressure	Local authority land management system	GIS
Attitudes and values	Education programmes, marketing and communication programmes, social ecology programmes, recreation management	_Questionnaires Interviews	Report
Landscape	Visual resource management, development pressures, urban edge management, infrastructure management	Fixed point photographs	Digital images
Socio-economic profile of adjacent low-income target communities	Social ecology programmes, economic empowerment programmes, education programmes, communication programmes	Census data Questionnaires Interviews	GIS Database Report

## **2.6b Administrative arrangements for monitoring**

The Integrated Environmental Management System (IEMS), based on ISO14001, sets performance indicators and targets, and protocols to facilitate continuous monitoring and evaluation of CPNP management.

The IEMS is to be subject to an annual audit by an independent consultant and two internal audits per annum. The results of the external audit are to be made public.

A further initiative of the CPNP is the establishment of an Environmental Information System (EIS), which comprises strategies, procedures and institutional frameworks, together with a set of data management tools. This system enables environmentally relevant data and information to be accessed and analysed by a wide range of users, to assist in decisions affecting the environment and natural resources, and in the planning of sustainable development.

The impact of management interventions and external pressures will be rigorously recorded, analysed and evaluated in order to monitor and evaluate performance against the biodiversity conservation, socio-economic, community participation and institutional objectives of the CPNP.

The Park will collect, store and retrieve information in order to monitor progress towards stated management objectives and targets. The project has already initiated the use of spatial information technology (ARC/INFO and ARCVIEW) to curate a complex environmental (natural-social-historical) database and to guide future decision-making. The maintenance of this database and development of decision-support tools have been outsourced where appropriate.

## **2.6c Results of previous reporting**

The CPPNE has a poor history of monitoring and data management owing to the historic lack of cohesive management. The Cape of Good Hope Nature Reserve maintained an excellent repository of monitoring information for alien vegetation, fauna, vegetation, fire and infrastructure whilst the Municipality of Cape Town kept a reasonable record of monitoring data for fire, vegetation, infrastructure, water quality and land tenure.

Excellent fire records were maintained for the Cape Peninsula by the now defunct Cape Peninsula Fire Protection Committee. The Council for Scientific and Industrial Research collated an excellent GIS database for all the natural resource information for the Cape Peninsula in 1993/1994.

The 1996 (volume 5) special edition of Biodiversity and Conservation focused on diverse aspects of the ecology and ecosystems of the Cape Peninsula (e.g. Cowling *et al.*, 1996a; Picker & Samways, 1996; Richardson *et al.*, 1996; Trinder Smith *et al.*, 1996a; refer to Volume 3). These and other concerted efforts to document and disseminate information, on the abundant wealth of the Cape Peninsula, have paved the way to ensuring the long-term future of this national park.

The CPNP's internet website (<http://www.cpnpc.co.za>) provides a download facility for the general public to access documents pertaining to the CPNP. These currently include the Management Policy, Strategic Management Plan and Conservation Development Framework for the national park.

## **CHAPTER 3 THE CEDERBERG WILDERNESS AREA**

The chapter describes one of the eight protected areas selected to represent the Cape Floral Region for World Heritage Status. This protected area lies within the Western Cape Province, close to the northwestern limits of the Cape Floral Region and the northern limit of the north / south axis of the Cape Fold Belt (refer to Figures 1.1.1 & 1.1.2). To the west is the coastal plain and to the east, the Succulent Karoo.

In brief, this large pristine wilderness of mountainous terrain conserves a phenomenal biodiversity of fynbos plants and endemic freshwater fish, as well as being a stronghold of ancient insect taxa. The high altitude mountain peaks provide not only stunning scenery and wonderful rock formations, but also unusual subalpine habitats. The mountains are named after the charismatic but rare cedar tree, which is being restored to its former importance through proactive restoration programs. The vast fynbos-covered landscapes of the protected area are complemented by extensive, adjoining conservation-orientated areas, allowing the operation of natural large-scale processes and ensuring the sustainability and future of this magnificent area.

Justification is given for the inclusion of the Cederberg Wilderness Area in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is provided.

### **SECTION 3.1 IDENTIFICATION OF THE CEDERBERG WILDERNESS AREA**

#### **3.1a Country**

The Republic of South Africa

#### **3.1b Province**

Western Cape

#### **3.1c Name of property**

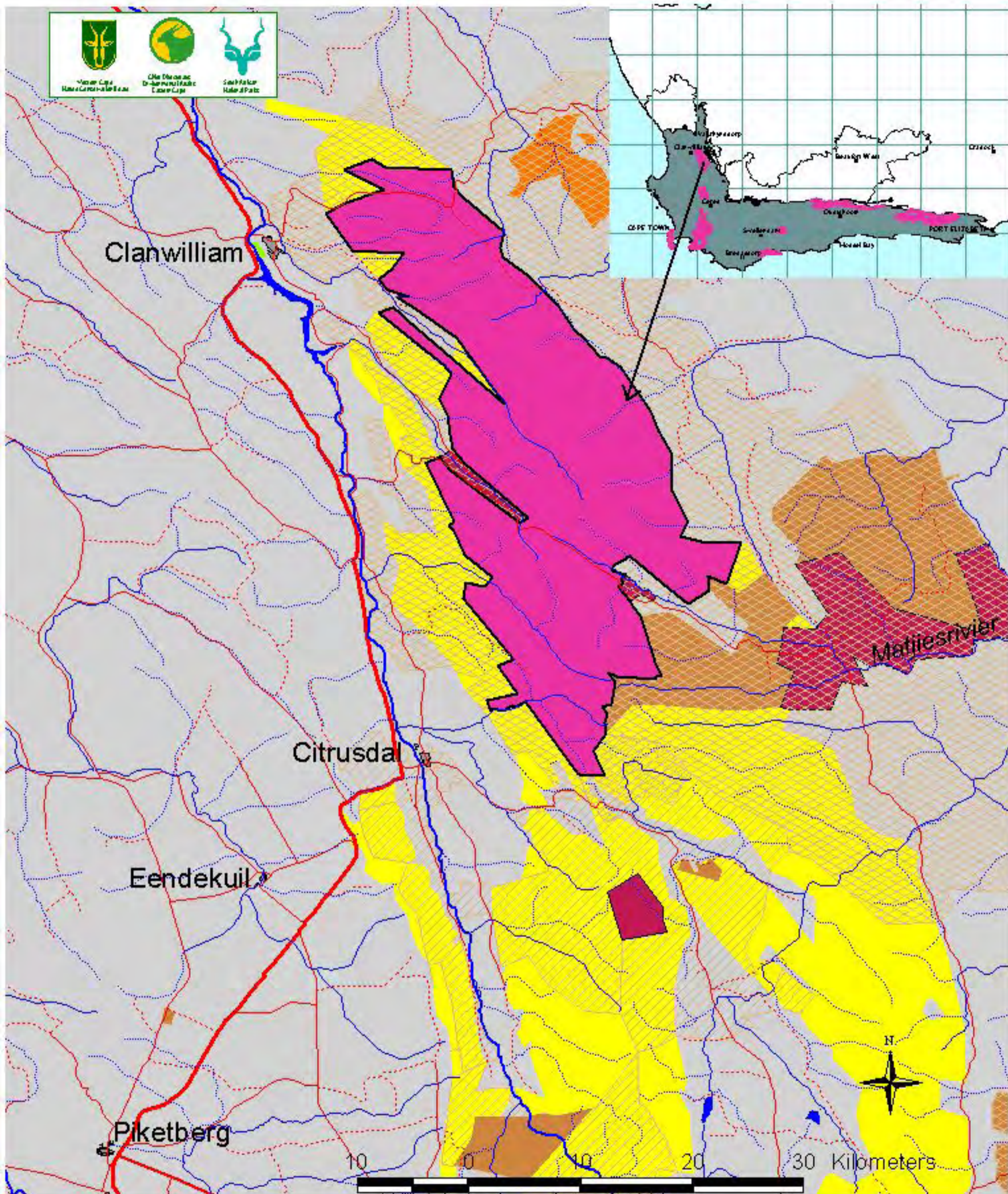
Cederberg Wilderness Area

#### **3.1d Location on map and identification of geographical co-ordinates**

The Cederberg Wilderness Area occurs within the boundaries of the Clanwilliam Magisterial District, and within the boundaries of the West Coast District Municipality (Moorreesburg). The geographic co-ordinates are listed in Table 1.1.1. A map of the area is illustrated in Figure 3.1.

#### **3.1e Maps and plans showing boundaries of the Cederberg Wilderness Area**

Refer to Figure 1.1.1 for an overall view of the location of this protected area in relation to the other protected areas and to the Cape Floral Region boundary. Figure 3.1 provides a closer view of the protected area and 1:50 000, 1:250 000 and 1:500 000 maps are provided in Appendix 1.



LEGEND

- |        |                                 |                           |
|--------|---------------------------------|---------------------------|
| Rivers | Local Authority Nature reserves | Proposed conservancies    |
| Roads  | Conservancies                   | SA Natural Heritage Sites |
| Dams   | Provincial Nature Reserves      | Mountain Catchment Areas  |
| Towns  | Private Nature Reserves         | Cederberg Wilderness Area |

FIGURE 3.1

Cederberg Wilderness Area and surrounding reserves

The boundaries are illustrated on Map No. 2 Government Notices No. 1256 of 27 July 1976 and No. 476 of 26 March 1976. The protected area is orientated along a northwest/southeast axis.

### 3.1f Area of the Cederberg Wilderness Area

The Cederberg Wilderness Area comprises one protected area of 64 000 ha with some 470 000 ha of surrounding reserves which link the Cederberg to the Groot Winterhoek Wilderness Area protected area in the south (refer to Figures 3.1 & 1.3.6; Table 1.1.1).

## SECTION 3.2 JUSTIFICATION FOR INSCRIPTION

### 3.2a Statement of significance

Because of its location close to the border of the Succulent Karoo in the most northwestern part of the Cape Floral Region (refer to Figures 1.1.1 & 1.3.2), the Cederberg Wilderness Area conserves a range of flora and fauna that is unique in the Cape Floral Region. The total area of the Cederberg Wilderness Area alone, along with its surrounding reserves is some 535 000 ha which, together with the Groot Winterhoek Wilderness Area, represents a significant part of the Northwest Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4).

In addition, this protected area forms the northern limit of the Cape Fold Belt. South of the Cederberg Wilderness Area, and extending along a north / south direction in line with the Cape Fold Belt, are several reserves that surround the Groot Winterhoek and Boland Mountain Complex protected areas. As a result, an extremely large proportion of the western mountainous Cape Floral Region is conserved by these three protected areas and surrounding reserves.

A centre of plant species richness (Lombard, 2000; Appendix 4), the Cederberg Wilderness Area preserves a number of endemic plants within a diverse flora of some 1 778 plants (Taylor, 1996). In addition, some 70 threatened (Red Data Book) plant species are harboured in the protected area. One such example of some of the many unique plants found in, and protected by, the sanctuary provided by this protected area is the relict conifer and local endemic, the Clanwilliam Cedar (*Widdringtonia cedarbergensis*)<sup>175</sup>. This Endangered species is an aesthetically imposing and important structural component of the Cederberg flora.

Conserving almost a third of the total area of the Cederberg Mountain Fynbos Complex Broad Habitat Unit, unique to this part of the Cape Floral Region, the protected area lies in a highly significant transition zone linking elements of mountain and arid fynbos with the flora of the Succulent Karoo.

The extremely varied topography and diverse plant habitats provide shelter and hunting grounds for a high diversity of fauna. Southern African endemic reptiles such as the Vulnerable armadillo girdled lizard (*Cordylus cataphractus*) and black spitting cobra (*Naja nigricollis woodi*) watch over the rocky crags, while mountain streams of the Cederberg environs are noted by Skelton *et al.* (1995) as a significant hotspot for endemism and diversity of freshwater fish - with eight endemic fish found in the waters of the Olifants River alone. The mountainous terrain and plentiful supply of prey and forage support large and medium-sized mammals including the Rare leopard (*Panthera pardus*) and Chacma baboon (*Papio ursinus*).

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<sup>175</sup> This species was brought to the point of near extinction through a combination of unsustainable woodcutting and too frequent fires. Both factors have been brought under control by a combination of outlawing woodcutting and improving the fire-management regime. In 1987, a 5 250 ha cedar reserve was established to establish young trees which are planted in suitable, selected sites within the protected area.

### 3.2b Comparative analysis

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

### 3.2c Authenticity / Integrity

The Cederberg Wilderness Area is a proclaimed Wilderness Area under the Forest Act, and is managed by the Western Cape Nature Conservation Board (refer to section 1.4a(iii)). The Cederberg Wilderness area enjoys high levels of legal protection and the wilderness management philosophy ensures that management is geared toward the conservation of biodiversity by encouraging the operation of natural processes (sections 1.4b(iii) & 1.4c(iv)) with regulated visitor access and low human impacts.

Overall, threats to the Cederberg Wilderness Area are few. The large size of this area, and its continuous linkage through the surrounding reserves such as Matjiesrivier Nature Reserve to the east, and the Groot Winterhoek and Boland Mountain Complex protected areas to the south, contribute to safeguarding it against external threats. The general area comprises agriculturally poor, mountainous land with low development potential. The eastern boundary of the protected area abuts onto Succulent Karoo, which is untransformed, and because of its low rainfall, is also unlikely to be developed.

The unspoilt tracts of indigenous flora allow the continuation of the natural fauna, including top predators such as the leopard (*Panthera pardus*) and black eagle (*Aquila verreauxii*). Specific management actions are taken to ensure the survival of any rare or threatened species. A good example of this is the re-establishment programme for the Clanwilliam cedar *Widdringtonia cedarbergensis* described above. A further example is that of the management programme initiated to conserve endemic and threatened fish species (described further in section 3.4f).

The size of the protected area, together with the surrounding reserves, ensures that many natural processes, required for biodiversity conservation in the future, remain functional and are likely to persist into the future.

### 3.2d Criteria under which inscription is proposed

The Cederberg Wilderness Area is being nominated as one of eight protected areas on the basis of two criteria.

<p><b>CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution</b></p>
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The Cederberg Wilderness Area has been identified in the CAPE Project as a component of one of three mega-reserves for the Cape Floral Region that will require further land acquisitions to create conservation corridors (Cowling *et al.*, 1999a; Appendix 5). Even without this expansion, the extent of the Cederberg Wilderness Area, in combination with adjacent reserves, is great enough to safeguard the long-term persistence of the area as a wilderness.

As a consequence of its large size, several important processes continue operating in this region. Important among these are a natural fire regime, which is vital to fynbos conservation, and the natural flow of water through the Wilderness Area. Because of its linkages through various reserves to other protected areas, the Cederberg Wilderness Area is an important ecological corridor allowing species migration, gene flow, dispersal, etc. along the Cape Fold Mountains.

The importance of these processes (species migration, gene flow, dispersal) is that much of the reproductive biology of fynbos depends on pollination and seed dispersal agents. Currently, these



operate in the protected area, but if local extinctions were to occur, recolonisation is possible owing to the substantial connections to adjacent natural areas.

The mountainous terrain of the Cederberg Wilderness Area ensures that there are steep altitudinal gradients within this protected area. These gradients provide a combination of physical features that are valuable for the conservation of biodiversity and potential buffering against climate change.

The area is also an important water catchment. The mountain fynbos in the region has a high conservation priority due to its water- and soil-holding capacity. Tributaries of the Olifants River that flow through the Wilderness Area represent a diverse riverine system with vital habitats for threatened and endemic fish.

<p><b>CRITERION 44 (a) (iv): <i>The most important and significant natural habitats for in situ conservation of biological diversity</i></b></p>
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This protected areas is located in one of the most species-rich areas in the Cape Floral Region and has one of the highest concentrations of threatened plant species as well as Proteaceae species. The plant assemblages of the Cederberg do not overlap greatly with those of other areas within the Cape Floral Region; the geographic location of the Cederberg Wilderness Area ensures the conservation of plant assemblages unique to this northern area. This arid fynbos region abuts onto the Karoo in the east, which means increased habitat diversity that, in turn, leads to enhanced species diversity.

A species-richness analysis revealed that the Cederberg Wilderness Area is sited within one of the richest areas in the Cape Floral Region (Appendix 4; Lombard, 2000). A separate analysis further showed that this area also has one of the richest concentrations of Proteaceae as well as threatened plant species in the Cape Floral Region.

The Cederberg Wilderness Area is a centre of endemism for fish and small mammals as well as being a major "hotspot" in terms of threatened species of endemic freshwater fish, including the Critically Endangered Clanwilliam sandfish (*Labeo seeberi*), an endemic to the Olifants River System. There are also a high number of threatened and endemic plant species including the Clanwilliam cedar (*Widdringtonia cedarbergensis*) and *Gladiolus delpierrei*.

### **3.2d(i) Cultural and aesthetic considerations**

Although the Cape Floral Region is not being nominated in terms of cultural and aesthetic criteria, the Cederberg Wilderness Area is valuable in both respects. The original inhabitants of the Cederberg area were the hunter-gatherers and Khoi stockmen, who were present until historic times. Evidence of their occupation of the area is found in the considerable rock art of the Cederberg Wilderness Area. Superb examples of rock art from between 300 and 6 000 years before present are found in the mountains. The national and international significance of rock paintings at Zimri Shelter in the Wilderness Area is considerable and represents the most important rock art discovery to date in the Western Cape<sup>176</sup>.

The Cederberg is renowned for its spectacular landscapes and rock formations, which consist mainly of Table Mountain sandstone and weathered sandstone formations, most notably the Wolfberg Arch and the Maltese Cross.

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<sup>176</sup> This invaluable rock art find is considered to be too significant and vulnerable to release exact details of its locality in case of vandalism or theft.

## SECTION 3.3 DESCRIPTION

### 3.3a Description of the Cederberg Wilderness Area

#### 3.3a(i) Physical features

The Cederberg Wilderness Area lies in the mountainous terrain ca. 70 km from the Atlantic seaboard (refer to Figure 1.1.2). The mountains rise suddenly and steeply from the coastal plain providing a steep altitudinal gradient. Sneeuberg (“snow mountain”) is the highest peak at 2 027 m above sea level whereas the lowest areas are a mere 300 m above sea level.

Weathering of the easily erodable sandstone has produced exceptional sandstone formations with high peaks, a series of steps to the lower areas and spectacular rock formations. The wide altitude gradients linked by a stepped topography, low nutrient levels, and acid sands, at the interface of the fynbos and karoo biomes, provide a combination of physical features that contribute to the unique biota of this region.

#### 3.3a(ii) Climate

The variable landscape of this Wilderness Area lends itself to a range of climatic conditions throughout this large area. Measured rainfall varies between an average annual rainfall of 647 mm at the Algeria Forestry Station to 939 mm on the slopes of Middelberg (just to the south of Algeria) with the wettest period of the year being from June to August. While mist is common at high altitudes, snowfalls may occur at any time from June to October.

Frost is common, particularly on the higher plateau, and night temperatures frequently drop below freezing point in winter (June – September). While temperature extremes of over 40°C are not uncommon during the summer months, the average summer temperature range between 25°C and 30°C depending upon altitude. Prevailing winds for the area are northwest during winter and southeasterly in summer, with hot, dry northerly and northeasterly winds (known as “berg winds”) creating fire hazard conditions on occasion – predominantly during the summer months.

#### 3.3a(iii) Vegetation, habitats and plant species

In the Cederberg Wilderness Area the vegetation is predominantly fynbos with some forest and scrub in the wetter, west-facing ravines. Representing the Northwestern Phytogeographic Centre of endemism (refer to Table 1.3.1; Figure 1.3.4), the Wilderness area supports substantial areas of northern arid fynbos that occur nowhere else. The flora further has close links with the fynbos flora of the southwestern Cape as well as with the dry winter-rainfall succulent shrublands of Namaqualand and also the western Karoo (Taylor, 1996).

A decrease in plant cover, as well as the declining importance of Restionaceae and other fynbos forms, and an increase in succulents in the northern and southeasterly portions of the area indicate a transition from the Fynbos- to the Succulent Karoo biome (refer to Figure 1.3.2) or an important ecotone between the biomes.

The Cederberg Mountain Fynbos Complex Broad Habitat Unit, which is unique to this area, covers most of the protected area. The protected area in turn occupies nearly 30% of the total of this habitat type in the Cape Floral Region (refer to Table 1.3.2; Figure 1.3.5).

Seventy threatened plant species (Hall & Veldhuis, 1985) have been recorded in the Cederberg Wilderness Area (Taylor, 1996). In many cases, this status is more an indication of locally- or regionally endemic species with naturally small populations than victims of extermination. A number of plant species are endemic to the Cederberg Wilderness Area (Taylor, 1996). The local endemic Clanwilliam cedar (*Widdringtonia cedarbergensis*), listed as Endangered (Red Data Book) (Hilton-Taylor, 1996), is among the most charismatic of these endemics, while the Rare snow protea (*Protea cryophila*), known from only four known populations, is restricted to high-altitude peaks. Other noteworthy threatened species of the Proteaceae family that are endemic to the Cederberg include *Leucadendron concavum*, *Serruria leipoldtii* and *S. flava* (all listed as Rare) and

the near-endemic, *Leucadendron diemontianum* (Rare)<sup>177</sup>. A yellow colour-form of the rather spectacular *Leucospermum reflexum*<sup>178</sup> is known from only one small population in the northern Cederberg Wilderness Area.

The area is also a centre of plant species richness (Oliver *et al.*, 1983; Rebelo & Siegfried, 1990; Appendix 4) including 97 families, 409 genera and 1 778 species of vascular plants (Taylor, 1996). While the core area is rich in Proteaceae (Rebelo & Siegfried, 1990) a variety of geophytes are found in the diverse habitats of the craggy mountains and sheltered valleys. These include the threatened endemics *Gladiolus delpierrei* (Rare) and *Lachenalia maximiliani* (Rare). During early spring many *Protea* and *Erica* species flower, attracting large numbers of sugarbirds and sunbirds that play an important role in fynbos pollination.

In comparison with similar-sized floras in the Cape Floral Region, such as those at Cape Hangklip (Boucher, 1977, 1978) and the Cape of Good Hope Nature Reserve (Taylor, 1985), the Cederberg Wilderness Area also has a high species to genus ratio (Table 3.1; Taylor, 1996). This could indicate a centre of local species radiation (Taylor, 1996).

Table 3.1 Percentage of species contained in the ten largest families and genera for several local floras and the Cape Floral Region. (Data from Boucher, 1977; Goldblatt & Manning, 1999; Taylor, 1985 and 1996).

Flora	% species in ten largest families	% species in ten largest genera
Cape Floral Region overall	60	21
Cape of Good Hope Nature Reserve (Cape Point)	57	18
Cape Hangklip (S of Kogelberg)	62	21
Cederberg	58	21
Swartboschkloof (Jonkershoek)	62	20

In an analysis of plant species-richness, based on the distribution of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records in the Cape Floral Region, the Cederberg Wilderness Area consistently fell within one of the species-rich “hotspots”. The Wilderness Area also fell in a “hotspot” based on all threatened species within this dataset (Lombard, 2000; Appendix 4). A separate analysis, using point localities for 364 species of Proteaceae comprising 183 322 records, yielded similar results showing that the Cederberg Wilderness Area is sited in one of the richest areas in the Cape Floral Region. This protected area also fell into the top 25% of sites needed to conserve these (selected) plant taxa in the Cape Floral Region (Lombard, 2000; Appendix 4). This suggests that the protected area is invaluable in the conservation of much of the mapped plant species-richness within the Cape Floral Region.

### 3.3a(iv) Fauna

The richness of the fauna in the Cederberg reflects the location of this protected area at the interface between the Fynbos and Karoo Biomes (refer to Figure 1.3.2). The area harbours large mammals characteristic of fynbos and karoo (refer to section 1.3a(iv)). The Wilderness Area also forms the core of a leopard conservation area that was established in 1988 and is one of the few large areas within the Cape Floral Region available for leopard conservation and management.

At least 190 bird and 48 reptile species (including 16 snake species) are found in the Cederberg Wilderness Area. Southern African endemic reptiles include black spitting cobra (*Naja nigricollis woodi*) and the Vulnerable armadillo girdled lizard (*Cordylus cataphractus*), the latter being one of at least four Red Data Book reptiles presently known to occur in the Cederberg Wilderness Area. Of 65 mammal species found in the Cederberg, the area provides protection for at least five threatened species and two South African endemic or near endemic rodents, namely the Rare

<sup>177</sup> This species is known only from 3 isolated populations scattered in the Groot Winterhoek and the Cederberg (Rebelo, 1995), further demonstrating the need for ensuring the representation of the Cape Floral Region by a constellation of sites, of which the Cederberg comprises a key element.

<sup>178</sup> *Leucospermum reflexum* is well known in cultivation as the spectacular Rocket pincushion.

spectacled dormouse (*Graphiurus ocellaris*) and Brants' whistling rat (*Parotomys brantsii*). The aardwolf (*Proteles cristatus*) and leopard (*Panthera pardus*) (both Rare) are also found in the Cederberg. Mammal species that occurred historically in the protected areas include elephant (*Loxodonta africana*), black rhinoceros (*Diceros bicornis*) and Cape mountain zebra (*Equus zebra zebra*).

The Olifants River system, part of which runs through the Cederberg Wilderness Area, contains the richest variety of endemic fish species of all rivers south of the Zambezi. Eight of the 10 indigenous fish species found in the Olifants River are endemic to the system. The mountains of the Cederberg Wilderness Area represent a major "hotspot" for freshwater fish endemism and diversity, for example, the Vulnerable Clanwilliam yellow fish (*Barbus capensis*), Endangered Clanwilliam red fin minnow (*Barbus calidus*) and Endangered fiery red fin minnow (*Pseudobarbus phlegethon*) are endemic to the Olifants River (Skelton *et al.*, 1995).

### 3.3b History and development of the Cederberg Wilderness Area

The original inhabitants of the Cederberg area were the hunter-gatherers, and the Khoi herders who were present until historical times. Evidence of occupation by the former, may be seen in the rock art of the area. These rock paintings record the social and spiritual history of the Later Stone Age people, reflecting their interaction with the Khoi who moved into the area within the past 1600 years. Table 3.2 provides a brief overview of relevant events at the Cederberg Wilderness Area.

Table 3.2 A summary of major events in the history of the Cederberg Wilderness Area.

Year / period	Description of historical incident or occasion
4 000 years BP	Occupation by hunter-gatherers during the late Holocene from 4 000 years before present (BP).
1 800 years BP	Introduction of domestic stock by Khoi herders from about 1 800 years BP onwards.
By end 18 <sup>th</sup> Century	Sites around Citrusdal and Clanwilliam well settled by European settlers.
1876	Forest Ranger appointed to take charge of the Cederberg.
1891	Government tried to control farmers using the area for stock.
1897	50 045 ha was declared to be "Demarcated Forest".
1903	Forest station was moved to the present site, Algeria.
1929	The Minister of Agriculture and Forestry instructed that "Forest Reserves in mountain areas" were not to be burned for grazing.
By 1936	Still some twenty-three grazing areas covering some 30 664 ha of the Forest Reserve.
1937	All grazing was stopped by the Government.
1940 and 1969	Harvesting of tan bark and bush tea halted in 1940 and 1969 respectively.
1968	No further sales of cedar timber or of permits to exploit these trees.
1973	Cederberg Wilderness Area proclaimed under the Forest Act.
1975	Buchu ( <i>Agathosma</i> spp.) last harvested on a commercial scale.

### 3.3c The most recent records of the Cederberg Wilderness Area

Refer to section 1.3c for information in this regard.

### 3.3d Present state of conservation of the Cederberg Wilderness Area

The Cederberg Wilderness Area is proclaimed and managed as a primitive wilderness in which natural processes are encouraged to proceed and human numbers are restricted. The Wilderness Area is roughly divided into three 20 000 ha zones with a limit of 50 people per zone per day. In all wilderness areas, group sizes are restricted to a minimum of two and a maximum of 12. Only activities compatible with the wilderness concepts are permitted and staff monitor the impacts of these activities. Fires are not allowed and users must remove all refuse.

### **3.3e Presentation and promotion of the Cederberg Wilderness Area**

Refer to Volume 3 for material relating to the presentation and promotion of the Cederberg Wilderness Area.

Amongst other scientific- and popular articles and texts relating to this area, a guide to the flora of the Cederberg (Taylor, 1996) provides eco-tourists and plant-enthusiasts with a means to identify a number of the plant species and habitats present in this beautiful wilderness area.

## **SECTION 3.4 MANAGEMENT**

### **3.4a Ownership**

Ownership of the core protected area of the Cederberg Wilderness Area lies with the State and the area is designated in law as a Wilderness Area (refer to section 1.4a(iii) and Figure 1.3.6).

### **3.4b Legal status**

Historically, the protected area was declared a “Demarcated Forest” in 1897 in Government Notice No. 491 of 1897 under Act 28 of 1888.

More recently, the area formerly demarcated as State Forest was proclaimed a Wilderness Area on 27 July 1973, except for the Kliphuis area, Algeria plantation and associated infrastructure, and as such enjoys the highest possible conservation management (refer to section 1.4b(iii)).

The privately owned mountain catchment land in the Cederberg was proclaimed as a Mountain Catchment Area in terms of the Mountain Catchment Areas Act (No. 63 of 1970) by Government Notice No. 984 of 11 June 1976. As such these areas (although in private ownership) are subject to stringent controls with respect to biodiversity conservation and alien species management (refer to section 1.4c(vi)) and are further subject to management prescriptions by the competent conservation authority.

### **3.4c Protective measures and means of implementing them**

An array of legislation protects this Wilderness Area from inappropriate development<sup>179</sup> or harm and provides the basis for protective and sustainable management of natural and cultural resources. This legislation includes national level legislation such as the Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), the Environmental Conservation Act (section 1.4c(iv)), the National Water Act (section 1.4c(v)), the Mountain Catchment Areas Act (section 1.4c(vi)), the Conservation of Agricultural Resources Act (section 1.4c(vii)), the National Heritage Resources Act (section 1.4c(viii)) and the National Forests Act (section 1.4c(ix)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

The Cape Nature and Environmental Conservation Ordinance, 1974, recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000, also applies in this protected area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Western Cape Nature Conservation Board, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), is tasked with implementation and enforcement of protective

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<sup>179</sup> For example, depending upon the situation, the development of a fire-control access network (including low impact infrastructure) may be deemed to be sustainable and appropriate development while development of a hotel complex in the heart of the wilderness area may well be deemed to be inappropriate development.

legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

### **3.4d Agency with management authority**

The agency with management authority for the Cederberg Wilderness Area is the Western Cape Nature Conservation Board.

For further details refer to section 1.4d.

### **3.4e Level at which management is exercised**

The Cederberg Wilderness Area is managed by a Reserve Manager with support from the Regional- and Area Managers of the Western Cape Nature Conservation Board. Refer to sections 1.4e and 3.4k for further detail in this regard.

### **3.4f Agreed plans relating to the Cederberg Wilderness Area**

The formulation of the Cederberg and Environs Spatial Development Framework (Dennis Moss, 2000) has been an invaluable catalyst and model for integrated spatial development planning within the bioregional context. Encompassing a vast area (including the Groot Winterhoek Wilderness Area (described in Chapter 4)), crossing political<sup>180</sup> and catchment<sup>181</sup> boundaries, this plan combines strategic bioregional planning and overarching policy guidelines with detailed investigation of fundamental issues such as sustainable development and conservation management for the area. This latter focus includes the provision of conservation management guidelines (incidentally adopted by a number of the conservancies in the area); emphasises the role of the Western Cape Nature Conservation Board in conservation management; and, supports proposals for the planning, creation and management of a Cederberg Biosphere Reserve. The process followed in formulating this Spatial Development Framework involved extensive consultation with all stakeholders including local landowners and officials from all spheres of government (van der Merwe, pers. comm.).

Fish habitats have been drastically degraded, leading to the establishment of a programme to protect habitats and rehabilitate rivers and other suitable freshwater habitats. A pilot project, with an effective partnership between the Western Cape Nature Conservation Board, the Working for Water Project, the JLB Smith Institute of Ichthyology (Grahamstown) and the University of Cape Town, has been initiated to remove alien fish from the Rondegat River, which originates in the Cederberg Wilderness Area. This is part of an integrated programme to re-establish and appropriately conserve threatened and endemic fish in the area.

The Cederberg Wilderness Area forms the core of a leopard conservation area. This area includes private land (e.g. conservancies) and is managed by the Western Cape Nature Conservation Board in collaboration with neighbouring landowners. The aim is to promote conservation and management of leopards by minimising conflict between stock farming and nature conservation while maintaining close co-operative management by the nature conservation agency and the private landowners.

Refer to section 1.4f for further details of overarching plans, which affect this area.

### **3.4g Sources and levels of finance**

Refer to section 1.4g, for detail in this regard.

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<sup>180</sup> Areas in both the Northern and Western Cape Provinces are included within the scope of this framework.

<sup>181</sup> Both the Olifants and the Doring River catchments are included within the scope of this framework.

### 3.4h Sources of expertise and training

Refer to section 1.4h, for detail in this regard.

### 3.4i Visitor facilities and statistics of the Cederberg Wilderness Area

The Cederberg Wilderness Area offers unsurpassed opportunities for recreation in primitive wilderness. Activities that are compatible with the wilderness atmosphere, such as hiking and rock climbing, are encouraged. Various hiking routes criss cross the protected area. There are hundreds of rocky overhangs and caves with fine examples of rock art dating from 300 to 6 000 years before present.

There are 48 campsites along the banks of the Rondegat River at Algeria immediately outside the wilderness area. The Kliphuis Campsite is situated at the Pakhuis Pass on the flower route to Wuppertal and has 10 sites along the Kliphuis River. There are seven chalets ranging from fully equipped to comfortable, basic accommodation close to the Rondegat River. Camping and accommodation facilities exist in the adjacent State Forest that is excluded from the protected area (Table 3.3).

Table 3.3 Visitor numbers to the Cederberg Wilderness Area (January to August 2000).

Hiking	5 130
Accommodation	3 150
Camping	9 846
TOTAL	18 126

### 3.4j The Cederberg Wilderness Area management plan and statement of objectives

For an overview on management plans for the Western Cape Nature Conservation Board, refer to section 1.4j and Appendix 2. The objectives of the Cederberg Wilderness Area aim towards the conservation of the area into the future and conform well to World Heritage Site criteria for ecological processes and biodiversity. The objectives address a wider range of considerations for long-term conservation, such as ensuring the maintenance of natural processes (including breeding populations of plants and animals), as well as habitat and species diversity. In addition, there is a strong focus on environmental education coupled with an outreach programme to develop potential environmentally-based economies. An outline of these objectives is listed below.

#### Primary objectives

1. Wilderness conservation in order to:

- provide for the long-term protection and preservation of the wilderness character of the Cederberg Wilderness Area, under a principle of non-degradation. The area's natural condition; opportunities for solitude; opportunities for primitive and unconfined types of recreation; and any ecological, geological, or any other features of scientific, educational, scenic or historical value will be managed so that they will remain unimpaired;
- manage the Cederberg Wilderness Area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use; and,
- manage the Cederberg Wilderness Area using a minimum of tools, equipment, or structures to accomplish the objective successfully, safely and economically. The chosen tool, equipment, or structure should be the one that least degrades wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulation as possible.

2. Nature conservation in order to:
  - conserve the optimum number of appropriate indigenous species (to the Cederberg Wilderness Area) and their habitats and to maintain breeding populations and protect the specificity of these gene pools;
  - allow natural, physical and ecological processes to operate without interference except under imperative circumstances; and,
  - maintain and enhance the range and population of the Clanwilliam Cedar.
3. Catchment conservation in order to:
  - maintain the optimal sustained flow of water of the highest quality possible from the Cederberg Mountain Catchment Area, through the implementation of an ecologically appropriate fire management programme, and the control of alien invasive plant species; and,
  - conserve the biological diversity of the Cederberg Mountain Catchment Area, through the implementation of an ecologically appropriate fire management programme and the control of alien invasive plant species.

### **Secondary objectives**

1. Recreation aims to:
  - provide a broad spectrum of wilderness-dependent recreation opportunities, such as long distance backpacking, free rock-climbing, primitive camping opportunities, observation of nature, photography etc., in natural areas of remarkable solitude;
  - provide a broad spectrum of wilderness-associated uses, such as short hiking, picnicking, camping in designated, rustic-type campgrounds and overnight accommodation in rustic chalets; and,
  - diversify recreational opportunities in the wilderness area to accommodate a broader spectrum of utilisation, thus potentially creating more revenue without degrading the wilderness character.

### **Other objectives aim to:**

- broaden the revenue base by developing the potential of areas outside the wilderness area within ecological parameters;
- promote eco-tourism in the greater Cederberg area;
- facilitate environmental education;
- promote local community involvement in the management of the wilderness area; and,
- stimulate the socio-economic development of local communities.

## **3.4k Staffing levels for the Cederberg Wilderness Area**

A Reserve Manager, C du Plessis, directs day-to-day operation of the Cederberg Wilderness Area. He is supported by the Northwest Area Manager, E Cloete, and the West Boland Regional Manager, J Rheeder, based at the West Boland Regional Office, one of four such offices in the Western Cape Province (refer to Figure 1.4.1).

The postal address of the West Boland Regional Office is PO Box 26, Porterville, 6810.

The postal address for the Cederberg Wilderness Area is Private Bag X1, Citrusdal, 7340.



## **SECTION 3.5 FACTORS AFFECTING THE CEDERBERG WILDERNESS AREA**

### **3.5a Development pressures**

There are no immediate threats to the Cederberg Wilderness Area owing to the high level of protection offered by the four conservancies and other adjacent reserves that surround the wilderness area.

#### **3.5a(i) Current extent of land transformation and encroachment on natural areas**

In one area, however, private land that is not part of a conservancy stretches deep into the wilderness area at Boskloof. The area to the west is transformed by agriculture but since the rest of the protected area is surrounded by reserves, development threats to the integrity of the wilderness area are considered to be low overall. Occasional threats to fynbos by livestock grazing pose a limited management challenge.

#### **3.5b(ii) Illegal resource use**

Minor threats posed by illegal resource use such as firewood gathering, poaching and illicit flower-picking are managed by personnel from the Wilderness Area. Illegal harvesting of medicinal plants such as buchu (*Agathosma betulina*) is a particularly serious problem that is currently receiving attention.

### **3.5b Environmental pressures**

#### **3.5b(i) Alien organisms**

The Cederberg Wilderness Area is relatively free of invasive alien vegetation. Black wattle (*Acacia mearnsii*), Australian blackwood (*Acacia melanoxylon*) and Port Jackson (*Acacia saligna*) are the most problematic species but are being controlled through the Working for Water project (refer to section 1.4f).

The integrity of the natural fish fauna is under threat from a variety of factors including habitat degradation and exotic species of freshwater fish. Pilot programmes to address these threats have already been implemented (refer to section 3.4f).

#### **3.5b(ii) Fire**

Fires that burn out of phase with the natural fire regime represent the most severe threat to the Wilderness Area. Such fires are often accidental, with no ill intent on the part of the landowner, and ongoing negotiation with neighbours and local community involvement with management of the area are viewed as the means by which to address this problem.

#### **3.5b(iii) Hybridisation of natural species**

Interbreeding, for example between domestic cats and the Vulnerable African wild cat (*Felis lybica*), poses a threat to genetic integrity of the wild populations. In this instance, feral cats are removed from the Wilderness Area as part of an ongoing management programme.

### **3.5c Natural disaster preparedness**

A number of supportive administrative, organisational and other associated structures are available to assist personnel in the event of a natural disaster such as a wildfire. Refer to section 1.5c(i) for further details in this regard.

### **3.5d Visitor / tourism pressures**

There is strict control over visitor numbers and only 150 people are allowed into the Wilderness Area per day. This limit was not reached until recently when this capacity was attained on several occasions. Consequently, the figure of 150 visitors per day is being re-evaluated and the likelihood exists that numbers may be reduced in certain areas.

### **3.5e Number of inhabitants within the Cederberg Wilderness Area**

There are no inhabitants within the Cederberg Wilderness Area but approximately 5 000 people, including reserve management personnel, live on the surrounding land.

## **SECTION 3.6 MONITORING**

Details of monitoring conducted by the Western Cape Nature Conservation Board have been provided in section 1.6. In addition to national programmes outlined in section 1.6, such as the *Protea* Atlas, the Frog Atlas, Bat Atlas, Nest Records and the Birds in Reserves Project, there are other protected area-specific monitoring projects for the Cederberg Wilderness Area that are listed below with the key indicators used for monitoring of these projects.

### **3.6a Key indicators**

#### **3.6a(i) Physical environment monitoring programmes**

- Rainfall is measured daily in mm/day.
- Fire frequency is monitored on an ongoing basis for each compartment of the Wilderness Area.
- Erosion in the area is monitored through fixed-point photography.
- Rehabilitation success of selected erosion areas (including paths and roads) is monitored using fixed-point photography.
- The impact of visitors on rock-climbing routes and overnighting points is monitored using fixed-point photography.

#### **3.6a(ii) Water monitoring programmes**

Water temperature change, water conductivity and water pH are measured at fixed points along watercourses. Fixed-point photography is used to monitor and record change along watercourses.

#### **3.6a(iii) Freshwater fish monitoring programme**

On a five-yearly basis, information is collected on:

- distribution of alien and indigenous fish;
- abundance of alien and indigenous fish communities as a measure of composition of each species; and,
- habitat preferences for each fish species.

#### **3.6a(iv) Vegetation management programme**

This programme deals with threatened plant taxa, updating of plant species lists and monitoring distributions of alien plant species.

A specific threatened plant rehabilitation programme looks at:

- the survival rate of nursery-grown Clanwilliam cedars when planted in the wilderness area.

The success of alien plant control methods is examined through measuring:

- the extent of area (in hectares) cleared of alien species;
- the success of alien removal (alien seedling germination and resprout growth); and,
- the recovery of indigenous vegetation following alien plant removal.

### **3.6b Administrative arrangements for monitoring**

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within the Cederberg Wilderness Area.

While data are regularly collected and collated by the staff of the Western Cape Nature Conservation Board, this area has also been used by research groups from a variety of disciplines and study interests, such as the National Botanical Institute, South African Museum as well as the Universities of Stellenbosch, Leicester (United Kingdom), Natal and Cape Town. These and other researchers have investigated and monitored diverse biophysical and other aspects of the Cederberg Wilderness Area including vegetation change, faunal communities, geology and cultural sites. Further, ongoing research by initiatives such as the Bird-, Bat-, Frog- and *Protea* Atlas programmes contribute to baseline data held by the Western Cape Nature Conservation Board. All information collected by these institutions is available to the Western Cape Nature Conservation Board.

Refer to section 1.6b(i) for information with regard to overarching administrative arrangements for monitoring of programmes within protected areas.

### **3.6c Results of previous reporting**

In many instances these data and interpretation of research, from the diverse institutions that are administratively linked with the Western Cape Nature Conservation Board, have informed management- and research priorities for the Cederberg Wilderness Area (refer to sections 3.6a & 3.6b). Response to previous reporting has led to the design and implementation of appropriate, focussed management strategies. Management response to long-term, integrated research efforts by a variety of institutions has resulted, for example, in a turn-around in previously declining numbers of the Clanwilliam cedar (*Widdringtonia cedarbergensis*) through managing populations for improved recruitment and survival rate of populations of this magnificent species (e.g. Mustart *et al.*, 1995; Thomas, 1995). Further, owing to the great age of a number of *Widdringtonia cedarbergensis* specimens, a research team from the University of Cape Town and the South African Museum is using this species to assess changes in atmospheric carbon dioxide (February & Stock, 1999).

Monitoring and reporting (by a number of institutions, including the Cape Technikon, Western Cape Nature Conservation Board and the University of Cape Town) on the status of threatened endemic fish species and the impacts of alien invasive fish in rivers of the Cederberg have also led to concerted and successful management efforts to improve fish habitats and reduce alien fish numbers in the water catchments of the Cederberg. These management efforts are further aided by dedicated and focussed research on aspects that require urgent attention. For example, researchers from the Department of Zoology at the University of Stellenbosch are currently investigating the population genetics and reproductive biology of one Critically Endangered (*Barbus erubescens*) and one Endangered (*Pseudobarbus phlegethon*) fish species in the Olifants River system.

Studies and reporting, by conservation staff from the Western Cape Nature Conservation Board on the plight of leopard (*Panthera pardus*), have resulted in the planning and implementation of leopard conservation areas (in association with surrounding landowners) ensuring the survival of these Rare beasts within the Wilderness Area.

Refer to section 1.6c for further information in this regard.

## **CHAPTER 4 THE GROOT WINTERHOEK WILDERNESS AREA**

The chapter describes one of the eight protected areas selected to represent the Cape Floral Region for World Heritage Status. The protected area is situated in the Western Cape Province immediately south of the Cederberg Wilderness Area in the central part of the north / south axis of the Cape Fold Belt (refer to Figures 1.1.1 & 1.1.2), about 120 km north of Cape Town. It lies in the Groot Winterhoek mountain range, north of Tulbagh and 33 km east Porterville (Figure 4.1). By virtue of surrounding reserves, the protected areas of Groot Winterhoek and the Boland Mountain Complex are linked (refer to Figure 1.3.6). The Groot Winterhoek Wilderness Area is therefore the central part of a continuous stretch of reserves protecting the north / south axis of the Cape Fold Belt.

The Groot Winterhoek (translated literally as “great winter corner”) is so named for its heavy shrouds of snow on mountain peaks during winter months. This extensive area is particularly important for the conservation of mountain fynbos and wildlife. Forming part of a major water catchment for the Western Cape, the rivers of the Groot Winterhoek Wilderness Area not only support a number of endemic fish species, but are also an important source of clean water. The exceptionally high plant diversity is supported by a pristine mountain landscape.

Justification is given for the inclusion of the Groot Winterhoek Wilderness Area in the constellation of protected areas, as well as information and background specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is provided.

### **SECTION 4.1 IDENTIFICATION OF THE GROOT WINTERHOEK WILDERNESS AREA**

#### **4.1a Country**

The Republic of South Africa

#### **4.1b Province**

Western Cape

#### **4.1c Name of property**

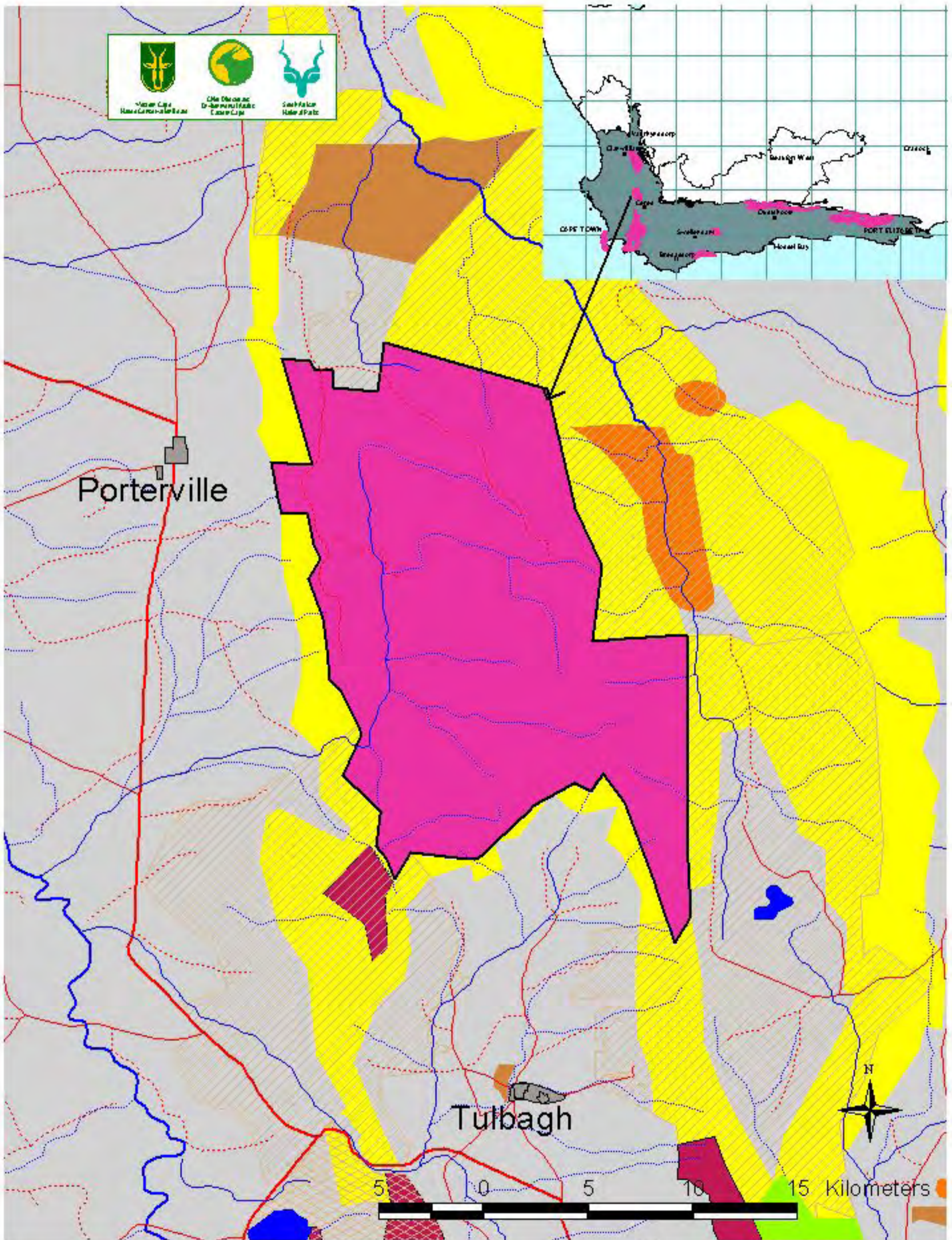
Groot Winterhoek Wilderness Area

#### **4.1d Location on map and identification of geographical co-ordinates**

The Groot Winterhoek Wilderness Area occurs within the boundaries of the Piketberg Magisterial District and within the boundaries of the West Coast District Municipality. The geographic co-ordinates are listed in Table 1.1.1. A map of the area is illustrated in Figure 4.1.

#### **4.1e Maps showing boundaries of the Groot Winterhoek Wilderness Area**

Refer to Figure 1.1.1 for an overall view of the location of the Groot Winterhoek Wilderness Area in relation to the other protected areas in this nomination. Figure 4.1 provides a closer view of the protected area and 1:50 000, 1:250 000 and 1:500 000 maps are provided in Appendix 1.



**LEGEND**

Rivers	Local Authority Nature reserves	Proposed conservancies
Roads	Conservancies	SA Natural Heritage Sites
Dams	Provincial Nature Reserves	Mountain Catchment Areas
Towns	Private Nature Reserves	Groot Winterhoek Wilderness Area

**FIGURE 4.1**

Groot Winterhoek Wilderness Area and surrounding reserves

The Groot Winterhoek Wilderness Area stretches from the Piekenierskloof Pass in the northwest to the Nuwekloof Pass in the southeast. The northern boundary is the Bo-Olifants River Irrigation Area while the southern boundary is the Tulbagh-Wolseley valley.

#### **4.1f Area of the Groot Winterhoek Wilderness Area**

The Groot Winterhoek Wilderness Area comprises some 26 000 ha surrounded by over 410 000 ha of reserves (refer to Figures 4.1 & 1.3.6; Table 1.1.1).

## **SECTION 4.2 JUSTIFICATION FOR INSCRIPTION**

### **4.2a Statement of significance**

The Groot Winterhoek Wilderness Area is the central protected area joining the Cederberg Wilderness Area in the north with the Boland Mountain Complex in the south. It therefore performs a vital function in the continuous protection of the north / south axis of the Cape Fold Belt. Covering some 26 000 ha, the area is supported by the presence of several contiguous reserves (comprising more than 410 000 ha of land) which surround both the Groot Winterhoek and Cederberg Wilderness Areas. This configuration of reserves forms a significant safeguard to both protected areas. Together the two Wilderness Areas represent the Northwest Phytogeographic Centre of Endemism in this nomination (refer to Table 1.3.1; Figure 1.3.4).

Conserving almost a third of the total of the Groot Winterhoek Mountain Fynbos Complex Broad Habitat Unit, the varied terrain predominantly supports mountain fynbos as well as a mosaic of ravine forests and important montane wetlands. A significant centre of plant species richness (Lombard 2000; Appendix 4), the marsh-loving orchid *Disa minor* (Rare) is one of a number of threatened plant species found in the protected area.

Faunal biodiversity and endemism are also high, with a number of endemic and/or threatened vertebrate and invertebrate species conserved in this protected area. The Vulnerable honey badger (*Mellivora capensis*) and Restricted southern rock lizard (*Australolacerta australis*) are just some of the threatened terrestrial animal species of this Wilderness Area, while at least two Cape Floral Region endemic fish species are found in the rivers of the Groot Winterhoek.

### **4.2b Comparative analysis**

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

### **4.2c Authenticity / Integrity**

The Groot Winterhoek Wilderness Area is a proclaimed Wilderness Area, managed by the Western Cape Nature Conservation Board, which imparts a high level of legal protection and a specific management philosophy aimed towards the conservation of natural processes and biodiversity (refer to sections 1.4a(iii), 1.4b(iii) & 1.4c(iv)).

Threats to the Groot Winterhoek Wilderness Area are few. The mountainous habitats that make up this protected area limit its potential for transformation and the surrounding reserves safeguard it against external threats. The indigenous flora is unspoilt and fauna, including top predators such as the Rare leopard (*Panthera pardus*) and black eagle (*Aquila verreauxii*) survive in this area. The size of the protected area, together with the surrounding reserves and the linkages with both the Cederberg Wilderness Area and the Boland Mountain Complex, ensure the continuation of natural processes required for conservation into the future.

#### 4.2d Criteria under which inscription is proposed

The Groot Winterhoek Wilderness Area is being nominated as one of eight protected areas on the basis of two criteria.

**CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution**

The Groot Winterhoek Wilderness Area, identified as a component of one of three mega-reserves for the Cape Floral Region (Cowling *et al.*, 1999a; Appendix 5), is over 25 000 ha in size, large enough to ensure the continuation of evolutionary processes (refer to Table 1.2.4). Furthermore, it is connected to the Boland Mountain Complex in the south and the Cederberg Wilderness Area in the north, through conservation-orientated land. The combined size of this protected area ensures considerable security for the essential natural processes, which maintain and drive biodiversity.

These processes include a natural fire regime, which is vital to fynbos conservation, pollination and seed dispersal strategies, natural water flow regimes, as well as species migration, gene flow, and dispersal along the ecological corridor in a north-south direction.

The area is part of a larger water catchment zone protected for production of water for human consumption. This is achieved through the maintenance of natural processes including water flow rates, fire and natural vegetation cover. Owing to the geomorphology of the mountains, this protected area acts as a sponge and releases water in a controlled manner.

**CRITERION 44 (a) (iv): The most important and significant natural habitats for in situ conservation of biological diversity**

The Groot Winterhoek Wilderness Area is a unique and pristine wilderness area and particularly important in terms of threatened plants. Mountain peaks and other inaccessible places in the protected area provide protection to representative samples of the original vegetation. The plant species and plant communities of the Groot Winterhoek Wilderness Area are relatively unique and differ from other areas that are characteristic of the Cape Floral Region.

A species-richness analysis of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records, revealed that the Groot Winterhoek Wilderness Area is sited within one of the richest areas in the Cape Floral Region (Appendix 4). In addition, a separate analysis, using point localities for 364 species of Proteaceae comprising 183 322 records, showed that this area also has one of the richest concentrations of these species in the Cape Floral Region. Overall, the protected area falls within the top 25% of the minimum number of Quarter Degree Squares needed to protect all (selected) species in this dataset. These results suggest that this protected area is well situated to conserve a significant proportion of the mapped plant species-richness within the Cape Floral Region.

#### 4.2d(i) Cultural and aesthetic considerations

The original inhabitants of the Groot Winterhoek Wilderness Area, the hunter-gatherer San people, have left untold world-renowned examples of rock art in the area. Groot Winterhoek is known for its extensive pristine landscapes and fascinating rock formations, which attract numerous visitors.

## SECTION 4.3 DESCRIPTION

### 4.3a Description of the Groot Winterhoek Wilderness Area

#### 4.3a(i) Physical features

The Groot Winterhoek Wilderness Area is characterised by high, sharp peaks rising in terraces with typical Table Mountain sandstone formations, which weather into exceptional rock formations, are a special feature of Groot Winterhoek. Height above sea level varies from 240 m, in the Olifants River Valley south of Citrusdal, to 2 077 m on Groot Winterhoek Peak. High terraces, acting as giant sponges, form extensive wetlands that feed a myriad of streams.

#### 4.3a(ii) Climate

Average annual rainfall in the Groot Winterhoek Wilderness Area is 1 450 mm falling mainly during May to July, with mist and snow common in the winter months. February is usually the driest, and hottest, month of the year.

Maximum average temperatures during summer seldom exceed 33°C and the nights are cool. During winter the average minimum temperatures range from 0 to 3°C, while during midday, average temperatures hover around 6°C. In winter, the rain-bearing wind blows from the northwest. During summer, both northeasterly (hot, dry berg winds) and southeasterly winds prevail.

#### 4.3a(iii) Vegetation, habitats and plant species

Representing the Northwestern Phytogeographic Centre of endemism (refer to Table 1.3.1; Figure 1.3.4), the area offers rough, mountainous topography with peaks, terraces and valleys providing considerable environmental variation across a rugged landscape. Numerous wetland areas merge with the dominant vegetation type, mountain fynbos. This mountain fynbos differs from that found in the adjacent Cederberg Wilderness Area. Afromontane forests thrive in the valleys, while shale bands across the mountain slopes support shale-affiliated plant communities.

The difference in vegetation types between the Groot Winterhoek Wilderness Area and the Cederberg Wilderness Area is reflected in the different Broad Habitat Units that are represented in these protected areas (refer to Table 1.3.2; Figure 1.3.5). The Groot Winterhoek Wilderness Area is dominated (99.3%) by the Groot Winterhoek Mountain Fynbos Complex Broad Habitat Unit (comprising 31.6% of the total of this BHU in the Cape Floral Region). Interspersed through the mountain fynbos of the wilderness area are mosaics of wetland, forest and shale band habitats.

The mountain fynbos of Groot Winterhoek Wilderness Area is rich in naturally Rare, otherwise threatened and locally endemic plant species. These include the Vulnerable endemic *Sorocephalus scabridus*, (family Proteaceae), presently known from a population of only 200 plants.

A large variety of orchids, including several *Disa* species such as *Disa minor* and *D. neglecta* (both listed as Rare), flower in abundance along stream banks, while a huge diversity of *Erica* (including the Rare *Erica leucosiphon*) and other typical fynbos species may be found in flower virtually throughout the year.

In separate analyses of plant species-richness, threatened plant species and Proteaceae, the Groot Winterhoek Wilderness Area consistently fell within one of the richest areas in the Cape Floral Region (Lombard, 2000; Appendix 4).

#### 4.3a(iv) Fauna

Noted more for its flora than for its fauna, Groot Winterhoek nonetheless supports significant faunal diversity. The Vulnerable honey badger (*Mellivora capensis*) and Rare leopard (*Panthera pardus*) are widespread in the protected area, while some threatened and endemic reptile species, most notably one of the country's rarest lizards, the Restricted southern rock lizard (*Australolacerta australis*),



as well as the locally endemic small-scaled leaf-toed gecko (*Goggia microlepidota*) occur in the protected area. The southern African endemic black spitting cobra (*Naja nigricollis woodi*) is also present in the wilderness area.

Records exist for almost 100 bird species currently inhabiting the diverse habitats of the Groot Winterhoek Wilderness Area. These include Cape Floral Region endemics such as the sugar bird (*Promerops cafer*) and Cape rockjumper (*Chaetops frenatus*) as well as threatened bird species such as black stork (*Ciconia nigra*). Raptors include black eagle (*Aquila verreauxii*), black harrier (*Circus maurus*) and Peregrine falcon (*Falco peregrinus*).

At least two Cape Floral Region endemic freshwater fish species, including the near threatened (Lower Risk) Cape galaxia (*Galaxias zebratus*) and the tiny Cape kurper (*Sandelia capensis*), measuring only 80-100 mm, are found in the streams feeding the Berg River.

Threatened invertebrates include the butterflies, *Thestor dicksoni dicksoni* and *Thestor dicksoni calviniae*. In addition, this range of mountains performs a vital role in the conservation of relictual Gondwanan insect fauna (refer to section 1.3a(iv)).

### 4.3b History and development of the Groot Winterhoek Wilderness Area

Various examples of rock art, believed to have been produced between 300 and 6 000 years before present, can be found in the area and serve as evidence of San habitation and use of the area. Rock paintings illustrate the religious and social life of the San, whose ancestors have lived in southern Africa for more than 100 000 years. The National Heritage Resources Act protects all rock art and artefacts (refer to section 1.4c(viii)).

A brief overview of relevant events at the Groot Winterhoek Wilderness Area is provided in Table 4.1.

Table 4.1 A brief history of major events in the Groot Winterhoek Wilderness Area.

Year / period	Description of historical incident or occasion
1687	A law passed that limited unauthorised fires.
1740 – 1741	The same law passed again.
1875 – 1890	Perdevlei, De Tronk, Louws Legplek, Driebosch and Kliphuis farms granted to farmers.
1909	A group of Portuguese herders stayed at De Tronk. They all died, apparently of influenza, and their stone graves can be seen at De Tronk, near the present-day office complex.
1920's	Vegetable, fruit and tobacco farming started.
1969	The indigenous buchu ( <i>Agathosma</i> spp.) and rooibos tea ( <i>Aspalathus linearis</i> ) harvested in abundance.
1984	Groot Winterhoek Wilderness Area proclaimed.

### 4.3c The most recent records of the Groot Winterhoek

Refer to section 1.3c for information in this regard.

### 4.3d Present state of conservation of the Groot Winterhoek Wilderness Area

The Groot Winterhoek protected area has legal protection as a Wilderness Area (refer to section 1.4b(iii)). In addition, the protected area is managed as a primitive wilderness in which natural processes are encouraged to proceed and human numbers are restricted. Only those activities compatible with wilderness concepts are permitted and staff monitor the impacts of these activities.

For example, the area is divided into two zones and visitor access into these zones is managed according to defined densities, with the aim of reducing visitor impact on the environment. Hikers

using the area are not compelled to stay on the routes, and may explore rock formations and caves alongside the trails. However, no open fires are permitted because of the high wildfire risk.

#### **4.3e Presentation and promotion of the Groot Winterhoek Wilderness Area**

Refer to Volume 3 for promotional material on the Groot Winterhoek Wilderness Area.

## **SECTION 4.4 MANAGEMENT**

### **4.4a Ownership**

Ownership of the core protected area of the Groot Winterhoek Wilderness Area lies with the State and the area is designated in law as a Wilderness Area (refer to section 1.4a(iii) & Figure 1.3.6).

### **4.4b Legal Status**

The Groot Winterhoek Wilderness Area is State Forest that was demarcated by proclamations in Government Notices under various Forest Acts between 1913 and 1979. The Wilderness Area was proclaimed on 20 September 1985, according to the Forestry Act, no. 122 of 1985. Adjacent private land was proclaimed as Mountain Catchment Areas on October 1981, according to the Mountain Catchment Areas Act No. 63 of 1970.

Refer to sections 1.4b(iii) and 1.4c(iv) for further detail in this regard.

### **4.4c Protective measures and means of implementing them**

As is the case for the Cederberg Wilderness Area, a range of legislation applies for the protection of the Groot Winterhoek Wilderness Area. These statutes include the Western Cape Nature Conservation Laws Amendment Act (section 1.4b(i)), the National Forestry Act (sections 1.4b(ii) and 1.4c(ix)) and the Mountain Catchment Areas Act (section 1.4c(vi)). An array of other overarching national legislation, including the Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), Environmental Conservation Act (section 1.4c(iv)), National Water Act (section 1.4c(v)), Conservation of Agricultural Resources Act (section 1.4c(vii)), National Heritage Resources Act (section 1.4c(viii)) as well as the Environmental Impact Assessment regulations (section 1.4c(iv)), further ensures protection of this area.

The Cape Nature and Environmental Conservation Ordinance, 1974, recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000, also applies in this protected area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Western Cape Nature Conservation Board, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), is tasked with implementation and enforcement of protective legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

#### **4.4d Agency with management authority**

The agency with management authority for the Groot Winterhoek Wilderness Area is the Provincial Western Cape Nature Conservation Board. Refer to section 1.4d for further detail in this regard.

#### **4.4e Level at which management is exercised**

The Groot Winterhoek Wilderness Area is managed by a Reserve Manager with support from the Regional- and Area Managers of the Western Cape Nature Conservation Board. Refer to sections 1.4e and 4.4k for further detail in this regard.

#### **4.4f Agreed plans relating to the Groot Winterhoek Wilderness Area**

The Cederberg and Environs Spatial Development Framework (Dennis Moss, 2000), includes the Groot Winterhoek in the bioregion under assessment for this comprehensive planning framework (refer to section 4.4f for detail regarding this initiative).

Refer to section 1.4f for further details of overarching plans, which affect this area.

#### **4.4g Sources and levels of finance**

Refer to section 1.4g for information in this regard.

#### **4.4h Sources of expertise and training**

Refer to section 1.4h for further detail in this regard.

#### **4.4i Visitor facilities and statistics of the Groot Winterhoek Wilderness Area**

Groot Winterhoek offers excellent opportunities for outdoor recreation. Ten hiking trails range in length from a 1.5-hour amble, to a two-day trail with an overnight stop in the wilderness. Wonderful natural swimming pools abound throughout the area and some of the hiking trails enable access to mountain peaks in the wilderness. The old farmhouses and outbuildings are currently used as overnight accommodation for hikers. Divided into different use-zones, with visitor numbers carefully monitored, some 7 000 people per year pass through the trails of this protected area.

#### **4.4j The Groot Winterhoek Wilderness Area management plan and statement of objectives**

For an overview on management plans for the Western Cape Nature Conservation Board, refer to section 1.4j and Appendix 2. A primary objective of this protected area is the maintenance of natural processes, which ensures that the protected area is a representative and viable example of biodiversity in the southwestern Cape. In addition, there is a strong focus on environmental education coupled with an outreach programme to develop potential environmentally based economies. An outline of these objectives is listed below.

##### **Objectives<sup>182</sup>**

The objectives of the Groot Winterhoek Wilderness Area aim towards the conservation of the area into the future and conform well to World Heritage Site criteria for ecological processes and biodiversity. The objectives address a wider range of considerations for long-term conservation, such as ensuring the maintenance of natural processes (including breeding populations of plants

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<sup>182</sup> Objectives for this protected area are the same as those adopted for the Cederberg Wilderness Area.

and animals), as well as habitat and species diversity. In addition, there is a strong focus on environmental education coupled with an outreach programme to develop potential environmentally-based economies. An outline of these objectives is listed below.

### **Primary objectives**

1. Wilderness conservation in order to:

- provide for the long-term protection and preservation of the wilderness character of the Groot Winterhoek Wilderness Area, under a principle of non-degradation. The area's natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation; and any ecological, geological, or any other features of scientific, educational, scenic or historical value will be managed so that they will remain unimpaired;
- manage the Groot Winterhoek Wilderness Area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use; and,
- manage the Groot Winterhoek Wilderness Area using a minimum of tools, equipment, or structures to accomplish the objective successfully, safely and economically. The chosen tool, equipment, or structure should be the one that least degrades wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulation as possible.

2. Nature conservation in order to:

- conserve the optimum number of appropriate indigenous species (to the Groot Winterhoek Wilderness Area) and their habitats and to maintain breeding populations and protect the specificity of these gene pools;
- allow natural, physical and ecological processes to operate without interference except under imperative circumstances; and,
- maintain and enhance the range and population of threatened taxa.

3. Catchment conservation in order to:

- maintain the optimal sustained flow of water of the highest quality possible from the Groot Winterhoek Mountain Catchment Area, through implementation of an ecologically appropriate fire management programme, and the control of alien invasive plant species; and,
- conserve the biological diversity of the Groot Winterhoek Mountain Catchment Area, through the implementation of an ecologically appropriate fire management programme and the control of alien invasive plant species.

### **Secondary objectives**

Recreation aims to:

- provide a broad spectrum of wilderness-dependent recreation opportunities, such as long distance backpacking, free rock-climbing, primitive camping opportunities, observation of nature, photography etc., in natural areas of remarkable solitude;
- provide a broad spectrum of wilderness-associated uses, such as short hiking, picnicking, camping in designated, rustic-type campgrounds and overnight accommodation in rustic chalets; and,
- diversify recreational opportunities in the wilderness area to accommodate a broader spectrum of utilisation, thus potentially creating more revenue without degrading the wilderness character.

**Other objectives aim to:**

- broaden the revenue base by developing the potential of areas outside the wilderness area within ecological parameters;
- promote eco-tourism in the greater Groot Winterhoek area;

- facilitate environmental education;
- promote local community involvement in the management of the wilderness area; and,
- stimulate the socio-economic development of local communities.

#### **4.4k Staffing levels in the Groot Winterhoek Wilderness Area**

A Reserve Manager, J van Deventer, manages the Groot Winterhoek Wilderness Area. He is supported by the West Boland Area Manager, Johnny Jacobs, and a Regional Manager, Jaco Rheeder, both of whom are situated in the West Boland Regional Office, one of four such offices in the Western Cape Province (refer to Figure 1.4.1).

The postal address for the West Boland Regional Office is PO Box 26, Porterville, 6810.

The postal address for the Groot Winterhoek Wilderness Area is PO Box 26, Porterville, 6810

## **SECTION 4.5 FACTORS AFFECTING THE PROPERTY**

### **4.5a Development pressures**

#### **4.5a(i) Current extent of land transformation and encroachment on natural areas**

The Groot Winterhoek Wilderness Area is safeguarded by reserves to the east, and is linked northwards to the Cederberg, and southwards to the Boland Mountain Complex (refer to Figures 4.1 & 1.3.6). In order to achieve the long-term persistence of the biodiversity of these protected areas, the CAPE Project recommended future extension of the conservation system westwards to provide a further buffer zone for these areas (Cowling *et al.*, 1999a).

#### **4.5a(ii) Illegal resource use**

While incidents are few and far between, illegal gathering of flowers by unscrupulous elements of the cut-flower industry remains a minor threat to the wilderness area. Illegal harvesting of medicinal plants such as buchu (*Agathosma betulina*) is a particularly serious problem that is currently receiving attention. Incidents, and known previous offenders, are monitored by reserve management in association with local peace officers.

### **4.5b Environmental pressures**

#### **4.5b(i) Alien organisms**

The original alien plant infestations have been removed, however, alien infestations occur mostly in the surrounding mountain catchments and the spread of alien invasive plants into the protected area from outside remains a threat.<sup>183</sup> Essentially no serious infestations of alien plants are present in the Wilderness Area and regular follow-up inspections for alien seedlings ensure that re-infestation by these species remains a negligible threat.

Alien fish species (including highly predatory trout and black bass species), which have been introduced by anglers into the Olifants River system, pose a threat to indigenous fish species and streambed habitats. These alien species are currently monitored and controlled through a Western

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<sup>183</sup> The following alien plants are present in the catchments of the Groot Winterhoek Wilderness Area: *Acacia mearnsii*, *A. saligna*, *A. bayleana*, *A. melanoxylon*, *A. longifolia*, *Eucalyptus saligna*, *Hakea sericea*, *Opuntia ficus-indica*, *Paraserianthes lophantha*, *Pinus radiata*, *P. pinaster*, *P. elliotii*, *Populus canescens* and *Sesbania punicia*.

Cape Nature Conservation Board management programme designed to eradicate the alien fish species from the Olifants River and tributaries.

#### **4.5b(ii) Fire**

Fires burning out of phase with the natural fire cycles of fynbos (e.g. too regularly) pose a threat to the regeneration of fynbos. Further, there remains a threat of alien invasive plants proliferating as a result of unplanned, irresponsible fires, since fires promote germination of residual seed banks of many of these species. Large parts of the protected area are not easily accessed and it is possible that alien species may infest these areas following a fire. Generally however, the invasive alien plant problem of the Groot-Winterhoek Wilderness Area is well under control and follow-up work is done regularly. As for all areas, continued involvement of neighbouring landowners in fire-management programmes is part of the management policy for this protected area.

#### **4.5c Natural disaster preparedness**

A number of supportive administrative, organisational and other associated structures are available to assist personnel in the event of a natural disaster such as a wildfire. Refer to section 1.5c(i) for further details in this regard.

#### **4.5d Visitor / tourism pressures**

Most users of this Wilderness Area are hikers. Strict quotas for trails (or use-zones) control and limit visitor numbers. Each trail is monitored on a regular basis by field rangers and trail maintenance is guided by the management plan for the protected area.

#### **4.5e Number of inhabitants within the Groot Winterhoek Wilderness Area**

This protected area is inhabited by two families, comprising about 10 people in total. Members of these families are employed to work in the area.

## **SECTION 4.6 MONITORING**

Details of monitoring conducted by the Western Cape Nature Conservation Board and external agencies have been provided in section 1.6. In addition to national programmes outlined in section 1.6, such as the *Protea* Atlas, the Frog Atlas, Bat Atlas, Nest Records and the Birds in Reserves Project, there are other protected area-specific monitoring projects for the Groot Winterhoek Wilderness Area that are listed below with the key indicators used for monitoring of these projects.

#### **4.6a Key indicators**

##### **4.6a(i) Physical environment monitoring programmes**

- Rainfall is measured daily in mm/day; and,
- Fire frequency, locality and extent is measured as and when fires happen.

##### **4.6a(ii) Freshwater fish monitoring programme**

The success of the alien fish removal programme is measured by:

- Change in population size or numbers of alien fish over time; and,
- Change in numbers of species, number of individuals of indigenous fish species counted over time.

#### **4.6a(iii) Vegetation management programme**

A threatened and endemic indigenous plant monitoring programme, collecting data on populations of endemic and threatened plants has been initiated in the Groot Winterhoek Wilderness Area. Data collected through this monitoring programme contribute to the SOB, GIS and ISEP databases for the Western Cape (refer to section 1.6) and key indicators for this monitoring programme include:

- occurrence and locality of species within protected area; and,
- population size, age and distribution of the species.

Success of the alien vegetation clearing programme is monitored through for example:

- percentage resprouting of cut and herbicide-painted; and,
- area of alien vegetation cleared per unit time.

#### **4.6a(iv) Management best practice**

A monitoring programme investigating the effectiveness of management actions and the achievement of desired management objectives and goals has already been implemented and is an ongoing programme to ensure continued management improvement. Measures include an improvement in management performance over time.

#### **4.6b Administrative arrangements for monitoring**

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within the Groot Winterhoek Wilderness Area. Baseline data collection by the Western Cape Nature Conservation Board is an ongoing requirement for the updating and upgrading of the State of Biodiversity database. Contributing to this programme in the Groot Winterhoek Wilderness Area, are a number of endeavours such as the *Protea*-, Bird-, Frog- and Bat Atlas projects. In addition, ecological relationships of various invertebrate fauna have been assessed by several teams of researchers including a team from Carlton University (Canada) and the University of Natal (in association with various national research institutes). Formal administrative links with these, and other, research institutions ensure that all data, as well as published and unpublished reports, are made available to the Western Cape Nature Conservation Board for reference purposes and, where relevant, for inclusion in the State of Biodiversity database.

Refer to section 1.6b(i) for information with regard to overarching administrative arrangements for monitoring of programmes within protected areas.

#### **4.6c Results of previous reporting**

Various fields of research have contributed significantly over the years to informed management of the diverse natural resources found within the Groot Winterhoek Wilderness Area. For example, research by scientists from the Western Cape Nature Conservation Board on leopard (*Panthera pardus*) and klipspringer (*Oreotragus oreotragus*) has played a role in conservation management of these mammals and their habitats within the Wilderness Area.

Baseline data on flora and fauna, collected over the decades by conservation personnel, have been augmented by research from academic institutions such as the Universities of Natal and Stellenbosch, while practical reporting on catchment management and conservation management (by, amongst other, the University of Stellenbosch and the national Department of Water Affairs and Forestry (DWAF)) have informed management direction for the Groot Winterhoek Wilderness Area. Data and interpretation of research emanating from the Groot Winterhoek (refer also to sections 4.6a & 4.6b) inform management- and research priorities for the Wilderness Area. Refer to section 1.6c for further information in this regard.

## **CHAPTER 5 THE BOLAND MOUNTAIN COMPLEX**

The chapter describes one of the eight protected areas selected to represent the Cape Floral Region for World Heritage Status. The Boland Mountain Complex is situated in the Western Cape Province, 50 km east of Cape Town. It includes the “hottest hotspot” of the Cape Floral Region, located where the two axes of the Cape Fold Belt meet (refer to Figures 1.1.1 & 1.1.2). It is the southernmost part of the series of contiguous reserves (described in the two previous chapters), along the north / south axis of the Cape Fold Belt, and its southern boundary is adjacent to the sea.

The Boland Mountain Complex comprises five contiguous protected areas in a north / south orientation. The Kogelberg Nature Reserve is considered the heart of the Cape Floral Kingdom, because of the exceptional quality of its fynbos. The Jonkershoek Nature Reserve, which effectively includes the smaller Assegaaibosch Nature Reserve, comprises the imposing Jonkershoek Mountains and portions of the upper Jonkershoek valley, while the Limietberg Nature Reserve lies in the Du Toitskloof Mountains near Paarl, also forming part of the Boland Mountain range. The Hottentots Holland Nature Reserve lies in the Hottentots Holland Mountains.

The area is considered the heartland of the Cape Floral Region because it is home to the richest flora, with the highest number of local endemics and naturally Rare species. The terrain is rugged, with high mountain peaks and steep valleys, offering a sense of remote wilderness. The near-pristine Lower Palmiet River, which originates high in the mountains and traverses a steep gradient down to the sea, is one of the significant attributes of this protected area.

This chapter provides justification for the inclusion of the Boland Mountain Complex in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is given.

### **SECTION 5.1 IDENTIFICATION OF THE BOLAND MOUNTAIN COMPLEX**

#### **5.1a Country**

The Republic of South Africa

#### **5.1b Province**

Western Cape

#### **5.1c Name of property**

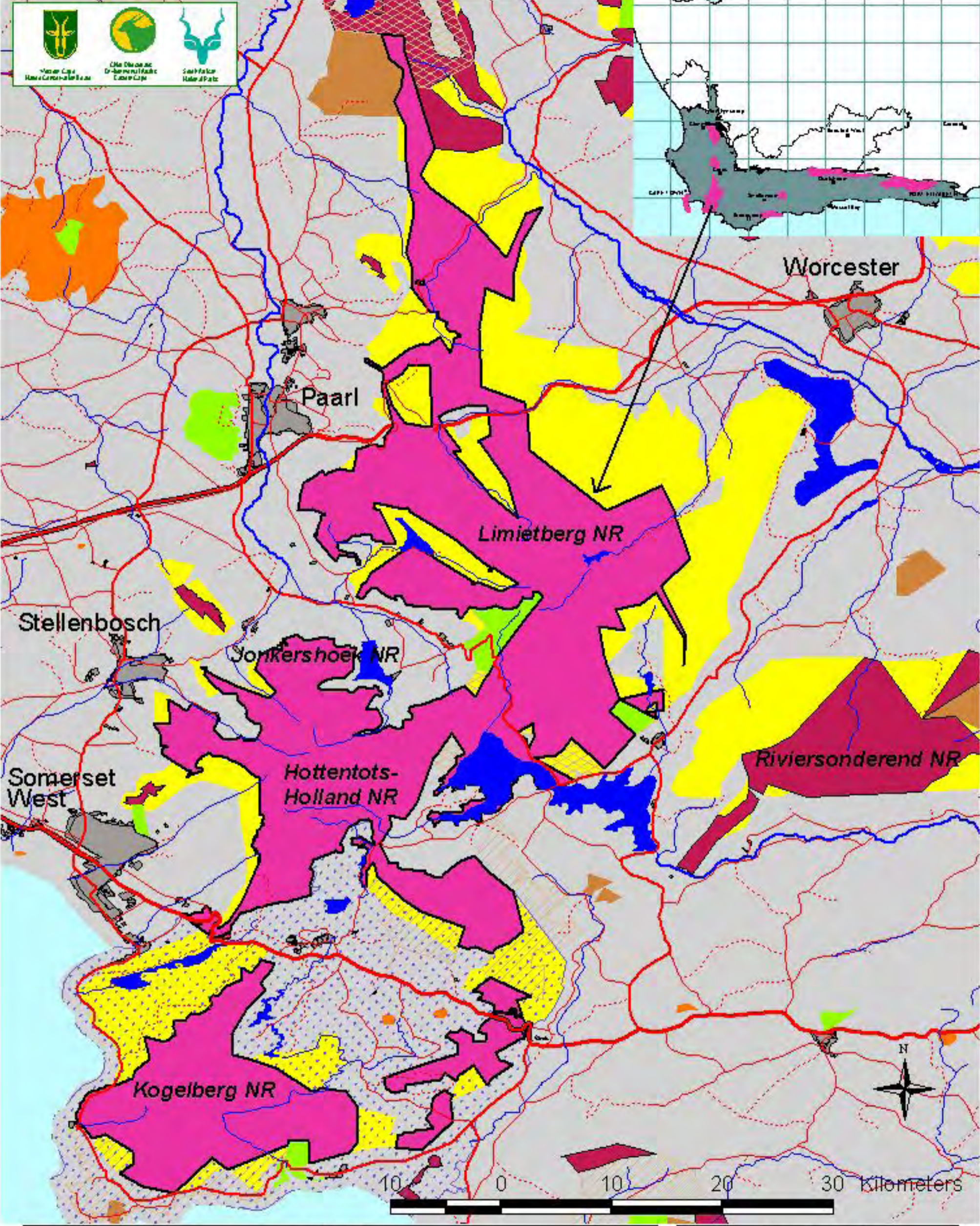
Boland Mountain Complex

#### **5.1d Location on map and identification of geographical co-ordinates**

The geographic co-ordinates of the Boland Mountain Complex are listed in Table 1.1.1 and a map of the area is shown in Figure 5.1.

Located to the east of the famous False Bay (refer to Figure 1.1.1) that in turn borders the Cape Peninsula National Park (refer to Chapter 2), the mountainous Boland Mountain Complex comprises a series of contiguous protected areas; namely the Jonkershoek, Assegaaibosch, Kogelberg, Hottentots Holland and Limietberg (Hawequas) Nature Reserves.





**LEGEND**

- |        |                                 |                             |
|--------|---------------------------------|-----------------------------|
| Rivers | Local Authority Nature Reserves | Proposed conservation areas |
| Roads  | Conservation Areas              | SA Natural Heritage Sites   |
| Dams   | Provincial Nature Reserves      | Mountain Catchment Areas    |
| Towns  | Private Nature Reserves         | Boland Mountain Complex     |
|        | Kogelberg Biosphere Reserve     |                             |

**FIGURE 5.1**

Boland Mountain Complex and surrounding reserves

### **5.1e** Maps and plans showing boundaries of the Boland Mountain Complex

Figure 1.1.1 shows an overall view of the Boland Mountain Complex locality in relation to the other protected areas and to the Cape Floral Region boundary. Figure 5.1 provides a closer view of the protected area and 1:50 000, 1:250 000 and 1:500 000 maps are provided in Appendix 1.

### **5.1f** Area of the Boland Mountain Complex

The combined area of the five components of the Boland Mountain Complex amounts to some 113 000 ha with over 285 000 ha of surrounding reserves that safeguard these borders (refer to Figures 5.1 & 1.1.1; Table 1.1.1).

## **SECTION 5.2 JUSTIFICATION FOR INSCRIPTION**

### **5.2a** Statement of significance

Inclusion of the Boland Mountain Complex in this nomination is essential, since its exceptional plant species diversity is the highest in the Cape Floral Region. Situated at the meeting point of the axes of the Cape Fold Belt (refer to Figure 1.1.2), the area ranks favourably amongst the richest areas in the world. Located within the Southwestern Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4) and noted for exceptionally high levels of endemism, the Broad Habitat Units (BHUs) in the Boland Mountain Complex are unique to this part of the southwestern Cape, conserving significant proportions of three mountain complex BHUs (refer to Table 1.3.2; Figure 1.3.5). The high species diversity and endemism characteristic of this area are dependent on several biological processes. Spanning an area of over 110 000 ha, the protected area and its surrounding reserves (a further ca. 285 000 ha) are sufficiently large for continuation of these processes, which include natural fires, specialised pollination syndromes and seed dispersal, etc. (refer to Table 1.2.4).

Comprising rugged mountains with deep valleys, bordered to the south and southwest by the sea, this physical diversity provides a range of climatic and altitudinal extremes providing habitats for the vast diversity of plants and animals. The Kogelberg Biosphere Reserve forms the southern reaches of the Fold Belt axis that extends more than 200 km northwards, through contiguous reserves and the Groot Winterhoek Wilderness Area, to the northern limit of the Cederberg Wilderness Area.

The Boland Mountain Complex maintains its rugged and pristine nature, exemplified by the impressive passage of the Palmiet River across steep gradients and rocky extrusions. Fed by flows from pristine subcatchments, this is one of few rivers in South Africa that can boast of lower reaches in a near-natural state.

Despite its proximity to the Boosmansbos and Groot Winterhoek Wilderness Areas, as well as to the Cape Peninsula National Park, the plants, animals, Broad Habitat Units, and physical habitats within the Boland Mountain Complex are distinctly different from these other protected areas. Plant diversity is exceptional, with endemism reaching nearly 10%. Analysis of an array of selected plant taxa consistently showed that the Boland Mountain Complex lies within the most species-rich part of the Cape Floral Region (Lombard, 2000; Appendix 4). Amongst other singular features the diverse fauna include an endemic freshwater crab; a number of threatened, endemic, newly described and even undescribed reptiles; and, an Endangered frog species.

The unique qualities of this protected area suggest that it is an essential component of the series of protected areas within this nomination.

### **5.2b** Comparative analysis

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

### **5.2c Authenticity / Integrity**

Although not formally proclaimed as a Wilderness Area, much of the Boland Mountain Complex is managed according to the principles of a wilderness area (refer to sections 1.4a(iii) & 1.4b(iii)) by the Western Cape Nature Conservation Board. Well protected legally (refer to section 5.4c), the management philosophy is directed towards the conservation of natural processes and biodiversity.

The southern part of the Boland Mountain Complex (the Kogelberg Nature Reserve and its environs) was registered by UNESCO in December 1998 as the first Biosphere Reserve in South Africa (refer to section 1.4a(vii)).

The Boland Mountain Complex is surrounded by reserves that safeguard the biodiversity against external threats. The indigenous flora is intact and fauna, including top predators, still thrive in this area. The protected area, together with the surrounding reserves, is large and essential natural processes continue to operate. Human impacts are limited by the sheer ruggedness of the terrain.

### **5.2d Criteria under which inscription is proposed**

The Boland Mountain Complex is being nominated as one of eight protected areas on the basis of two criteria.

***CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution***

The large area (over 110 000 ha) of the Boland Mountain Complex and its connections to both the Groot Winterhoek and Cederberg Wilderness Areas provide considerable ecological security. As a result, the combined areas ensure the long-term persistence of many essential natural processes on which biodiversity depends (refer to Table 1.2.4).

The processes that will be conserved include a natural fire regime (vital to fynbos conservation) natural water flow regimes, as well as pollination and seed dispersal, species migration and dispersal and thus gene flow along the ecological corridor in a north-south direction. The mountain-to-coast connectivity along this corridor provides a further, highly significant, addition to maintenance of biological process within this complex and beyond.

The Boland Mountain Complex acts as a vast catchment and this, together with the formidable landscape, ensure that within this protected area, human impacts remain low and natural processes are maintained.

***CRITERION 44 (a) (iv): The most important and significant natural habitats for in situ conservation of biological diversity***

Representing the Southwestern Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4), the Boland Mountain Complex has some of the finest examples of mountain fynbos in the Cape Floral Region. Species-richness analyses revealed that the Boland Mountain Complex is sited within one of the richest areas in the Cape Floral Region (Appendix 4; Lombard, 2000). The site is acknowledged as the most important site in the Cape Floral Region in terms of floristic diversity. The area is a "hotspot" not only for this diversity but also represents the highest concentration of threatened and locally endemic species in the Cape Floral Region; southern Africa; and, on an area basis, the world. A separate analysis showed that this area is also the focal point for the concentration of Proteaceae family diversity within the Cape Floral Region. In particular, the Endangered marsh rose (*Orothamnus zeyheri*) has been rescued from near extinction.

The diversity of Broad Habitat Units (BHUs) in this protected area is greater than that of any of the other six protected areas assessed in the Lombard (2000) analysis. Equally, the BHUs within the Boland Mountain Complex occur in none of the other six protected areas<sup>184</sup> and significant proportions of the total amount of these BHUs are protected within this area (refer to Table 1.3.2; Figure 1.3.5). In addition, valuable components of low-lying vegetation occur within the Boland Mountain Complex.

While the occurrence of leopard (*Panthera pardus*) in this area attests to the health of surviving populations of prey species, especially ungulates and other mammals, these mountains of the southwestern Cape are also known to be important in the conservation of the relictual Gondwanan invertebrate fauna (section 1.3a). These “living fossils”, such as *Peripatus* spp. and the flightless stag-beetles (*Colophon* spp.), have connections with similar species across the southern continents (Endrödy-Younga & Peck, 1983; Endrödy-Younga, 1988).

### **5.2d(i) Cultural and aesthetic considerations**

Many sites of cultural and heritage importance are found within the Boland Mountain Complex. Archaeological deposits in the lower Jonkershoek valley testify to the presence of Early Stone Age habitation dating as far back as 250 000 years before present. The Khoi and San inhabited the mountain ecosystems, regularly traversing the mountain ranges in the vicinity of the present-day Sir Lowry's Pass and Franschoek Pass (Kruger, 1983) leaving many indications of their passing.

Much of the Hottentots Holland mountain range is visible from metropolitan Cape Town and the distinctive scenery provided by this breathtaking juxtaposition of rugged mountains and panoramic seascapes thrills locals and tourists alike.

## **SECTION 5.3 DESCRIPTION**

### **5.3a Description of the Boland Mountain Complex**

#### **5.3a(i) Physical features**

The Boland Mountain Complex is sited at the meeting of the two axes of the Cape Fold Belt. This mountain complex provides a range of habitats and landscape features and is a valuable biogeographical region within the Cape Floral Region.

The mountains of the Boland Mountain Complex overlie the relatively erodable Cape granites. Enclosed in the granite are remnants of shale and metamorphosed sedimentary rocks that are overlain by the sedimentary layers of the Table Mountain Group.

Incised by a number of large river catchments, including those of the Palmiet, Berg and Rivieronderend Rivers, Table Mountain Sandstones dominate the landscape that is predominantly rugged and mountainous. Altitudes vary from sea level to Du Toits Peak at 2 182 m. As a result of its rugged terrain, high rainfall (refer to section 5.3a(ii)) and numerous large river systems, the Boland Mountain Complex is an important water catchment area.

#### **5.3a(ii) Climate**

Winters are cold and very wet, often with gale-force northwesterly winds, and snow may fall occasionally on the higher peaks. The mountainous topography has a significant effect on the average annual rainfall, which (in parts of the Complex) is one of the highest in South Africa. Annual rainfall across the landscape varies between 700 mm to 1 700 mm per year but may reach up to 3 300 mm on the Dwarsberg Plateau (in the Jonkershoek Nature Reserve).

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<sup>184</sup> These BHUs are also not present in the Cape Peninsula National Park.

The summer months are hot and dry with strong south-easterly prevailing winds, which create serious fire hazards. Some relief from this summer drought, and often-intense heat, is provided in the form of moisture-laden air, pushed up from the ocean by the southeasterly gales, providing misty conditions that cool and humidify the higher mountain slopes and plateaus.

### 5.3a(iii) Vegetation, habitat and plant species

The vegetation of the Boland Mountain Complex is mainly mountain fynbos although there are patches of relict indigenous forest in narrow, moist valleys that are sheltered from fire. The Palmiet River and its associated riparian vegetation provide one of the most pristine habitats in the southwestern Cape. This protected area importantly conserves a large part of the highly significant Southwest Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4).

The Boland Mountain Complex primarily conserves different types of mountain fynbos, protecting significant areas of Hawequas, Franschoek, and Kogelberg Mountain Complex Broad Habitat Units (refer to Table 1.3.2; Figure 1.3.5). None of these Broad Habitat Units are represented in the other seven protected areas. The extremely diverse topography, ranging from the seashore to mountain peaks and including the Palmiet River valley, provides an array of remarkable habitats including salt marshes, flood plains, rocky cliffs and mountain slopes.

The Boland Mountain Complex supports some of the finest examples of mountain fynbos in the Western Cape. Over 1 600 plant species, including several locally Rare and otherwise threatened plant species as well as more than 150 endemic plants, are conserved within this protected area.

Many spectacular members of the Proteaceae are found in this protected area. It has the highest concentration of *Mimetes* species in the Western Cape, most notably the Rare *M. hottentoticus* and *M. capitulatus*. Another member of this family is the beautiful but Endangered marsh rose, *Orothamnus zeyheri*, once on the brink of extinction, but now conserved on a few relatively inaccessible peaks. *Protea repens*, *P. neriifolia* and *Widdringtonia nodiflora*, as well as a diversity of *Erica* and *Restio* species, grow here in combination with a high diversity of fynbos species.

In an analysis of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records, the Boland Mountain Complex consistently fell within the “hottest” species-rich “hotspot” (Appendix 4). In a separate analysis, using point localities for 364 species of Proteaceae comprising 183 322 records, the Complex again fell within the most species-rich part of the Cape Floral Region.

The Boland Mountain Complex, also fell within the top 25% of the minimum set of Quarter Degree Squares needed to conserve all (selected) species in the dataset and all threatened species extracted from the same dataset (Appendix 4).

### 5.3a(iv) Fauna

The extensive, rugged mountains and deep valleys characteristic of the Boland Mountain Complex provide habitats for a variety of mammals, such as the klipspringer (*Oreotragus oreotragus*), and their predator, the Rare leopard (*Panthera pardus*). The high peaks and steep cliffs dropping to the sea support a range of cliff nesting birds and large raptors such as black eagle (*Aquila verreauxii*) and spotted eagle owl (*Bubo africanus*). Kingfishers and typical fynbos birds - the Cape sugarbird (*Promerops cafer*) and orange-breasted sunbird (*Nectarinia violacea*) - are abundant, playing an important role in the reproductive biology of fynbos. The southwestern Cape endemic Verreaux's mouse (*Praomys verreauxii*), associated with pollination of certain *Protea* species, occurs in this protected area.

Of special interest, the locally endemic montane marsh frog (*Poyntonina paludicola*) was only recently described and represents a new monotypic genus. An endemic freshwater crab (*Potamonautes brincki*), restricted to the Grabouw / Kogelberg area, is also found in this protected area, while the only known population of the endemic dwarf crag lizard (*Pseudocordylus nebulosus*) is found in the Hottentots Holland Mountains.

### 5.3b History and development of the Boland Mountain Complex

Evidence of Late Stone Age occupation can be found in the Hottentots Holland Mountains where people are likely to have been living for about 250 000 years.

Owing to its close proximity to Cape Town, European settlers occupied parts of the Boland Mountain Complex less than three decades after the establishment of Cape Town (refer to section 2.3b). In spite of this long period of colonial settlement, the mountains in the Boland Mountain Complex do not appear to have suffered severe impacts. Harvesting of wood and indigenous medicinal herbs such as buchu (*Agathosma crenulata*) reduced some populations of regularly cropped species but are now under strict conservation management. Large game, such as the eland (*Taurotragus oryx*), disappeared from the mountains and numbers of caracal (*Felis caracal*) and the Rare leopard (*Panthera pardus*) were greatly reduced.

Between 1961, when the Cape Provincial Administration purchased Assegaaibosch, and 1987 when the Kogelberg Nature Reserve was transferred to Cape Nature Conservation, the Boland Mountain Complex was formally placed under the control of conservation.

A brief overview of relevant events at the Boland Mountain Complex is given in Table 5.1.

Table 5.1 A summary of major events in the history of the Boland Mountain Complex.

Year / period	Description of historical incident or occasion
100 000 years BP	Middle to Late Stone Age people (evidenced by middens and burial sites) inhabited the area from about 100 000 years before present.
1692	Simon van der Stel granted a number of freeholds in the Jonkershoek valley.
1711	First reference to Assegaaibosch when Dirk Coetzee collected wood in Jonkershoek.
1790	The Assegaaibosch farmstead was built. It is now a National Monument.
1817	Wouter Eduard Wium granted land in the area by Lord Charles Somerset.
1810	The government of the Cape demarcated certain Crown Lands in the area.
1937	The Department of Forestry declared Kogelberg a State Forest.
1939	The Cape Provincial Administration became responsible for Jonkershoek.
1961	The Cape Provincial Administration purchased Assegaaibosch.
1987	Kogelberg transferred to Cape Nature Conservation.

### 5.3c The most recent records of the Boland Mountain Complex

Refer to section 1.3c for information in this regard.

### 5.3d Present state of conservation

This protected area comprises Western Cape Nature Conservation Board-managed Nature Reserves. The southern part of the Boland Mountain Complex (around Kogelberg) is managed according to the internationally accepted principles of a Biosphere Reserve. This Biosphere Reserve has a sensitive pristine core area of 18 000 ha, sustaining high levels of biological diversity, buffered by a surrounding area. Beyond the biosphere reserve's borders, agriculture and pine plantations of the South African Forestry Company Limited (SAFCOL) form a transitional zone, in keeping with the biosphere reserve concept.

As a result of its mountainous terrain and high rainfall, the Boland Mountain Complex is an important water catchment area, providing water for the Cape Metropolitan Area as well as for extensive areas on richer soils in the upper catchment under deciduous fruit orchards (some 25% of

the catchment) grown for export and domestic use<sup>185</sup>. The Breede and Berg Rivers, which flow through the complex in the north, feed the Wemmershoek, Stettynskloof and Elandskloof dams. The Eerste, Berg, Lourens and Riviersonderend Rivers have their sources in the mountains of the central part of the Complex, with the Kleinplaas dam built on the Eerste River.

Private and State-owned properties, including the Theewaterskloof and Groenlandberg Conservancies, abut the protected area.

### **5.3e Presentation and promotion of the Boland Mountain Complex**

Refer to Volume 3 for material relating to the presentation and promotion of the Boland Mountain Complex.

Amongst other research articles, popular articles and texts relating to this area, a Hottentots Holland wild-flower guide (Burman & Bean, 1985) provides hikers and eco-tourists with a means to identify many of the plant species present in this unique protected area.

## **SECTION 5.4 MANAGEMENT**

### **5.4a Ownership**

All land forming the core of this protected area is State-owned.

Refer to section 1.4a for further details in this regard.

### **5.4b Legal status**

- **Kogelberg Nature Reserve**

This Nature Reserve is demarcated as State Forest under the Forest Act. It includes the whole of the original Kogelberg State Forest and portions of Highlands State Forest. Legal responsibility for this area was assigned to the Administrator of the Cape by State President's Proclamation No. 97 of 1992, in Government Gazette no. 14246 of 21 August 1992.

- **Hottentots Holland Nature Reserve**

Hottentots Holland was proclaimed as a Nature Reserve under the Forest Act, Act 122 of 1984 (now replaced by the National Forests Act, Act 84 of 1998), in Government Notice No. 469 of 16 March 1979 (refer to sections 1.4b(ii) & 1.4c(ix)).

- **Jonkershoek Nature Reserve (including the Assegaibosch Nature Reserve)**

Jonkershoek Nature Reserve, first proclaimed under the Forest Act (Act 122 of 1984)<sup>186</sup>, is currently demarcated State Forest and includes portions of the original Jonkershoek and La Motte State Forests. Legal responsibility was assigned to the Administrator of the Cape by State President's Proclamation No. 97 of 1992 (Government Gazette no. 14246, 21 August, 1992). Assegaibosch Nature Reserve was bought by the Department of Nature and Environmental Conservation in 1961 (Deed no. 361 of 1961), and was proclaimed a Provincial Nature Reserve in 1994 (Provincial Proclamation No. 37 of 6/5/1994).

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<sup>185</sup> An integrated and consultative Catchment Management Plan (CMP) for the Palmiet River is in advanced stages of development. The CMP provides a framework for integrating objectives for the larger Palmiet River catchment with those of the "Reserve" (refer to section 1.4c(v)) and the Kogelberg Biosphere Reserve. The CMP further requires the setting of objectives, indicators and ongoing monitoring to ensure management towards the desired (ecologically sustainable) future state of the river and its catchment.

<sup>186</sup> The Forest Act has since been replaced by the National Forests Act (refer to sections 1.4b(ii) and 1.4c(ix)).

- **Limietberg Nature Reserve**

Limietberg Nature Reserve is currently demarcated State Forest under the Forest Act and includes portions of the original Hawequas and La Motte State Forests. Legal responsibility for this area was assigned to the Administrator of the Cape by State President's Proclamation No. 97 of 1992, in Government Gazette no. 14246 of 21 August 1992.

#### **5.4c Protective measures and means of implementing them**

An array of legislation protects this area from inappropriate development or harm and provides the basis for protective and sustainable management of natural and cultural resources. This legislation includes national level legislation such as the Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), the Environmental Conservation Act (section 1.4c(iv)), the National Water Act (section 1.4c(v)), the Mountain Catchment Areas Act (section 1.4c(vi)), the Conservation of Agricultural Resources Act (section 1.4c(vii)), the National Heritage Resources Act (section 1.4c(viii)), the National Forests Act (section 1.4c(ix)), the Marine Living Resources Act (section 1.4c(xi)), the Sea-shore Act (section 1.4c(xii)) and the Western Cape Nature Conservation Laws Amendment Act (section 1.4c(xvi)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

The Cape Nature and Environmental Conservation Ordinance, 1974, recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000, also applies in this protected area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Western Cape Nature Conservation Board, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), is tasked with implementation and enforcement of protective legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

#### **5.4d Agency with management authority**

The agency with management authority for the Boland Mountain Complex is the provincial Western Cape Nature Conservation Board. For further details refer to section 1.4d.

#### **5.4e Level at which management is exercised**

The Boland Mountain Complex is managed by four Reserve Managers, with support from the Regional- and Area Managers of the Western Cape Nature Conservation Board. Refer to sections 1.4e and 5.4k for further detail in this regard.

#### **5.4f Agreed plans relating to the Boland Mountain Complex**

There are a number of plans of relevance to the Boland Mountain Complex. Of considerable importance to this area is the Palmiet River Catchment Management Plan (refer to section 5.3d). Protecting all aspects of the ecology of the broader catchment, this plan was compiled through an exhaustive public participation process and has endorsement from all stakeholders.

Two Conservancies, several National Heritage Sites and Private Nature Reserves, including Sea Farm Private Nature Reserve, adjoin the Protected Area, while three further Conservancies are in the process of establishment. These have subscribed to the conservation ethic of the Western Cape Nature Conservation Board and, through a long process of consultation leading to co-operative management strategies for the area, a number of Landowner Co-operation Programmes



and numerous Mountain Catchment Agreements with landowners adjacent to the protected area (Figure 5.1)<sup>187</sup> have been established.

The internationally recognised Kogelberg Biosphere Reserve, registered in December 1998 under UNESCO's Man and the Biosphere Programme (following a long period of consultation, planning and development), has also made an impact on a number of local landowners who have agreed to associate themselves with the Biosphere Reserve concept.

Refer to section 1.4f for further details of overarching plans, which affect this area.

#### **5.4g Sources and levels of finance**

Refer to section 1.4g for detail in this regard.

#### **5.4h Sources of expertise and training**

Refer to section 1.4h for detail in this regard.

#### **5.4i Visitor facilities and statistics at the Boland Mountain Complex**

The wilderness character of the area creates an ideal atmosphere for hiking trails. Trails range from a few hours duration to three-day hikes, while in appropriately zoned areas canoeing, swimming and angling are allowed. A 10 km circular motor route through the valley in the central section of the protected area provides access for less energetic eco-tourists. The use of the Complex by visitors during the year 2000 is shown in Table 5.2.

Table 5.2 Visitors to Boland Mountain Complex during 2000.

<b>Protected area</b>	<b>Number of visitors during 2000</b>
Kogelberg Nature Reserve	3 263
Hottentots Holland Nature Reserve	11 763
Jonkershoek Nature Reserve	3 886
Assegaaibosch Nature Reserve	7 148
Limietberg Nature Reserve	32 487

#### **5.4j The Boland Mountain Complex management plan and statement of objectives**

Although the Boland Mountain Complex is not a proclaimed Wilderness Area, its size, inaccessibility and rugged nature of the higher peaks afford it *de facto* wilderness status. This has a twofold advantage for this nomination. First, it facilitates the conservation of natural and biological processes unhindered by high levels of human impact. Second, it allows controlled and zoned use for recreation as well as formal and informal environmental education. A summary of overarching management objectives for the Boland Mountain Complex is listed below and a copy of the management plan for the Jonkershoek Nature Reserve is included in Appendix 2.

##### **Management objectives:**

- Management for public use on a zoned basis compatible with other objectives, and with particular emphasis on the wilderness character and experience;

<sup>187</sup> Both the Landowner Co-operation Programmes and the Mountain Catchment Agreements are effectively contractual management agreements, between private landowners and the Conservation Authorities, whereby private land under such a programme or agreement is managed (e.g. aliens are cleared and management challenges are administered) by the Western Cape Nature Conservation Board in association with the landowners.

- Management and use as an eco-tourism centre, with public support and co-operation between surrounding landowners;
- Maintenance of a dynamic system to retain the diversity of habitat and indigenous biota; and,
- Management of the catchment system to maintain a sustained yield of high quality water.

#### **5.4k Staffing levels in the Boland Mountain Complex**

Four Reserve Managers are located within the Boland Mountain Complex. These managers are in turn supported by three Area Managers (Limietberg Area Manager, Panti Melikhaya; Hottentots Holland Area Manager, Mark Gentle; and, Kogelberg Area Manager, Gonald Present) as well as by the Southwest Regional Manager, Zane Erasmus, situated in the Southwest Regional Office, one of four such offices in the Western Cape Province (refer to Figure 1.4.1).

On site staff for the Kogelberg Nature Reserve include 2 Nature Conservators, 2 Foremen, 3 Field Rangers, 15 Workers, 3 Vacancies (Workers), 1 Project Manager, 11 Working for Water contractors, 2 Quality Controllers and 1 Clerk (who also does reserve administration).

On site staff for the Limietberg Nature Reserve include 3 Nature Conservators, 3 Office Staff, 5 Field rangers, 3 Foremen, 24 Labourers and 2 Gate guards. A foreman and a quality controller for the Working for Water project are also part of the staff complement for this Nature Reserve.

The address of the Southwest Regional Office is Private Bag X7, Bellville, 7535.

The current managers and their contact addresses are: -

L Lourens	Hottentots Holland Nature Reserve	P. Bag X27, Elgin, 7180
M Johns	Kogelberg Nature Reserve	P. Bag X1, Kleinmond, 7195
A Swart	Limietberg Nature Reserve	P. Bag 14, Paarl, 7622
A Wheeler	Jonkershoek Nature Reserve	P. Bag X1, Uniedal, 7612

## **SECTION 5.5 FACTORS AFFECTING THE BOLAND MOUNTAIN COMPLEX**

### **5.5a Development pressures**

#### **5.5a(i) Current extent of land transformation and encroachment on natural areas**

The reserves surrounding the Boland Mountain Complex provide a great deal of protection from encroachment by urban- and agricultural development (refer to Figures 5.1 & 1.3.6). These reserves include the Kogelberg Biosphere Reserve (surrounding and including the Kogelberg Nature Reserve) as well as the privately-owned Mountain Catchments, Conservancies, Private Nature Reserves and company-owned (SAFCOL) timber plantations. Over 75% of the total boundary of the core protected area is well buffered by these existing reserves.

As a further improvement on the existing situation, a considerable portion of SAFCOL plantations bordering on the core protected area will be decommissioned over the next 20 years and restored to fynbos (possible owing to relatively good fynbos regeneration following felling and removal of pines in association with appropriate management strategies that encourage fynbos regeneration).

#### **5.5a(ii) Illegal resource use**

Illegal wildflower-picking is no longer a common event in this area, although sporadic incidents do take place. This is strictly monitored and controlled by the reserve management in association with local peace officers.

## **5.5b Environmental pressures**

### **5.5b(i) Alien organisms**

Infestations of alien invasive plants are still severe in parts of the protected area and adjacent lands. Dense infestations upstream outside the boundaries also cause the regular establishment of *Acacia longifolia* and *Acacia mearnsii* seedlings on river banks. *Acacia cyclops* has invaded the coastal vegetation while *Pinus pinaster* and *Hakea tenuifolius* occur near dams. The varied topography provides a range of different habitats, which are exploited by a range of alien invasive plants. A well-funded initiative under the national Working for Water Programme is ongoing to control invasive plants in the protected area.

### **5.5b(ii) Fire**

In recent seasons, lightning strikes have been a major cause of wildfire, with extensive areas being burned. In February 1990, at least 11 widespread strikes occurred, resulting in much of the northwestern area being burned. In March 1991, at least 5 strikes during severe fire-weather conditions eventually caused fires, which spread to local towns, where major fire-fighting efforts were required to prevent damage. Significant damage was caused to farms east of Kleinmond, near Hermanus.

### **5.5b(iii) Soil erosion**

Natural erosion is monitored with little interference unless strictly necessary, any causes of unnatural erosion are attended to as a priority by reserve management in association with related national, provincial and local authorities.

## **5.5c Natural disaster preparedness**

A number of supportive administrative, organisational and other associated structures are available to assist personnel in the event of a natural disaster such as a wildfire. Refer to section 1.5c(i) for further details in this regard.

## **5.5d Visitor / tourism pressures in the Boland Mountain Complex**

Much of this area used for hiking. Visitor numbers are controlled and each trail is monitored on a regular basis by field rangers. Trail maintenance is guided by the management plan and trails may be temporarily closed if necessary.

## **5.5e Number of inhabitants within the Boland Mountain Complex**

The number of inhabitants found within the Boland Mountain Complex and the surrounding reserves is provided in Table 5.3 below.

Table 5.3 Residents within the Boland Mountain Complex.

<b>Protected area</b>	<b>Inhabitants</b>
Kogelberg Nature Reserve & Biosphere buffer zone	125
Hottentots Holland Nature Reserve	200
Jonkershoek Nature Reserve	30
Assegaaibosch Nature Reserve & buffer zone	60
Limietberg Nature Reserve	0
Surrounding Reserves	10 000
<b>TOTAL</b>	<b>10 415</b>

## SECTION 5.6 MONITORING

Details of monitoring conducted by the Western Cape Nature Conservation Board have been provided in section 1.6. In addition to national programmes outlined in section 1.6, such as the *Protea* Atlas, the Frog Atlas, Bat Atlas, Nest Records and the Birds in Reserves Project, there are a number of protected area-specific monitoring programmes in the Boland Mountain Complex. The management team is in the process of identifying key species and is currently monitoring populations of rare and threatened species. Plant and animal checklists are regularly updated, fire and vegetation monitoring (including alien plants) is conducted, and erosion control, stream flow and water quality are monitored through implementation of the National River Health Programme<sup>188</sup>. In addition, a range of monitoring programmes examines the impact of visitors on the area.

The objectives of the monitoring programme within the Boland Mountain Complex aim to:

- establish monitoring techniques and programmes to aid management of the protected area.
- encourage research activities of value to the protected area.
- implement the CAPE Project (refer to section 1.2c(ii); Appendix 5) into all Western Cape Nature Conservation Board-based monitoring.

### 5.6a Key indicators

Key indicators used for various monitoring programmes within this protected area include:

#### 5.6a(i) Physical environment monitoring programme

- Erosion control measured through fixed-point photography; success of vegetation re-establishment in eroded patches.
- Fire monitoring programme maps extent of burn following each fire event.

#### 5.6a(ii) Vegetation monitoring programmes

- New plant records and Red Data Book species are recorded on an ongoing basis;
- Forest patch expansion measured through fixed-point photography;
- Alien vegetation monitoring programme uses indicators of area cleared through mapping of extent of alien vegetation; and success of clearance measured through rate of re-establishment of natural vegetation.

#### 5.6a(iii) Faunal monitoring programme

- Game counts at regular intervals for selected animal populations allow monitoring of population size and movement.
- Monitoring of macro-invertebrates in rivers of the protected area have been initiated under the national River Health Programme.

### 5.6b Administrative arrangements for monitoring

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and

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<sup>188</sup> This Programme, initiated in 1994 by the National Department of Water Affairs and Forestry, is primarily a source of information regarding overall ecological status of river ecosystems in South Africa. The programme includes a monitoring component, aimed at standardising scientific techniques and monitoring methodologies, and auditing of data assessment and reporting processes (<http://www.csir.co.za/rhp/>).

Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within the Boland Mountain Complex.

While the component areas of the Boland Mountain Complex have contributed significantly as zones of baseline research for the Bat-, Bird, Frog- and *Protea* Atlassing programmes (refer to section 1.6), various research avenues relating to invertebrate fauna have also been explored by, amongst other, the University of Natal in association with both the Agricultural Research Council and the Vegetable and Ornamental Plant Institute. Formal administrative relationships between these institutions, other research bodies and the Western Cape Nature Conservation Board, ensure that all data, as well as published and unpublished reports, are made available for reference purposes and for inclusion in the State of Biodiversity database.

Refer to section 1.6b(i) for information with regard to overarching administrative arrangements for monitoring of programmes within protected areas.

### **5.6c Results of previous reporting**

Research and reporting for the Boland Mountain Complex is varied, given the high biophysical diversity of this area. Studies include those on the presence of alien plant species (e.g. Richardson & Cowling, 1994) and the exceptional plant diversity (e.g. Boucher, 1978; McDonald & Morley, 1988) of the area. Further research and studies (by a number of research teams from the Western Cape Nature Conservation Board, the Universities of Stellenbosch and Cape Town, as well as the Council for Scientific and Industrial Research) have included intensive investigations on fire-management (e.g. van Wilgen, 1981); a number of issues relating to the ecology and sustainability of the Palmiet River catchment (contributing to the integrated Catchment Management Plan); and, to the planning of the Kogelberg Biosphere Reserve. Research and data on these, and other projects (refer to sections 5.6a & 5.6b), have informed, and continue to inform, management- and research priorities for the Boland Mountain Complex, leading, for example, to the registration of the Biosphere Reserve.

Refer to section 1.6c for further details in this regard.

## **CHAPTER 6 THE DE HOOP NATURE RESERVE**

The De Hoop Nature Reserve, one of eight protected areas that are being nominated for a natural property, is situated in the region of the mouth of the Breede River, about 50 km east of Bredasdorp and 50 km south of Swellendam (refer to Figures 1.1.1 & 1.1.2). Located close to the southern-most point of Africa, Cape Agulhas, De Hoop Nature Reserve is the furthest south of the protected areas selected to represent the Cape Floral Region.

This near pristine coastal landscape is an essential component in this nomination, owing to its role in conserving a large proportion of unique lowland habitats, including a “hotspot” of edaphic plant endemics, a sand corridor, a RAMSAR wetland, and fascinating intertidal zones on limestone terraces. Furthermore, the De Hoop coastline provides amongst the best land-based whale watching in the world. Literally translated as “the hope”, this protected area conserves a number of plants and animals found nowhere else in the Cape Floral Region.

This chapter provides justification for the inclusion of the De Hoop Nature Reserve in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is given.

### **SECTION 6.1 IDENTIFICATION OF DE HOOP NATURE RESERVE**

#### **6.1a Country**

The Republic of South Africa

#### **6.1b Province**

Western Cape

#### **6.1c Name of property**

De Hoop Nature Reserve

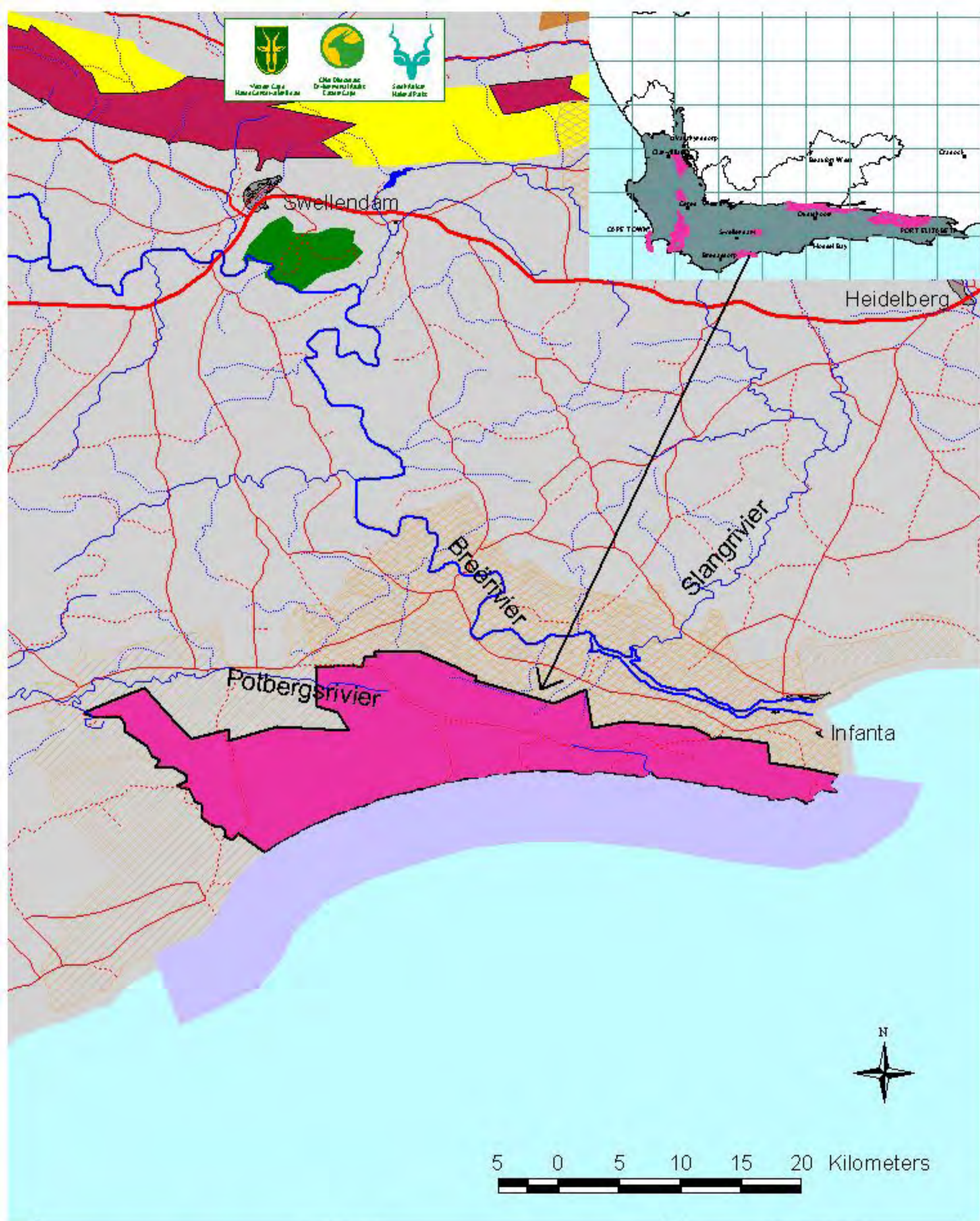
#### **6.1d Location on map and identification of geographical co-ordinates**

The De Hoop Nature Reserve occurs within the boundaries of the Bredasdorp and Swellendam Magisterial Districts within the boundaries of the Overberg District Municipality. The geographic co-ordinates are listed in Table 1.1.1. A map of the area is shown in Figures 6.1 and 1.1.1.

#### **6.1e Maps and plans showing boundary of De Hoop Nature Reserve**

Figure 1.1.1 provides an overall view of the location of this area in relation to the other protected areas and to the Cape Floral Region boundary. Figure 6.1 provides a closer view of the protected area and Appendix 1 shows the location of De Hoop Nature Reserve in relation to the Cape Floral Region at a scale of 1:500 000. Maps in Appendix 1 further illustrate De Hoop Nature Reserve topographically on a map at a scale of 1:50 000.

Since its first establishment in 1957, the boundaries of the protected area have been changed several times. The correct boundaries are indicated in Figure 6.1.



LEGEND

- Rivers
- Roads
- Dams
- Towns
- SA National Parks
- Conservancies
- Provincial Nature Reserves
- Private Nature Reserves
- Proposed conservancies
- Marine Reserves
- Mountain Catchment Areas
- De Hoop Nature Reserve

FIGURE 6.1

De Hoop Nature Reserve and surrounding reserves

The De Mond Nature Reserve (954 ha), the Waenhuiskraans Nature Reserve (267 ha), and Zoetendalsvlei Nature Reserve (417 ha) are at present under the management of the De Hoop Nature Reserve. The intention is that these areas will eventually be managed separately.

### 6.1f Area of De Hoop Nature Reserve

De Hoop Nature Reserve is a single protected area comprising some 32 000 ha with a conservancy adjacent to the northeastern border (refer to Figures 6.1 & 1.3.6; Table 1.1.1). The Overberg Test Range is a 25 000 ha para-military area west of De Hoop that enjoys co-operative management with the protected area. The Marine Reserve extends from the eastern border of the De Hoop Nature Reserve to well beyond the western border (incorporating the area adjacent to the Overberg Test Range) covering a total area of approximately 25 300 ha and extending three nautical miles into the ocean.

## SECTION 6.2 JUSTIFICATION FOR INSCRIPTION

### 6.2a Statement of significance

The De Hoop Nature Reserve is unique among the protected areas in conserving Cape Floral Region lowlands. It is a centre of plant diversity and endemism, reflected in its location within the Agulhas Plain Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4). Much of the area conserves special, and in some cases unique, habitats including wetlands, limestone soils, a sand dune corridor, a small but invaluable portion of renosterveld, as well as mountain fynbos. The juxtaposition of lowland and mountain habitats, with well-preserved linkages between the coast and mountain ranges, contributes to the altitudinal range found within this protected area.

The habitat diversity of De Hoop Nature Reserve is spectacular. Conserving well over a third of each of the Agulhas Fynbos / Thicket Mosaic and the De Hoop Limestone Fynbos Broad Habitat Units (BHU), De Hoop also conserves almost half of the South Dune Pioneer BHU and 90% of the Potberg Mountain Fynbos Complex BHU (refer to Table 1.3.2; Figure 1.3.5).

A significant centre of plant species richness (Lombard, 2000; Appendix 4) and endemism, De Hoop was found to be one of the most significant areas for conservation of a selection of plant taxa including Proteaceae and threatened species. De Hoop safeguards populations of over 1 100 species of which 36 taxa are locally endemic in this area. Three taxa are strictly endemic to the reserve, including two Rare members of the protea family, *Leucospermum fulgens* and *Protea aurea* subspecies *potbergensis*. The reserve also protects populations of at least 59 plant taxa that are considered nationally Rare or threatened.

Geological processes have produced caves that today form one of the most vital and important habitats for bats in the Western Cape. The De Hoop Wetland (or De Hoop **Vlei**) is of international value, as reflected by its Ramsar Status. The wetland is highly productive, harbouring a diversity of aquatic organisms as well as large numbers of birds, including migratory birds.

Large mammals are rare in the Cape Floral Region, however, the plains of the De Hoop Nature Reserve support a number of large mammal species. Of special interest, are the Rare Western Cape endemic bontebok (*Damaliscus dorcas dorcas*) and the Vulnerable Cape Floral Region endemic, the Cape mountain zebra (*Equus zebra zebra*), two of at least eight Red Data Book mammals in the Reserve. Bird life is exceptionally diverse owing to the mosaic of lowland, montane, thicket, wetland and estuarine habitats. To date, over 250 bird species (of which 29 are threatened) have been recorded in the De Hoop Reserve, including secretary birds (*Sagittarius serpentarius*) and the Vulnerable Cape vulture (*Gyps coprotheres*).

Marine life, especially in the intertidal zones, is easily accessible on the coastal terraces and owes its diversity to the overlapping of marine provinces, namely the Benguela and the Agulhas



Provinces. During spring the coastline provides spectacular coastal scenery as well as views of the calving and mating antics of the southern right whale.

## **6.2b Comparative analysis**

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

## **6.2c Authenticity / Integrity**

The De Hoop Nature Reserve is a proclaimed Provincial Nature Reserve, managed by the Western Cape Nature Conservation Board (refer to section 4a(i)). This imparts a high level of legal protection (refer to section 6.4c), ensuring that management is directed towards the conservation of biodiversity and the operation of natural processes (refer to section 1.4b(i)).

Management arrangements with the adjacent Denel Overberg Test Range (OTB) and the Test Flight and Development Centre (TFDC) of the South African Air Force, as well as the conservancy, and the Marine Reserve, safeguard this protected area. The land is agriculturally poor and surrounding stock farmers are considering changing to game farming. A new conservancy along the base of the hard-dunes (the northern boundary) is currently being developed.

De Hoop Nature Reserve is located on the coastal plain in the southern Cape (also referred to as the Elim Plain and as the Agulhas Plain). Threats are limited due to the surrounding land uses, conservation agreements, and current initiatives. The Marine Reserve allows a terrestrial and marine interface to function under natural conditions. The area of De Hoop is large, particularly if the adjacent conservation areas (such as conservancies) are included. Thus, the unique habitats within this area are well protected, and the Ramsar status of the wetland confers additional protection. There is a minimum of infrastructure within the protected area.

## **6.2d Criteria under which inscription is proposed**

The De Hoop Nature Reserve is being nominated as one of eight protected areas on the basis of two criteria.

<p><b><i>CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution</i></b></p>
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This area conserves a wild and unspoilt coastline, one of the few remaining on the South African seaboard, in which ecological processes and interactions among the sea, beach, dunes, lowlands and the isolated hills of the area are still intact. The connectivity and links among these ecosystems make a vital contribution to conservation in this region.

The De Hoop dune field is the largest remaining undeveloped, and naturally shifting, dune system in the southern Cape with vegetation dynamics showing no successional tendency towards thicket.

The coast-to-mountain connectivity and the large size of De Hoop Nature Reserve (well over 30 000 ha) provide an important opportunity for conservation and maintenance of a range of geomorphological and biophysical processes (refer to Table 1.2.4).

The broad continental shelf, known as the Agulhas Bank, is an area of exceptionally rich marine biodiversity. This is explained in part by the overlap of waters of two Marine Provinces. The Marine Reserve of De Hoop plays an extremely important role in providing sanctuary for the rebuilding of fish stock numbers, which are then able to recolonise the overexploited, unprotected coastline to the east and west of the Marine Reserve.

Apart from some of the raptors, ostriches and larger mammals for which interventionist-management (either to increase or to limit population growth) might be required, most species in De Hoop are considered self-regulating. Many typical fynbos pollination and seed-dispersal processes, involving complex relationships between plants and animals, occur within the protected areas and predation by the bats on the abundant insects is important in this protected area.

**CRITERION 44 (a) (iv): *The most important and significant natural habitats for in situ conservation of biological diversity***

The De Hoop Nature Reserve is the only nominated protected area representing the Agulhas Plain Phytogeographic Centre of endemism. The protected area is distinctive because it conserves a wide coastal lowland plain. The lowland vegetation of the Cape is highly threatened and this protected area makes a major contribution to its conservation. In addition, its unique characteristics are the edaphic plant endemics associated with the limestone habitats, as well as the plant patterns related to abrupt differences in soil type.

These highly threatened lowland vegetation types include limestone fynbos, fynbos/thicket mosaics, and a small remnant of renosterveld. Of particular biological importance are the transitions between limestone and acid soil habitats where associations of plant species change abruptly with soil type. In addition, the protected area also conserves a local mountain fynbos type. These Broad Habitat Units do not occur in the other protected areas. Furthermore, these habitats conserve many endemic and threatened plant species, and De Hoop Nature Reserve is a centre of endemism for limestone fynbos. In addition, many threatened plants occur in the renosterveld, which also supports the Cape Floral Region endemic parrot-beaked tortoise (*Homopus areolatus*). The mountain fynbos on the Potberg Range is an important site for the conservation of Proteaceae species, some of which are local endemic species.

A species-richness analysis of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records, revealed that De Hoop Nature Reserve is sited within a species rich area in the Cape Floral Region (Appendix 4; Lombard, 2000). Overall, the protected area falls within the top 25% of the minimum number of Quarter Degree Squares needed to protect all (selected) species in this dataset.

There are also several distinct habitats at De Hoop that offer a range of places for plants and animals to live. These include the highly productive RAMSAR coastal wetland, which is an important ecosystem for resident aquatic species as well as being a vital stop-over for several migratory species of birds. Caves in the limestone hills provide valuable habitats for cave organisms including five species of bats and the Bat Cave at De Hoop is one of the most important areas for bat conservation in South Africa.

The marine environment at De Hoop provides a unique area where waters of different origins mix providing a range of conditions that support a diverse and rich marine community. One of the most important functions of this area is to act as a calving and mating ground for the southern right whale (*Balaena glacialis*).

The invertebrate faunal biodiversity is exceptional, with estuarine and wetland affiliated species adding to the diverse terrestrial invertebrate fauna.

The protected area is an important bird area and significant populations of the threatened Cape vulture (*Gyps coprotheres*) and African black oystercatcher (*Haematopus moquini*) are found in the Potberg Range and along the beaches of De Hoop, respectively.

Thriving populations of Rare endemic<sup>189</sup> bontebok (*Damaliscus dorcas dorcas*) and Vulnerable Cape mountain zebra (*Equus zebra zebra*) are an important source for reintroduction of these taxa to other reserves and conservation-oriented areas.

### **6.2d(i) Cultural and aesthetic considerations**

The archaeological, as well as the more recent cultural-historical, features of De Hoop Nature Reserve are of great historic importance and include rock-art, middens, tools, and dwellings, for example, the rock painting in Black Eagle Cave is one of only two known in the entire Agulhas region. At least 17 archaeologically significant sites have been discovered within the Nature Reserve.

The archaeological and palaeontological value of this protected area is enhanced by the overlying limestone layer, which is an exceptionally good medium for preservation of biological deposits including bone and shell materials. The naturally shifting dune system has protected numerous unfossilised and semi-fossilised artefacts, while similar preservation has also occurred in many of the caves on the Nature Reserve (Hendey, pers. comm.).

The De Hoop homestead and its encircling wall have been declared a national monument and constitute one of the finest examples of this architectural style in the region.

## **SECTION 6.3 DESCRIPTION**

### **6.3a Description of De Hoop Nature Reserve**

#### **6.3a(i) Physical features**

The Potberg Range (rising to 611 m above sea level) and its associated limestone hills lie along the northern boundary (refer to Figure 1.1.2). The limestone terrain exhibits typical karst topography (circular and oval depressions) and cave systems. Many of these features follow an east-west orientation and were established when the limestone hills were laid down parallel to the old coastline.

The Potberg Range is an isolated outlier of quartzitic sandstone of the Table Mountain Group that is separated from the limestone hills by a narrow valley. The land drops to the southwest in a series of four distinct terraces that are the result of marine transgressions. There are alluvial fans at the southern foot of the range and quartzites form sea cliffs where they are exposed beneath the limestones.

The Salt River has cut a deep gorge through the limestone hills to discharge into the De Hoop coastal lake that is separated from the sea by dunes.

One of the features of importance of De Hoop Nature Reserve lies in the fact that it conserves an intertidal system of large eroding soft sandstone platforms that are not protected elsewhere in South Africa. De Hoop Nature Reserve preserves a number of other topographically diverse systems, including a sprawling dune field system (the largest remaining undeveloped naturally shifting dune system in the southern Cape), a highly productive coastal wetland and an extensive intertidal zone. The mountain-to-coast connection provides a fascinatingly diverse landscape, further enriched by the particularly scenic qualities of the area.

#### **6.3a(ii) Climate**

Situated in the southeastern part of the Cape Floral Region, the De Hoop protected area is influenced by the warm Agulhas current resulting in temperate winters and warm summers. De

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<sup>189</sup> Bontebok are restricted to a narrow distribution range along coastal plains in the southwestern Cape.

Hoop lies in a broad transition zone between winter and summer rainfall and while still influenced by the strong cyclonic systems which bring winter rainfall to the western regions, some rain falls during the rest of the year.

Fogs, during autumn and winter, contribute to an average annual rainfall of 380 mm (measured at the De Hoop Homestead) with the wettest month being August. Average rainfall varies significantly across this protected area, with the Potberg receiving over 700 mm, while the limestone hills receive only some 400 mm per year. The wettest months of the year are June to August and the driest are December to February.

Prevailing south-easterly winds in summer swing to southwesterly, rain-bearing winds during winter months. Average annual temperature is 16.8°C, with summer temperatures averaging around 20.5°C and winter temperatures averaging 13.2°C. The warmest month is January, while the coldest is July.

### **6.3a(iii) Vegetation, habitats and plant species**

Representing the Agulhas Plain Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4), De Hoop Nature Reserve differs from the other protected areas in conserving unique lowland fynbos types. These are strongly associated with soil type, including a representative range of the habitat variation within limestone fynbos. In addition, fynbos/thicket mosaics occur on coastal alkaline sands, and a small portion of renosterveld on finer, richer soils. Mountain fynbos is found on the nutrient-poor sands of the mountain range, and tiny fragments of forest occupy the ravines.

In terms of Broad Habitat Units, De Hoop Nature Reserve is unique in conserving significant proportions of threatened lowland BHUs: De Hoop Limestone Fynbos (35% of its total); South Dune Pioneer (49%), and Agulhas Fynbos Thicket Mosaic (38%) (refer to Table 1.3.2; Figure 1.3.5; Appendix 3). It conserves 50% of the Potberg Mountain Fynbos Complex (90% of the target), but only a fragment of Overberg Coast Renosterveld (ca. 300 ha.)

Out of a total of well over 1 100 plant species recorded in the reserve (Burgers, unpublished data) at least 36 taxa, that are endemic in the reserve and immediate vicinity, are protected in the reserve including eight undescribed taxa. The majority of the locally endemic taxa (29 taxa) occur on limestone, while at least 13 taxa are endemic to the mountain fynbos of the Potberg range. Some 59 nationally Rare and threatened plant species have been recorded in De Hoop Nature Reserve (Burgers, unpublished data) including three species which are strictly endemic to the present reserve, namely *Leucospermum fulgens* (Vulnerable), *Cliffortia burgersii* (Rare) and *Protea aurea* subspecies *potbergensis* (Rare). A member of the Proteaceae, endemic to the Potberg and vicinity, is the tooth-leaf sugarbush, *Protea denticulata*, while another proteoid, *Leucadendron cryptocephalum* (Endangered), is now virtually confined to the Potberg since the only other population near Caledon is nearly extinct.

As a centre of endemism for limestone fynbos, the De Hoop Nature Reserve conserves at least 73 species (66%) of 110 taxa, thought to be confined to limestone outcrops between Gansbaai and the Gouritz River (Heydenrych, 1994).

Of the plant taxa listed in Hilton-Taylor (1996) as threatened or possibly threatened (IUCN Red Data conservation status categories), at least 59 occur in the De Hoop Nature Reserve.

In analysis of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records, De Hoop consistently fell within one of the species-rich "hotspots", and also fell in a "hotspot" based on all threatened species within this dataset (Lombard, 2000; Appendix 4). In a separate analysis, using point localities for 364 Proteaceae species comprising 183 322 records, De Hoop again featured as one of the most species-rich areas of the Cape Floral Region and also fell within the top 25% of sites needed to conserve these plant taxa in the Cape Floral Region (Appendix 4). This indicates that this protected area is particularly important in the conservation of much of the mapped plant species-richness within the Cape Floral Region.

### 6.3a(iv) Fauna

De Hoop Nature Reserve is very important in conserving animals associated with coastal lowlands. The invertebrate fauna, although relatively poorly known, is nonetheless considerable and may possibly surpass plant diversity (Lloyd, 1983). Insects represent the main diet for bats that occupy the extensive system of limestone caves in the protected area. The main bat cave harbours healthy populations of at least five bat species, including the South African endemic Cape horseshoe bat (*Rhinolophus capensis*), and probably represents one of the most important habitat features for mammals in this Nature Reserve.

De Hoop is located in an area on the southern African coastline where mixing of waters of the South Indian-, South Atlantic- and Southern Ocean takes place. As a result a diversity of marine and intertidal organisms, associated with the waters of both the sub-tropical Agulhas Current system from the east coast and the more temperate waters occurring to the south and west, are all found here. The region is also adjacent to the broadest part of the continental shelf of southern Africa, a feature known as the Agulhas Bank. The Agulhas Bank represents an area in which marine life thrives in response to the mixing processes of waters of various origins. These conditions are particularly favourable for supporting southern right whale (*Balaena glacialis*) that annually spend up to five months along this coastline. The Marine Reserve, which supports a marine fish life of over 250 species, is also one of the southern right whale's most important calving grounds.

The populations of the Rare southwestern Cape endemic bontebok (*Damaliscus dorcas dorcas*) and the Vulnerable Cape mountain zebra (*Equus zebra zebra*) are some of the most important for these taxa. Close on 100 mammalian species are known from terrestrial and marine environments of De Hoop Nature Reserve. Some of the larger ungulates and carnivores died out in historic times and several of these have already been re-established with others planned for re-establishment in the near future. For example, re-introduction of black rhino (*Diceros bicornis*) into De Hoop is currently being explored in collaboration with Kwa-Zulu Natal Conservation Authorities.

There are approximately 50 species of reptiles and 14 species of amphibians found in De Hoop Nature Reserve. The current bird checklist exceeds 250 species, including a number of threatened taxa such as the Vulnerable Cape vulture (*Gyps coprotheres*) and the Rare Damara tern (*Sterna balaenarum*), while southern Africa's second rarest coastal breeding bird, the African black oystercatcher (*Haematopus moquini*), is a notable resident of De Hoop. Apart from including the most southwesterly located Cape vulture colony<sup>190</sup>, De Hoop also provides sanctuary for the critically Endangered blue crane (*Anthropoides paradiseus*) and a wide range of raptors such as the Vulnerable martial eagle (*Polemaetus bellicosus*), black eagle (*Aquila verreauxii*), African fish eagle (*Haliaeetus vocifer*) and secretary bird (*Sagittarius serpentarius*). The De Hoop Wetland, a RAMSAR site, is a favourable habitat for some 75 species of aquatic birds, while a variety of other birds also use the resources of this rich wetland. De Hoop further provides an important site for migrant birds ranging from swallows and plovers to the Rare white stork (*Ciconia ciconia*).

### 6.3b History and development of the De Hoop Nature Reserve

There is evidence of human occupation on the De Hoop Nature Reserve during the Early to Middle Stone Age, one million to 40 000 years before present (BP). During the Late Stone Age, the San lived here as hunter-gatherers in the area. The Khoi practised nomadic pastoralism through the area approximately 2 000 years BP. Many midden sites along the coast bear testimony to these early occupations and a rock painting in Black Eagle Cave at Potberg represents the most southerly example in Africa.

After the European occupation of the Cape (refer to section 2.3b), the large area north of De Hoop became a thriving agricultural area from the 1730's. However, De Hoop lay to the south of the main travellers' eastward route, which, combined with its relatively low agricultural potential, meant that

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<sup>190</sup> De Hoop is home to the largest breeding site of these birds in the Western Cape. The Cape vulture colony at Potberg/De Hoop is now in a positive growth mode thanks to Western Cape Nature Conservation Board initiatives and willing co-operation from local landowners.

the region was relatively undeveloped until recently. A brief overview of relevant events at the De Hoop Nature Reserve is provided in Table 6.1.

Table 6.1 A summary of major events in the history of the De Hoop Nature Reserve.

Year / period	Description of historical incident or occasion
1739	Frederick de Jager granted grazing rights to the De Hoop land by the Dutch East India Company.
Late 18th century	Pieter Lourens Cloete built the homestead complex.
1956 and 1957	Cape Provincial Administration bought the farms De Hoop and Windhoek and later The Nook farm was added.
1976	The De Hoop Nature Reserve was proclaimed.
1978	The farm Dronkvlei and portions of Potteberg Estates were added.
1984	Establishment of the Overberg Test Range west of De Hoop Nature Reserve by ARMSCOR resulted in a new era of co-operative management.
1980's	Eastern (or Cape Infanta) Section and the Melkkamer Homestead complex were added to De Hoop Nature Reserve.
1990	An enlarged De Hoop, with the present day boundaries, was proclaimed a Provincial Nature Reserve. The De Hoop Marine Reserve was also proclaimed in this year.

### 6.3c The most recent records of De Hoop Nature Reserve

Refer to section 1.3c for information in this regard.

### 6.3d Present state of conservation

De Hoop Nature Reserve was proclaimed a Provincial Reserve (refer to section 1.4b(i)) in terms of the Nature Conservation Ordinance (No 19 of 1974)<sup>191</sup>. Safeguarded along its 46 km coastline by the De Hoop Marine Reserve (proclaimed in terms of the Sea Fisheries Act No 12 of 1988), the protected area is further bordered by a 3 352 ha conservancy on its northeastern boundary. The extensive coastal wetland in the protected area, called the De Hoop Wetland, is a proclaimed RAMSAR site.

De Hoop is isolated and lies in an area of low agricultural potential. This suggests that the land surrounding the protected areas is unlikely to be further developed for agricultural purposes or for urban development and discussions with adjacent landowners, concerning their conversion from stock to game farming, are in progress. There are few roads and the accommodation and management complex is restricted to a small area. Apart from scientifically determined removals of game from the area, mainly for re-establishment purposes in other conservation areas (such as Provincial- or Private Game Reserves and Conservancies), no exploitation of natural resources is allowed. The operation of natural processes is relatively unhindered by human intervention.

The most severe threat to the protected area is the occurrence of infestations of invasive plants particularly rooikrans (*Acacia cyclops*) and Port Jackson (*Acacia saligna*).

### 6.3e Presentation and promotion of De Hoop Nature Reserve

Refer to Volume 3 for promotional material on the De Hoop Nature Reserve.

<sup>191</sup> Recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000 (refer to section 1.4c(xvi)).

## **SECTION 6.4 MANAGEMENT**

### **6.4a Ownership**

De Hoop Nature Reserve is wholly owned by the State. Refer to section 1.4a(i).

### **6.4b Legal Status**

The establishment of De Hoop Nature Reserve dates back to 1956 and 1957, when the Cape Provincial Administration bought the De Hoop and Windhoek Properties. In 1978, Dronkvlei and portions of the Potteberg Estates were added. The first portion of the protected area was proclaimed as a Provincial Nature Reserve in 1976 (Proclamation No: 409-1976). The eastern section and part of Melkkamer were added during the 1980's.

The De Hoop Marine Reserve was proclaimed in Government Gazette No. 12667 dated 27 October 1990 in terms of the Sea Fisheries Act (Act 12 of 1988)<sup>192</sup>. The protected area with its existing boundaries was proclaimed a Provincial Nature Reserve (refer to section 1.4b(i)) in 1990 in terms of the Nature Conservation Ordinance (No 19 of 1974)<sup>193</sup>.

### **6.4c Protective measures and means of implementing them**

An array of legislation protects this Provincial Nature Reserve from inappropriate development or harm and provides the basis for protective and sustainable management of natural and cultural resources. This legislation includes national level legislation such as the Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), the Environmental Conservation Act (section 1.4c(iv)), the National Water Act (section 1.4c(v)), the Conservation of Agricultural Resources Act (section 1.4c(vii)), the National Heritage Resources Act (section 1.4c(viii)), the Marine Living Resources Act (section 1.4c(xi)), the Sea-shore Act (section 1.4c(xii)) and the Western Cape Nature Conservation Laws Amendment Act (section 1.4c(xvi)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

The Cape Nature and Environmental Conservation Ordinance, 1974, recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000, also applies in this protected area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Western Cape Nature Conservation Board, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), is tasked with implementation and enforcement of protective legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

### **6.4d Agency with management authority**

The agency with management authority for the De Hoop Nature Reserve is the provincial Western Cape Nature Conservation Board.

For further details refer to section 1.4d.

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<sup>192</sup> The Sea Fisheries Act has recently been replaced by the Marine Living Resources Act (refer to section 1.4c(xi)).

<sup>193</sup> Now replaced by the Western Cape Nature Conservation Laws Amendment Act (refer to section 1.4c(xvi)).

#### **6.4e Level at which management is exercised**

The De Hoop Nature Reserve is managed by a Reserve Manager with support from the Regional- and Area Managers of the Western Cape Nature Conservation Board.

Refer to sections 1.4e and 6.4k for further detail in this regard.

#### **6.4f Agreed plans relating to the De Hoop Nature Reserve**

The De Hoop Marine Reserve was proclaimed in terms of the Sea Fisheries Act<sup>194</sup> and is managed jointly by the Western Cape Nature Conservation Board and by the Marine and Coastal Management section of the National Department of Environment Affairs and Tourism. This Marine Reserve forms the southern boundary of De Hoop Nature Reserve.

Due west of De Hoop is a missile testing range (Denel / ARMSCOR) called the Overberg Test Range. This is an extensive (20 000 ha) area that has a management agreement with the De Hoop Nature Reserve management. Northeast of the protected area is the Lower Breede River Conservancy (Figure 6.1). Co-operative agreements, between such surrounding landowners and the De Hoop Nature Reserve management, have led to improved alien vegetation control, an increase in population size of the threatened Cape vulture, improved resource use (of particularly water supplies) and also to a move toward game-ranching, rather than domestic livestock farming, in the locality.

Refer to section 1.4f for further details of overarching plans, which affect this area.

#### **6.4g Sources and levels of finance**

Refer to section 1.4g for detail in this regard.

#### **6.4h Sources of expertise and training**

Refer to section 1.4h for detail in this regard.

#### **6.4i De Hoop Nature Reserve visitor facilities and statistics**

There are picnic sites, hiking trails, short walks, a mountain bike trail and a circular drive for vehicles. The De Hoop office and the Potberg Centre host information displays and environmental centres at Potberg and Koppie Alleen cater for organised school group environmental education events.

In total eleven self-catering cottages are available for eco-tourists. These include seven basic cottages, equipped with electricity, beds, bathrooms and kitchens, which can accommodate between four to ten people. Three fully-equipped cottages, each accommodating up to five people, and a comfortable house, situated at Lekkerwater overlooking the sea, provide further accommodation choice for visitors.

In addition to a camping area, with seven sites for tents and caravans, a 54 km hiking trail, the Whale Trail, designed specifically for whale-viewers and nature-lovers, accommodating a maximum of 12 hikers per overnight stop, was opened during August 2001. This 5-day trail boasts exploration of the Potberg followed by spectacular coastal views, affording hikers unique opportunities for rock-pool discovery with sure prospects of whale-watching from June to December.

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<sup>194</sup> This Act has been replaced by the Marine Living Resources Act (refer to section 1.4c(xi)).



## **6.4j De Hoop Nature Reserve management plan and statement of objectives**

For an overview on management plans for the Western Cape Nature Conservation Board, refer to section 1.4j and Appendix 2. The objectives of De Hoop Nature Reserve clearly indicate a desire for the conservation of biodiversity through the understanding and facilitation of the functioning of natural processes. A great deal of information on the functioning of the ecosystems in this region has been gathered and is now being used in the management of the protected area. Important linkages among mountains, low-lying areas and aquatic terrestrial systems have been maintained through the judicious planning of infrastructure such as the road network. Further, the links between the terrestrial and marine components have similarly been maintained.

The commitment to future conservation of the region is reflected in collaboration with neighbouring landowners, which has resulted in the establishment of conservancies and other conservation agreements. Current initiatives, investigating the feasibility of landowners converting from stock- to game farming, are a further example of this collaboration.

Primary objectives aim to:

- maintain a representative and viable example of the biodiversity of the southwestern Cape coastal region through conservation of natural fauna and flora and integrated ecosystems.

Secondary objectives aim to:

- form a focus for conservation research and monitoring.
- provide facilities and opportunities for formal and informal outdoor environmental education.
- provide opportunities and facilities for nature orientated outdoor recreation and interpretation.
- support the conservation of important cultural heritage sites.
- involve local communities in the conservation of their natural environment.

## **6.4k Staffing levels for De Hoop**

A Reserve Manager is located within De Hoop and is supported by the Overberg Area Manager, Tierck Hoekstra, and the Breede River Regional Manager, Duncan Heard, who is situated in the Breede River Regional Office, one of four such offices in the Western Cape Province (refer to Figure 1.4.1).

On-site staff for De Hoop Nature Reserve include 2 Nature conservators, 1 Tourism manager, 1 Administrative clerk, 2 Bookings clerks, 1 Senior foreman, 2 Foremen, 3 Field rangers, 2 Gate guards, 5 Cleaners, 1 Factotum, 1 Storeman and 8 Labourers. At present 1 Foreman and 4 Labourers are employed on contract to ensure maintenance of the newly opened Whale Trail. The Working for Water Project currently has some 40 contract staff clearing alien vegetation in parts of the Nature Reserve.

The address of the Breede River Regional Office is PO Box 594, Onrus River, 7201.

The current Reserve Manager is B Swanepoel and his address is Private Bag X16, Bredasdorp, 7280.

## **SECTION 6.5 FACTORS AFFECTING THE DE HOOP NATURE RESERVE**

### **6.5a Development pressures**

#### **6.5a(i) Current extent of land transformation and encroachment on natural areas**

Good opportunities still exist for creating buffer zones around the reserve along most of the boundary except for a short section where agricultural fields occur up to the boundary fence. Initiatives to establish conservancies around the reserve are in progress and some adjacent stock farmers are considering converting to game farming.

#### **6.5a(ii) Detrimental resource use**

Excessive ground water abstraction for use within the protected area, or for external developments, can lead to both over-exploitation of the resource as well as its contamination with brack water.

Due to agricultural activities in the catchment of the Salt River, pesticide accumulation, eutrophication and siltation threaten the river system and De Hoop Wetland. Further, water abstraction from rivers within the Salt River catchment is reducing the volume and quality of run-off flowing into De Hoop wetland. Water quality and volume is monitored to check these threats (refer to section 6.6).

The eastern sector of the reserve is used periodically by Denel for testing missiles. These activities are monitored but are not considered a significant threat to the integrity of the protected area at this time.

#### **6.5a(iii) Threats due to non-sustainable activities outside the protected areas**

Oil and other marine pollution remain a constant threat to the coastal zone of this region.

### **6.5b Environmental pressures**

#### **6.5b(i) Alien organisms**

Nearly 80 alien plant species have been recorded in De Hoop Nature Reserve. Trees and shrubs are the major invasive species that invade natural fynbos in this area. Rooikrans (*Acacia cyclops*) is the greatest threat since it covers the largest area and has the potential for invading all Limestone Fynbos and Dune Fynbos. However, a seed-destroying beetle, *Melanterius servulus*, was released in the protected area in 1995 to reduce the spread of rooikrans. Port Jackson (*Acacia saligna*) is also a major invader in the valley between the Potberg and the limestone hills but good control is anticipated by the introduced fungus, *Uromykladium tepperianum*.

Other major invasive species include *Acacia pycnantha*, *A. mearnsii*, *Eucalyptus* spp., *Pinus pinaster* and *Paraserianthus lophantha*, while small infestations of *Hakea drupacea* and *Myoporum* spp. are also present. De Hoop, under the auspices of the Working for Water programme, employs about 40 people each year to remove alien plants from the protected area (refer to section 1.4f).

#### **6.5b(ii) Fire**

Most of the vegetation types in De Hoop are adapted to periodic fires. The increased probability of runaway fires during the hottest and driest period of the year (December to February) remains a management challenge since some vegetation types, such as the forest and dune thicket, ill-adapted to fire, have margins vulnerable to regular fires. In addition to threatening these vegetation types, fire can also be a threat to fire-adapted vegetation types if it does not follow a natural pattern. While the maintenance or restoration of a natural fire regime is part of the main objective of the protected area inappropriate management practices (such as too frequent burning), can lead to

irreversible changes in ecosystems. Monitoring of the use of fire in this system is conducted and is used to improve fire management (refer to section 6.6).

### **6.5c Natural disaster preparedness**

A number of supportive administrative, organisational and other associated structures are available to assist personnel in the event of a natural disaster such as a wildfire. Refer to section 1.5c(i) for further details in this regard.

### **6.5d Visitor / tourism pressures**

Visitor numbers are monitored and managed appropriately for all components of the protected area and the carrying capacity of visitors is not exceeded. Approximately 18 000 people visit the De Hoop Nature Reserve each year.

### **6.5e Number of inhabitants within De Hoop Nature Reserve**

There are approximately 80 people (staff and their families) living inside the protected area and some 2 500 farmers, their families, and staff surrounding it.

## **SECTION 6.6 MONITORING**

De Hoop Nature Reserve has a number of monitoring sites and supports a diversity of research. Physical and biological environmental variation including, water quality, faunal population growth and decline, fire management as well as vegetation changes are monitored by reserve personnel, Scientific Services for the Western Cape Nature Conservation Board and a variety of researchers from academic and research institutions around the country. Key indicators for some of the monitoring programmes in De Hoop Nature Reserve are provided below. Refer to section 1.6 for further information on broad monitoring programmes for this area.

### **6.6a Key indicators**

#### **6.6a(i) Physical environment monitoring programme**

- Standard measurements of temperature, rainfall, wind, soil moisture and relative humidity are recorded as well as slope stability and sediment transfer.
- In addition, the management of the cave systems in the protected area is strictly controlled and the rate of landward migration of the slip-face of the dune field is also monitored.

#### **6.6a(ii) Archaeological and historical sites**

- The social carrying capacity of these sites is monitored together with visitor preferences and needs through visitor surveys, monitoring visitor numbers and records of damage to the areas.

#### **6.6a(iii) Water management programme - freshwater resources**

- A number of water-dependent monitoring programmes are conducted and include an inventory of freshwater resources, natural watering points for game, and the supply and management of water for human use and river mouth movement. An intensive programme of ground water monitoring is ongoing.

- For the De Hoop Wetland, water flow and quality into the wetland, the control of alien fish species, water bird counts, as well as the collection and monitoring of pH, conductivity, macrophytic vegetation, nitrate and phosphate data over set time periods.

#### **6.6a(iv) Vegetation management programme**

- This broad programme looks at long-term changes in the vegetation using indicators such as community shift and population dynamics with the aim of developing an understanding of the plant / animal interactions.
- There is also a conservation programme for threatened plant taxa and habitats, which is coupled with the updating of plant species lists.
- More detailed monitoring includes assessing parent: seedling ratios of indicator species and conducting a floristic assessment and community structure using satellite imagery.

#### **6.6a(v) Fire management programme**

- Basic information such as burning schedules and the use of fire to eradicate alien vegetation is collected.

#### **6.6a(vi) Alien vegetation control programme**

- Alien plant eradication by unit area, indigenous vegetation recovery success, and the biological impacts of alien plants are monitored over unit time.

#### **6.6a(vii) Fauna management programme**

- This programme involves regular surveys of selected fauna such as the monitoring of the breeding success of the Cape vulture (*Gyps coprotheres*) and the African black oystercatcher (*Haematopus moquini*), population dynamics of the Cape mountain zebra (*Equus zebra zebra*), and studies on the chacma baboon (*Papio ursinus*). An intensive monitoring of fish populations in the marine reserve is also ongoing.
- A count of the larger ungulates is undertaken regularly and recently re-established ungulates are monitored relatively intensively.

### **6.6b Administrative arrangements for monitoring**

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within the De Hoop Nature Reserve. In addition to ongoing baseline data collection and collation by the Western Cape Nature Conservation Board, as well as a number of country-wide and region-wide projects, including the Bird-, Frog-, Bat- and *Protea* Atlassing Projects (refer to section 1.6), De Hoop Nature Reserve is host to a number of diverse projects which are investigating, amongst other, baboon ecology and marine fish ecology. The South African Museum, as well as a variety of local and international universities and research institutes have formal administrative links with the Western Cape Nature Conservation Board and all data, as well as published and unpublished reports, are made available for reference purposes and for inclusion in the State of Biodiversity database.

Refer to section 1.6b(i) for information with regard to overarching administrative arrangements for monitoring of programmes within protected areas.

### **6.6c Results of previous reporting**

Research within the De Hoop Nature Reserve has contributed significantly over the decades to improved management of the natural resources and biodiversity of this unique area. Baseline data using LandSat imagery to monitor vegetation changes (a multi-institutional project involving the Agricultural Research Council, the Institute for Soil, Climate and Water as well as the WCNCB) have contributed to success of intensive alien-clearing programmes over the past decade, while specific projects (WCNCB in association with the University of Cape Town) investigating ecological aspects of the Rare endemic Bontebok (*Damaliscus dorcas dorcas*), have contributed to the survival and successful re-introduction of this once highly-threatened antelope.

Various long-term studies on troops of Chacma baboon (*Papio cynocephalus ursinus*) - including behavioural ecology; parental investment; thermo-regulation; and, vocalisation and communication in baboon communities, are being conducted as part of a large, multi-institutional project with contributors including the Western Cape Nature Conservation Board, University of Liverpool (United Kingdom), University of Natal (South Africa) and the University of Leithbridge (Canada). Data from these studies, as well as from other projects (refer to sections 6.6a & 6.6b), inform management- and research priorities for the De Hoop Nature Reserve.

Refer to section 1.6c for further information in this regard.

## **CHAPTER 7 THE BOOSMANSBOS WILDERNESS AREA**

The Boosmansbos Wilderness Area, one of eight protected areas selected to represent the Cape Floral Region for World Heritage Status, is situated about 250 km east of Cape Town and 70 km from the southern Cape Indian Ocean seaboard. Boosmansbos is located in the Langeberg Mountains in the central region of the Cape Fold Belt, north of northeast of De Hoop Nature Reserve (refer to Figures 1.1.1 & 1.1.2).

Boosmansbos<sup>195</sup> is an area of spectacular mountain fynbos set in a pristine and often breathtaking landscape. Representing the Langeberg Phytogeographic Centre as well as the Southern Langeberg Mountain Fynbos Complex Broad Habitat Unit (BHU), the Boosmansbos Wilderness Area contains a rich diversity of fynbos flora with a high number of locally endemic plant species. The range of topographical features and altitudinal gradients provide habitats for an array of vegetation types including pockets of Afromontane forest, the latter being significant owing to the limited distribution of forest in the Cape Floral Region.

Justification is given for inclusion of the Boosmansbos Wilderness Area in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is provided.

### **SECTION 7.1 IDENTIFICATION OF THE BOOSMANSBOS WILDERNESS AREA**

#### **7.1a Country**

The Republic of South Africa

#### **7.1b Province**

Western Cape

#### **7.1c Name of property**

Boosmansbos Wilderness Area

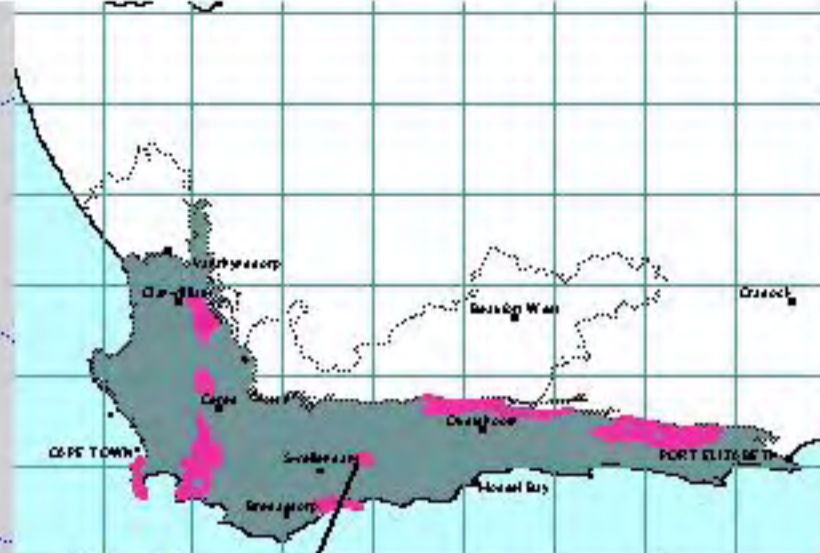
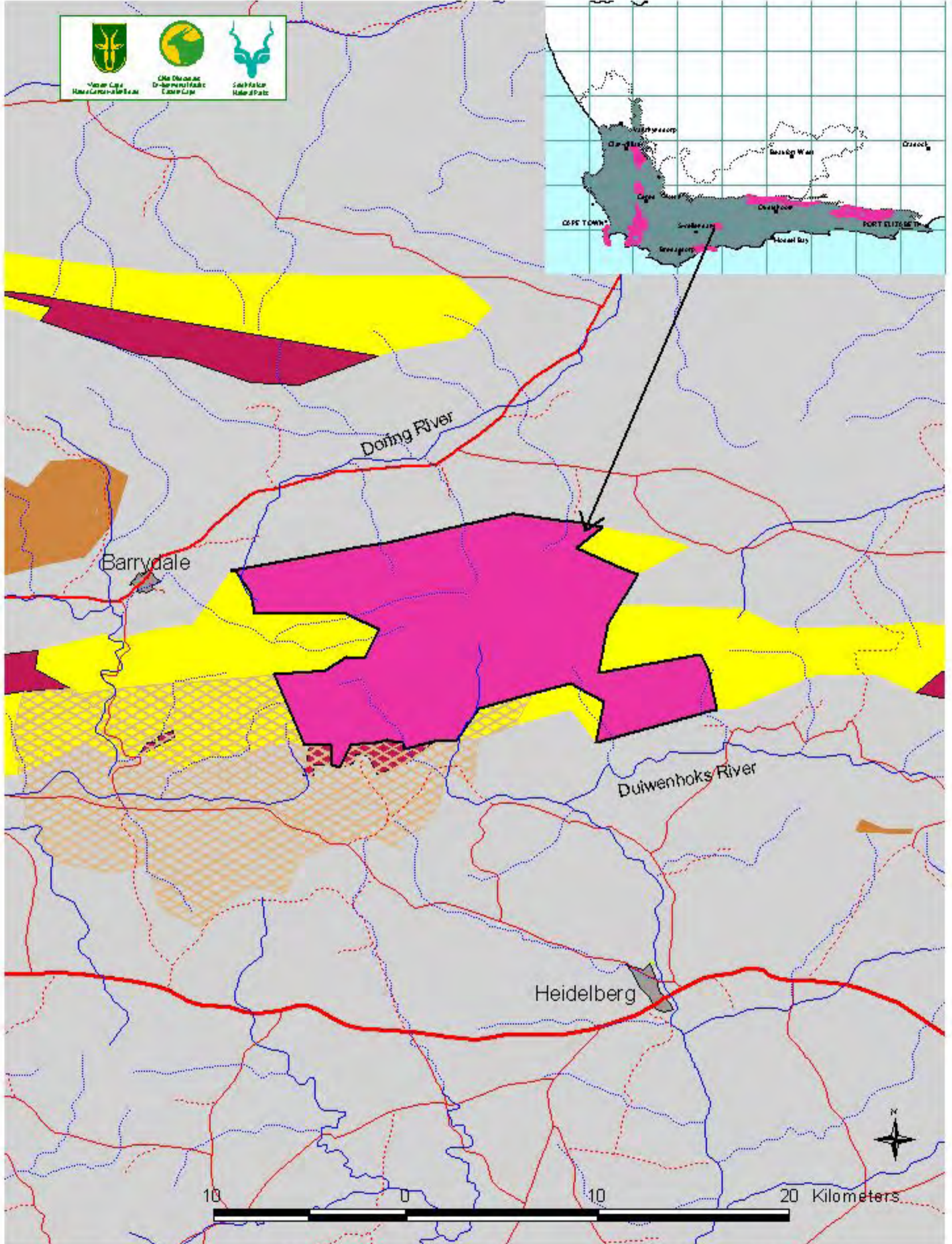
#### **7.1d Location on map and identification of geographical co-ordinates**

Maps of the Boosmansbos Wilderness Area are provided in Figures 7.1 and 1.1.1 and geographic co-ordinates are listed in Table 1.1.1. Boosmansbos Wilderness Area is situated in the Langeberg Mountain Range, straddling the border between the Swellendam and Heidelberg magisterial districts of the Western Cape Province.

Some 10 km distant from the nearest town (Barrydale), the Wilderness Area is a component of the greater Langeberg East Conservation Area (Table 7.1).

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<sup>195</sup> Boosmansbos, literally translated as “wicked or angry man’s forest”, was named after a hermit who lived in the forests during the early 19<sup>th</sup> century.



LEGEND

Rivers	Local Authority Nature Reserves	Proposed conservation areas
Roads	Conservation areas	SA National Heritage Sites
Dams	Provincial Nature Reserves	Mountain Catchment Areas
Towns	Private Nature Reserves	Boosmansbos Wilderness Area

FIGURE 7.1

Boosmansbos Wilderness Area and surrounding reserves

## 7.1e Maps and plans showing the boundaries of the Boosmansbos Wilderness Area

Figure 1.1.1 yields an overall view of the location of this protected area in relation to the other protected areas and to the Cape Floral Region boundary. Figure 7.1 provides a closer view, while Appendix 1 maps show the area at a scale of 1:500 000 and its topography at a scale of 1:50 000.

The Boosmansbos area forms the central part of a much greater conservation-related area known as the Langeberg East Conservation Area (refer to Figure 1.3.6), which covers the Langeberg Mountain Range between the Tradouw River in the west and the Gouritz River in the east. The protected area and reserves that make up the Langeberg East Conservation Area are listed in Table 7.1 below.

Table 7.1 Areas and reserves comprising the Langeberg East Conservation Area.

Boosmansbos Wilderness Area	15 000 ha	Area for inscription
Grootvadersbosch Nature Reserve	1 930 ha	Reserve
Garcia State Forest	12 423 ha	Reserve
Spioenkop State Forest	128 ha	Reserve
Paardeberg State Forest	563 ha	Reserve
Witelsberg State Forest	1 125 ha	Reserve
Private catchment land	40 931 ha	Reserve
<b>TOTAL AREA</b>	<b>72 100 ha</b>	

The boundaries are shown on Government Gazette No. 7824 of October 1981. The Langeberg East Mountain Catchment Area is orientated along an east-west axis over a distance of about 90 km. The average north / south "breadth" of the catchment is about 10 km.

The Boosmansbos Wilderness Area lies in the Heidelberg, Riversdale, and Ladismith Magisterial Districts as well as the South Cape and Overberg District Municipalities.

## 7.1f Area of the Boosmansbos Wilderness Area

Boosmansbos Wilderness Area comprises one protected area of some 15 000 ha with over 55 000 ha of surrounding and adjacent reserves (refer to Figures 7.1 & 1.3.6; Tables 7.1 & 1.1.1).

## SECTION 7.2 JUSTIFICATION FOR INSCRIPTION

### 7.2a Statement of significance

A unique feature of Boosmansbos Wilderness Area is its location in the Langeberg mountain ranges of the Cape Fold Belt (refer to Figure 1.1.2). No other nominated protected area occurs in this southern range and it is thus the only nominated protected area representing the Langeberg Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4). Habitats range from moist, high altitude fynbos to the arid fynbos of the northern slopes. Hence a number of plant species are conserved here that are not represented in the other protected areas. Forest, which is of very limited distribution in the Cape, is well represented in this Wilderness Area. In terms of Broad Habitat Units, forest areas in Boosmansbos are categorised as Swellendam Afromontane Forest (refer to Table 1.3.2; Figure 1.3.5), while the dominant habitat type is Southern Langeberg Mountain Fynbos Complex, which supports a rich diversity of species, including local endemics and naturally rare species.



At just under 15 000 ha (the smallest of all eight protected areas described in this nomination) Boosmansbos Wilderness Area more than compensates for its smaller size with a high diversity of habitats, fauna and flora.

Over 1 200 plant species have been recorded in the Southern Langeberg with 9% of these recorded as having threatened plant status. Unique Langeberg endemic species and even families, such as the monotaxic *Geissoloma marginata* are conserved within fynbos vegetation in this area while the forests preserve magnificent specimens of the Vulnerable stinkwood (*Ocotea bullata*).

Analyses of data sets, for selected plant taxa, Proteaceae and threatened plant species, consistently showed Boosmansbos Wilderness Area to be within one of the biodiversity "hotspots" of the Cape Floral Region (Lombard, 2000; Appendix 4).

To date, one endemic butterfly species, three threatened fish species, an endemic frog species, a locally endemic reptile (the Knysna dwarf chameleon (*Bradypodion damaranum*)) and eight threatened bird species have been recorded within the Wilderness Area, while nine threatened mammal species occur in the broader catchment area. Particularly rich in bird life, over 180 bird species have been recorded including the Rare striped flufftail (*Sarothrura affinis*).

## 7.2b Comparative analysis

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

## 7.2c Authenticity / Integrity

The Boosmansbos Wilderness Area is a proclaimed Wilderness Area, managed by the Western Cape Nature Conservation Board. These two factors impart high levels of legal protection, and the pristine wilderness management philosophy ensures that management is geared toward the conservation of biodiversity by encouraging the operation of natural processes (refer to sections 1.4a(iii), 1.4b(iii) & 1.4c(iv)).

Threats to the Boosmansbos Wilderness Area are few. It is well buffered by adjacent reserves to the east and west (Figure 7.1), as well as being bordered in the north by karoo vegetation (including several private conservation initiatives adjacent to the catchment in the north). Generally, arid karoo is not suited to intense development, posing no potential impacts to the protected area. Furthermore, the area is mountainous, which further reduces the likelihood of development or transformation.

## 7.2d Criteria under which inscription is proposed

The Boosmansbos Wilderness Area is being nominated as one of eight protected areas on the basis of two criteria.

<p><b>CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution</b></p>
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A central component of the Langeberg East Conservation Area (refer to Table 7.1), the area covered by this medium-sized Wilderness Area alone (ca. 15 000 ha) is sufficient to support significant physical and biological processes important in the maintenance of natural populations. This ensures the maintenance of evolutionary pathways and processes along ecological corridors (particularly along an east-west axis) for species migration (*i.e.*, gene flow, dispersal, pollination, *etc.*). Augmented by the surrounding components of the Langeberg East Conservation Area, a total area of over 70 000 ha, the combined size of this conservation-orientated area provides considerable security for essential natural processes such as natural fire and water flow regimes.

Identified as a component of one of three mega-reserves for the Cape Floral Region (Cowling *et al.*, 1999a; Appendix 5), Boosmansbos is further considered to be one of the more secure sites for conservation of biological and ecological processes during climate change, allowing for altitudinal migration of species (refer to section 1.5b(iii)).

**CRITERION 44 (a) (iv): The most important and significant natural habitats for in situ conservation of biological diversity**

Given the unique location of Boosmansbos Wilderness Area, several habitats are present here that are not represented elsewhere in the Cape Floral Region. Of note is the transition from high altitude mountain fynbos to dry fynbos on the north aspects of the Langeberg Mountains mentioned above. These habitats provide for a range of endemic and threatened plant and animals species.

Existing plant records show that 1 228 species have been recorded in the Southern Langeberg, of which 111 are listed as Red Data Book species. Species richness analyses placed Boosmansbos as one of the most important sites for conservation of plant diversity, while analysis of selected species of Proteaceae showed this Wilderness area to fall within the second richest area for these species in the Cape Floral Region (Lombard, 2000; Appendix 4).

The unique habitats within Boosmansbos are reflected in the presence of endemics such as the Cape ghost frog (*Heleophryne purcelli orientalis*) and a subspecies of the forest emperor butterfly (*Charaxes xiphares occidentalis*) both of which survive in the forest patches. The distinctive riverine habitats within this mountain range conserve three species of threatened fish.

#### **7.2d(i) Cultural and aesthetic**

Set in the heart of the southern Cape Fold Mountains, and containing a number of San rock-art sites, this beautiful area - with its tranquil Cape forests and awe-inspiring scenery - is a small gem in the constellation of protected areas, from a cultural, aesthetic and environmental perspective.

## **SECTION 7.3 DESCRIPTION**

### **7.3a Description of the Boosmansbos Wilderness Area**

#### **7.3a(i) Physical features**

A part of the Cape Fold Belt, the Langeberg is an east/west trending mountain range with northward-verging folds (refer to Figure 1.1.2). The core of folding in the Langeberg is in the region of the Tradouw Pass. A transect over the Langeberg reveals the peculiar local geology, the result of folding, faulting and consequent positioning of strata and fault valleys. These disturbances have exposed a range of rocks including sandstones, shales, conglomerates, and mudstones. Most soils in the area are derived from Table Mountain sandstone but there are isolated pockets of Bokkeveld shales on which the scarce indigenous forests are found.

The highest peak is at Grootberg (1 637 m) and two rivers, originating in the Boosmansbos Wilderness Area, the Duiwenhoks River and its tributary, the Noukrans River, flow to the coast where they emerge at Puntjie, near Vermaaklikheid.

#### **7.3a(ii) Climate**

The Langeberg Mountains of the southern Cape Fold Belt lie in the transitional zone where winter rainfall is replaced by rainfall all year round. Precipitation occurs mainly as rainfall throughout the year with peaks in autumn (April) and spring (October). Fogs and mists play a role in precipitation

and the lowest mean annual precipitation is about 800 mm in the southern parts. With an increase in altitude, this value increases to almost 1 300 mm. With a decrease in altitude on the north slopes, bordering the Little Karoo, a steep rainfall gradient exists, with the lower slopes receiving less than 300 mm mean annual precipitation. Snow occurs in August, September, October and occasionally November (McDonald, 1993a, b and c).

Prevailing winds in summer are from the southeast or southwest and winter rains are usually brought in by northwesterly or southwesterly winds. February is the warmest month, while August is the coolest month on average.

### 7.3a(iii) Vegetation, habitats and plant species

The only protected area representing the Langeberg Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4), Boosmansbos Wilderness Area is important in that it has elements of very wet mountain fynbos and dry fynbos and also areas of forest (refer to Figure 1.3.3). The cool south slopes of the mountain range are moist and may be likened to an extensive seepage zone supporting eight shrubland communities. The most striking feature of the fynbos is the division between the vegetation of the southern and northern sides of the range. *Erica hispidula*, a common dominant on the southern slopes is almost completely absent on the north slopes. Although a number of other species transgress the south-north boundary (for example *Leucadendron eucalyptifolium*), it is clear that a definite floristic distinction can be made between shrublands on the south and north sides of the range. A decrease in plant cover and importance of the Restionaceae and other fynbos forms, and an increase in the number and variety of succulents on the northern aspects, indicate the transition to dry fynbos, which extends beyond the Boosmansbos boundary and into the start of Succulent Karoo vegetation.

The different types of fynbos are named according to the dominant component: erica-rich fynbos occurs on wet, upper south slopes, daisy-dominated fynbos on drier northern slopes and on wetter, shale-derived soils, restios prevail on winter water-logged and summer arid fynbos slopes, and proteas preside on richer colluvial, sand-stone derived soils. A different form of fynbos is ecotonal to forest where rock outcrops, gorges and watercourses protect the vegetation from fires (Campbell, 1985).

The dominant Broad Habitat Unit, occupying 95% of the property, is the Southern Langeberg Mountain Fynbos Complex (9.6% of the BHU total). In addition, the Swellendam Afromontane Forest (36%) is classified as wet high forest, present as small remnants in the deep, south facing, cool and moist valleys (refer to Table 1.3.2; Figure 1.3.5).

Of 1 228 species recorded in the Southern Langeberg (McDonald, 1999), 111 are listed in the Red Data List of southern African plants (Hilton-Taylor, 1996) with at least 20 of these threatened species recorded in Boosmansbos. Red Data Book listed Proteaceae family species include *Protea decurrens* (Vulnerable), *Leucospermum muirii* (Rare) and the Rare Langeberg endemics *Mimetes splendidus* and *Spatalla nubicola*. Other Red Data book listed species include the unique Langeberg endemic *Geissoloma marginata* (Rare), the only living representative of the family Geissolomataceae. The heath-like *Linconia alopecuroidea* and water-loving *Penaea dahlgrenii* are two Langeberg endemics, the former is a member of a near endemic family (Bruniaceae) while the latter belongs to one of five Cape Floral Region endemic families (Peneaceae).

The forest areas conserve a diversity of trees, many of which are highly sought after for their good quality timber. These include the Red Data listed stinkwood (*Ocotea bullata*) (Vulnerable) and the "real" yellowwood (*Podocarpus latifolius*), the latter species having afro-tropical linkages as do the Cape beech (*Rapanea melanophloeos*), the ironwood (*Olea capensis*) and the African holly (*Ilex mitis*), all present in the forests of the wilderness area. Cape Floral Region endemic tree species found in the forests of this protected area include the Cape saffron (*Cassine schinoides*).

In an analysis of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records, the Boosmansbos Wilderness Area was identified as one of the most important species-rich "hotspots" (Lombard, 2000; Appendix 4). In a separate analysis, using point localities for 364 Proteaceae species comprising 183 322 records, the Boosmansbos Wilderness Area again fell in the second most species-rich part of the Cape Floral Region (Appendix 4).

This protected area, also fell within the top 25% of the minimum set of Quarter Degree Squares needed to conserve all species in the dataset and all threatened species extracted from the same dataset (Appendix 4).

### 7.3a(iv) Fauna

Nine threatened mammal species occur in the broader catchment area. These include the southern Cape endemic long-tailed forest shrew (*Mysorex longicaudatus*)<sup>196</sup>, the Vulnerable white-tailed mouse (*Mystromys albicaudatus*) and the Vulnerable African wild cat (*Felis lybica*), which are found within Boosmansbos, while the secretive Vulnerable aardvark (*Orycteropus afer*) and gentle Rare aardwolf (*Proteles cristatus*) are known to occur in areas adjacent to the Wilderness Area. Seventeen threatened bird species include the Rare cuckoo hawk (*Aviceda cuculoides*), Rare Peregrine falcon (*Falco peregrinus*) and Rare Knysna warbler (*Bradypterus sylvaticus*) while three threatened fish species, the Endangered Burchell's redfin (*Pseudobarbus burchelli*), Endangered slender redfin (*Pseudobarbus tenuis*) and Vulnerable whitefish (*Barbus andrewi*), occur in the protected area. The Knysna dwarf chameleon (*Bradypodion damaranum*) is one of the endemic reptiles recorded to date in this area.

No threatened amphibian species have been recorded to date for the area, although the Cape ghost frog (*Heleophryne purcelli orientalis*) is endemic to Grootvadersbosch and outlying forest patches. A subspecies of forest emperor butterfly<sup>197</sup> (*Charaxes xiphares occidentalis*) is endemic to Grootvadersbosch and it is likely that *Colophon* beetle species (including *Colophon barnardii*, *C. thunbergii*, and *C. izardii*) are present on high altitude peaks although this is as yet unconfirmed.

### 7.3b History and development of the Boosmansbos Wilderness Area

Evidence of occupation dating back about 250 000 years before present can be found in the Boosmansbos property. These pre-colonial occupants, the San and Khoi, occupied mainly the low-lying areas of the Langeberg and consequently had little impact on the upland vegetation. At least four San rock art sites exist within the protected area and the surrounding reserves.

A brief overview of relevant events at the Boosmansbos Wilderness Area is given in Table 7.2.

Table 7.2 A summary of major events in the history of the Boosmansbos Wilderness Area.

Year / period	Description of historical incident or occasion
1723	The land with the forest was called Melkhoutskraal, and was assigned to Roelof Oelofse.
End of 18th century	Farmers occupied the lower-lying foothills and valley lands and used the mountains for grazing.
1978	Boosmansbos proclaimed a Wilderness Area in terms of the Forest Act.
1986	Boosmansbos placed under the control of what is now the Western Cape Nature Conservation Board.

### 7.3c The most recent records of the Boosmansbos Wilderness Area

Refer to section 1.3c for information in this regard.

### 7.3d Present state of conservation

The Boosmansbos protected area has legal protection with Wilderness Area status (refer to section 1.4b(iii)). The property is managed as primitive wilderness in which natural processes persist, and

<sup>196</sup> Although the overall Red Data Book status of this species is listed as Indeterminate, the Langeberg Mountains population of this species may be Vulnerable (Apps, 2000).

<sup>197</sup> Declared a protected wild animal under the Cape Provincial Ordinance No. 19 of 1974.

human numbers into the area are restricted. Only activities that are compatible with wilderness concepts are permitted and monitoring of the impacts of these activities is conducted by staff at the properties. Fires are not allowed and users must remove all refuse.

As indicated in Figures 7.1 and 1.3.6, the Boosmansbos Wilderness Area is well surrounded by reserves, including Mountain Catchment Areas and State Forests.

### **7.3e Presentation and promotion of the Boosmansbos Wilderness Area**

Refer to Volume 3 for material relating to the presentation and promotion of the Boosmansbos Wilderness Area.

## **SECTION 7.4 MANAGEMENT**

### **7.4a Ownership**

Ownership of the core protected area of the Boosmansbos Wilderness Area lies with the State and the area is designated in law as a Wilderness Area (refer to section 1.4a(iii)).

### **7.4b Legal status**

The protected area was one of the first to be demarcated as a State Forest by proclamation in 1896 (refer to section 1.4c(ix))<sup>198</sup> and as a Wilderness Area in 1978 in terms of what is now the National Forests Act. The adjacent private mountainous land was proclaimed a Mountain Catchment Area in terms of the Mountain Catchment Areas Act (refer to section 1.4c(vi)) in October 1981 in Government Gazette No. 7824.

### **7.4c Protective measures and means of implementing them**

An array of legislation protects this Wilderness Area, providing the basis for sustainable management of natural and cultural resources. This legislation includes national level legislation such as the Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), the Environmental Conservation Act (section 1.4c(iv)), the National Water Act (section 1.4c(v)), the Mountain Catchment Areas Act (section 1.4c(vi)), the Conservation of Agricultural Resources Act (section 1.4c(vii)), the National Heritage Resources Act (section 1.4c(viii)) and the National Forests Act (section 1.4c(ix)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

The Cape Nature and Environmental Conservation Ordinance, 1974, recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000, also applies in this protected area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Western Cape Nature Conservation Board, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), is tasked with implementation and enforcement of protective legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

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<sup>198</sup> The reader is reminded that more than one legal status may apply to such areas. Wilderness Areas are proclaimed in terms of the National Forests Act (refer to section 1.4c(ix)) as are State Forests.

#### **7.4d Agency with management authority**

The agency with management authority for the Boosmansbos Wilderness Area is the Provincial Western Cape Nature Conservation Board.

For further details refer to section 1.4d.

#### **7.4e Level at which management is exercised**

Boosmansbos Wilderness Area is managed by a Reserve Manager, with support from Regional- and Area Managers of the Western Cape Nature Conservation Board. Refer to sections 1.4e and 7.4k for further detail in this regard.

#### **7.4f Agreed plans relating to the Boosmansbos Wilderness Area**

As shown in section 7.1e (refer to Table 7.1) a series of reserves<sup>199</sup> and a substantial piece of demarcated private catchment land, together with Boosmansbos Wilderness Area, comprise the Langeberg East Conservation Area. These reserves and the privately owned catchment land all have valid legal status, and as such they serve to safeguard the Boosmansbos Wilderness Area.

A recently drafted management plan for the Langeberg East Conservation Area provides a comprehensive summary of baseline data and overarching plans for the broader Conservation Area of which Boosmansbos is an integral component.

Refer to section 1.4f for further details of overarching plans, which affect this area.

#### **7.4g Sources and levels of finance**

Refer to section 1.4g for information in this regard.

#### **7.4h Sources of expertise and training**

Refer to section 1.4h for information in this regard.

#### **7.4i Visitor facilities and statistics of the Boosmansbos Wilderness Area**

Since this is a wilderness area, paths are unmarked, with overnight huts providing rudimentary shelter. A maximum of 12 people per day are permitted in the area and hikers may choose their own routes from 64 km of paths and trails.

Approximately 1 130 visitors enter the Boosmansbos Wilderness Area each year, with a further 1 250 visiting the Grootvadersbosch Nature Reserve (refer to Table 7.1) where a small camp-site offers further accommodation for visitors to the area.

#### **7.4j Boosmansbos Wilderness Area management plans and statement of objectives**

For an overview on management plans for the Western Cape Nature Conservation Board, refer to section 1.4j and Appendix 2. The objectives of Boosmansbos Wilderness Area (as a key component of the Langeberg East Conservation Area) aim to allow natural processes to operate without hindrance by humans. To a great extent, this is achieved by the inaccessibility of the

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<sup>199</sup> These reserves, contiguous with Boosmansbos, are proclaimed as either Provincial Nature Reserves (Grootvadersbosch) or as State Forests (Garcia, Spioenkop, Paardeberg, Witelsberg).

inhospitable terrain of this protected area. These objectives are enhanced by the management focus on promoting processes such as viable population size and breeding genetics of key species.

**Objectives aim to:**

- manage and conserve the protected area as an integrated system for the maintenance of biodiversity and ecological processes. This implies the maintenance of a dynamic system by limiting human induced impacts, as well as the maintenance of an optimal sustained flow of water of the highest quality possible;
- manage and regulate the private mountain catchment area in order to ensure the sustainable utilisation of natural resources;
- conserve the natural biodiversity of the region *i.e.* species and their habitats, breeding populations, and specificity of these gene pools;
- allow natural, physical and ecological processes to operate without interference except under imperative circumstances;
- present various environmental education courses. The “Leave No Trace” ethic of outdoor wilderness awareness will form the basis of all such activities;
- offer an interpretation service to the public, which highlights biotic and abiotic features, recreational opportunities and management actions;
- provide a broad spectrum of outdoor recreation opportunities associated with natural areas, such as long distance back-packing, free rock-climbing, primitive camping, observation of nature, photography, *etc.*, in natural areas;
- monitor and manage erosion and impacts caused by human activities in the Wilderness Area; and,
- conserve all sites and objects of palaeontological, archaeological and historical value on state property, as well as to promote their conservation on private property.

#### **7.4k Staffing levels for the Boosmansbos Wilderness Area**

A Reserve Manager is located within Boosmansbos Wilderness Area and is supported by the Langeberg Area Manager, Henry Africa, and a Regional Manager, Duncan Heard, who are both stationed in the Breede River Regional Office, one of four such offices in the Western Cape Province (refer to Figure 1.4.1).

On-site staff at the Boosmansbos Wilderness Area include 2 Nature Conservators, 1 Foreman, 2 Field Rangers and 4 Labourers.

Further, 1 Contractor with a team of 19 Labourers is employed on contract to undertake alien plant clearing for the Working for Water Project in Boosmansbos and the surrounding area.

The address of the Breede River Regional Office is PO Box 594, Onrus River, 7201.

The current manager is M. Floris and his address is PO Box 19, Heidelberg, 6665.

## **SECTION 7.5 FACTORS AFFECTING THE PROPERTY**

### **7.5a Development pressures**

#### **7.5a(i) Current extent of land transformation and encroachment on natural areas**

Agricultural development around the Langeberg East Conservation Area provides no direct threat to the Boosmansbos Wilderness Area although some human-induced threats to the maintenance of biodiversity of the broader area nonetheless remain a challenge for the Wilderness Area

management. These include the control of domestic animals and livestock, fire-management and ongoing control of invasive forestry tree species.

#### **7.5a(ii) Illegal resource use**

Illegal use or destruction of natural resources in the Wilderness Area include the hunting of wild animals by free-ranging domestic dogs; illegal grazing by neighbouring landowners' livestock; and, illegal harvesting of wild flowers. All of these management challenges are monitored by reserve staff, and a good degree of control has been gained through increasing awareness of local landowners.

### **7.5b Environmental pressures**

#### **7.5b(i) Alien organisms**

Management initiatives since 1990 have succeeded in significantly reducing infestations of black wattle (*Acacia mearnsii*) in riverine and seepage areas, as well as cluster pine (*Pinus pinaster*) and silky hakea (*Hakea sericea*) on the mountain slopes. Prior to the Working for Water Project (refer to section 1.4f), few attempts were made to control the invasive alien plants on adjacent private land (the primary source of alien seeds dispersing into the Wilderness Area and surrounding reserves). While this matter is being readily addressed through the application of this project, there remain (outside the Wilderness Area) a number of stands of invasive alien plants e.g. Kleinberg (*Pinus pinaster*), Bronze Grove (*Acacia mearnsii* and *Sesbania punicea*), Brandrivier (*Pinus pinaster*), Assegaaibosch (*Pinus pinaster*), which are a continuing source of wind-blown seeds penetrating the Wilderness Area. In particular, seeds blow into the inaccessible Noukrans Gorge and seedlings are difficult to eradicate.

To date, none of the alien plant species that have invaded Boosmansbos Wilderness Area has been fully eradicated and, owing to their long-lived seed banks, species such as *Acacia mearnsii* and *Pinus pinaster* will take a number of years before they may be completely eradicated. The ongoing success of the alien plant eradication is becoming more and more evident as cleared areas regenerate with indigenous plant species.

#### **7.5b(ii) Fire**

Fires started by humans that occur either too frequently and/or during winter and spring, with concomitant modification of the disturbance regime of the natural vegetation, are managed through ongoing negotiation with surrounding landowners.

#### **7.5b(iii) Hybridisation of natural species**

Interbreeding between domestic cats and the Vulnerable African wild cat (*Felis lybica*) is problematic in this area. Reserve management controls this problem through continued eradication of feral domestic cats in the Wilderness Area.

#### **7.5b(iv) Climate change**

While Boosmansbos Wilderness Area is considered to be one of the most secure sites (for this nomination) with respect to projected climate change scenarios (refer to section 1.5b(iii)), the medium size of this Wilderness Area (ca 15 000 ha) and resultant population discontinuities could have negative repercussions for biodiversity in the long-term. Fortunately, the Langeberg East Conservation Area (ca 72 000 ha) is considered to be large enough to support all major ecological processes as well as viable populations of plant species and all wildlife species (refer to Table 1.2.4), including larger mammal species (such as the Vulnerable Cape mountain zebra (*Equus zebra zebra*)), which may be re-established here in the near future. The leopard (*Panthera pardus*) requires the largest area in terms of home range and territory size, and fortunately much of the surrounding private mountain catchment area still provides suitable habitat for these secretive Rare beasts. The size of the Boosmansbos Wilderness Area, together with the protection provided by



the other components of the Langeberg East Conservation Area, is considered to be capable of facilitating shifts in species' distribution in response to the projected effects of climatic change.

### **7.5c Natural disaster preparedness**

A number of supportive administrative, organisational and other associated structures are available to assist personnel in the event of a natural disaster such as a wildfire. Refer to section 1.5c(i) for further details in this regard.

### **7.5d Visitor / tourism pressures**

The number of visitors to the Wilderness Area is limited to groups of 12 or smaller with a maximum of 12 persons allowed in the area at any one time. This retains the character of the Wilderness Area and significantly limits visitor impacts on the area. Visitors are not allowed to light any fires and are required to remove all refuse from the area.

### **7.5e Number of inhabitants within the Boosmansbos Wilderness Area**

While there are no residents in the Boosmansbos Wilderness Area, 17 people, including conservation personnel and their families, are resident in the adjacent Grootvadersbosch Nature Reserve. Approximately 840 people occupy the surrounding farms and 300 people live in the Grootvadersbosch Conservancy.

## **SECTION 7.6 MONITORING**

Details of monitoring conducted by the Western Cape Nature Conservation Board have been provided in section 1.6. In addition to national programmes outlined in section 1.6, such as the *Protea* Atlas, the Frog Atlas, Bat Atlas, Nest Records and the Birds in Reserves Project, there are a number of specific monitoring programmes conducted in the Boosmansbos Wilderness Area. Below is a selection of the key indicators used for monitoring some of the ongoing projects in this protected area.

### **7.6a Key Indicators**

#### **7.6a(i) Water catchment monitoring programme**

- monitoring the quality and volume of water leaving the catchment;

#### **7.6a(ii) Fire monitoring programme**

- monitoring frequency, season and extent of fires within the protected area;

#### **7.6a(iii) Alien vegetation monitoring programme**

- mapping distribution and density of alien invasive plants;

#### **7.6a(iv) Monitoring of threatened taxa**

- gathering baseline data on the distribution and status of all populations of threatened plant species; and,
- determining which Red Data Book, threatened or rare vertebrate species occur in the area and to compile a species list of indigenous mammals, birds, reptiles, amphibians, fish, and invertebrates.

### **7.6a(v) Heritage site monitoring programme**

- mapping and cataloguing archaeological, palaeontological and historical sites to record their status, preservation and to draw up a statement of their significance.

### **7.6b Administrative arrangements for monitoring**

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within the Boosmansbos Wilderness Area. Presently, several wide-reaching research programmes, including the Bird-, Frog-, Bat- and *Protea* Atlassing Projects (refer to section 1.6), are investigating select aspects of the biodiversity of the Boosmansbos, as these relate to the broader biodiversity of the Cape Floral Region and southern Africa. A joint project between the Agricultural Research Council and the University of Natal, investigating relationships between insect- and plant species-richness, is also ongoing in the Boosmansbos Wilderness Area. All data, published and unpublished reports are made available to the Western Cape Nature Conservation Board for reference purposes and for inclusion in the State of Biodiversity database.

Refer to section 1.6b(i) for information with regard to overarching administrative arrangements for monitoring of programmes within protected areas.

### **7.6c Results of previous reporting**

A number of research initiatives have been undertaken within the Langeberg East Conservation Area, many of which have included research within the Boosmansbos Wilderness Area. Outputs from these include a number of articles on vegetation and environmental relationships within the southern Langeberg (e.g. McDonald, 1993a-c; McDonald, 1996) as well as from a multi-disciplinary project examining aspects of relationships between invertebrate species-richness and plant species-richness (e.g. Wright & Samways, 1998). Information from these studies, as well as from other projects (refer to sections 7.6a & 7.6b), inform management- and research priorities for the Boosmansbos Wilderness Area.

Refer to section 1.6c for further information in this regard.

## **CHAPTER 8 THE SWARTBERG COMPLEX**

The Swartberg Complex is one of eight protected areas selected to represent the Cape Floral Region for World Heritage Status. The Swartberg Complex is located in the mountain range of the east/west trending Cape Fold Belt, and is bordered to the north and the south by karoo vegetation (refer to Figures 1.1.1 & 1.1.2).

The Swartberg (or “black mountain”) is an area of great habitat diversity. It is the only protected area in this nomination to conserve the Karoo Mountain Phytogeographic Centre. The vegetation includes significant elements of the Fynbos biome as well as notable transition zones between the Fynbos biome and the Succulent- and Nama-Karoo biomes.

Relatively unspoilt, with low levels of invasion by alien plant and animal species, this area abuts on arid areas to the north (Central Karoo) and south (Little Karoo) and natural fires are uncommon. The vast land area includes steep altitudinal gradients. Both the large size and varied topography of the Swartberg Complex offer significant protection from the projected effects of global climate change.

Justification is given for the inclusion of the Swartberg Complex in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is given.

### **SECTION 8.1 IDENTIFICATION OF THE SWARTBERG COMPLEX**

#### **8.1a Country**

The Republic of South Africa

#### **8.1b Province**

Western Cape

#### **8.1c Name of property**

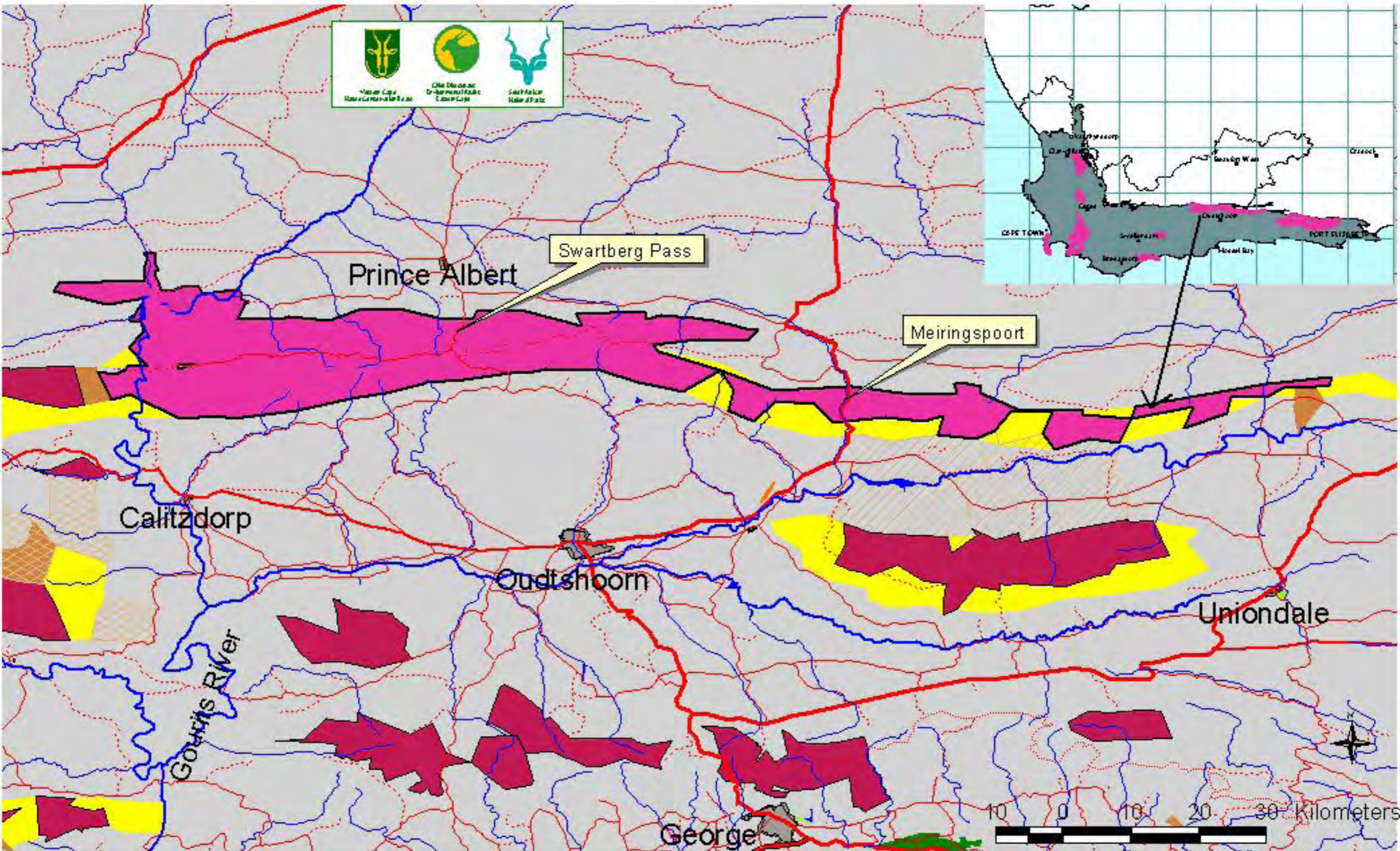
Swartberg Complex

#### **8.1d Location on map and identification of geographical co-ordinates**

The Swartberg Complex lies in the central region of the Swartberg Mountains over a length in excess of 140 km. It is situated about 8 km from Prince Albert in the north and 33 km from Oudtshoorn in the south (Figure 8.1). Exact geographical co-ordinates are listed in Table 1.1.1. The Complex comprises three component areas in a linear east / west orientation in the northeastern part of the Cape Floral Region (refer to Figures 8.1 & 1.1.1). These are Groot Swartberg, Swartberg East and Gamkapoort.

Gamkapoort forms the western limit of the Swartberg Complex where it borders on the Towerkop Nature Reserve in the west. The Groot Swartberg extends from Gamkapoort to Swartberg East.

The Swartberg Complex stretches across the boundaries of the Prince Albert, Laingsberg, Oudtshoorn, and Calitzdorp Magisterial Districts; the Central Karoo District Municipality; and, the South Cape District Municipality.



LEGEND

- |        |                                 |                          |
|--------|---------------------------------|--------------------------|
| Rivers | Local Authority Nature reserves | Proposed conservancies   |
| Roads  | Conservancies                   | SA National Parks        |
| Dams   | Provincial Nature Reserves      | Mountain Catchment Areas |
| Towns  | Private Nature Reserves         | Swartberg Complex        |

FIGURE 8.1

Swartberg and surrounding reserves

### **8.1e Maps and plans showing boundary of the Swartberg Complex**

Figure 1.1.1 yields an overall view of the location of this protected area in relation to the other selected areas and the boundary of the Cape Floral Region. Figure 8.1 provides a closer view of the protected area and Appendix 1 provides maps at scales of 1:250 000 and 1:500 000.

### **8.1f Area of the Swartberg Complex**

The area of the Swartberg Complex is 112 000 ha and there are roughly 60 000 ha of reserves that surround the protected area (Figure 8.1).

## **SECTION 8.2 JUSTIFICATION FOR INSCRIPTION**

### **8.2a Statement of significance**

The only area representing the Karoo Mountain Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4), the Swartberg Complex protects a significant portion of the Swartberg Mountain Range that forms a junction between the Karoo and Fynbos biomes in the eastern part of the Cape Floral Region (refer to Figure 1.3.2). The Swartberg Complex not only conserves the Groot Swartberg Mountain Fynbos Complex Broad Habitat Unit (refer to Table 1.3.2; Figure 1.3.5) but also conserves elements of, and importantly significant transition zones between, the Fynbos, Nama-Karoo and Succulent Karoo biomes (refer to Figure 1.3.2).

Covering over 110 000 ha, the varied topography and range of altitudinal gradients provide a number of diverse habitats for both flora and fauna of the area and a relatively high number of species are found within this protected area. These include several threatened endemic plant species, such as *Gladiolus nigromontanus* (Vulnerable) and the Rare *Leucadendron dregei*.

Analyses of data sets, for selected plant taxa, showed that the Swartberg Complex falls in one of the poorer areas (of the seven sites analysed for the second phase of this nomination) with respect to species richness (Lombard, 2000; Appendix 4). This trend was also apparent in analyses of Red Data Book plant species and Proteaceae species. However, since the Swartberg Complex has been poorly sampled to date, with inadequate existing plant records for all components of the Complex, it is probable that improved sampling, as well as implementation of the State of Biodiversity project (refer to section 1.4f(i)), will not only improve data records but will show the Swartberg Complex to have a greater species diversity and conservation value than is currently shown by existing data.

This important Mountain Catchment Area supports a number of freshwater fish. These include several threatened southern Cape endemics, in particular an Endangered Cape Floral Region endemic, the slender redbfin (*Pseudobarbus tenuis*). With well over 150 bird species recorded to date, including the Vulnerable kori bustard (*Ardeotis kori*) and the southern Cape endemic protea canary (*Serinus leucopterus*), the area also supports a diversity of mammals and reptiles, many of which have affinities with the more arid northern regions, including the Vulnerable honey badger (*Mellivora capensis*).

The presence of a diversity of *Colophon* beetle species in the Swartberg Complex is considered to be indicative of the capacity of this area to provide refuge to biodiversity during periods of climate change (refer to section 1.3a(iv)).

### **8.2b Comparative analysis**

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

## 8.2c Authenticity / Integrity

Wholly owned by the State, two components (Groot Swartberg and Swartberg East) of the Swartberg Complex are proclaimed State Forests, managed by the Western Cape Nature Conservation Board as Provincial Nature Reserves (refer to sections 1.4a(i) & 1.4b(ii)), which imparts a high level of legal protection to the area (refer to section 8.4c). The third component Gamkapoort (an established although not yet a proclaimed Provincial Nature Reserve) is managed by the Western Cape Nature Conservation Board according to the principles of Provincial Nature Reserve management. The vision for all three areas of the Swartberg Complex ensures that management is directed towards the conservation of biodiversity by allowing the unhindered operation of natural processes (refer to section 1.4b(i)).

As an important Mountain Catchment Area, the Swartberg Complex is further protected to ensure both the quality and surety of supply of water resources that it provides to the nearby agricultural and urban developments in the Little- and Central Karoo (refer to section 1.4c(vi)).

Threats to the Swartberg Complex are few. With extremely low levels of alien infestation, the general area comprises agriculturally poor, mountainous land that is unlikely to be developed. The northern boundary abuts onto Succulent and Nama-Karoo, which is largely untransformed and is also unlikely to be developed to any major degree because of its low rainfall. The vast mountainous area is buffered by Private Nature Reserves to the east and west, while Provincial Nature Reserves to the south further provide a protective safeguard to the core protected area. The large size of the protected area, together with these surrounding reserves, ensures the persistence of natural processes required for biodiversity maintenance (refer to Table 1.2.4).

## 8.2d Criteria under which inscription is proposed

The Swartberg Complex is nominated as one of eight protected areas on the basis of two criteria.

***CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution***

The large size of this protected area, the second largest in the constellation, ensures that natural processes that are essential for the maintenance of habitats and survival of species continue operating (refer to Table 1.2.4). In this regard, large scale processes such as natural fire regimes that assist in maintaining for example, evolutionary processes, plant / herbivore and predator / prey relationships, diversification across geographical gradients as well as a significant east west biological corridor, are some of these processes that operate naturally in the Swartberg Range.

Identified as a component of one of three mega-reserves for the Cape Floral Region (Cowling *et al.*, 1999a; Appendix 5), the diverse climatic, altitudinal and topographical gradients found across this extensive area are further considered likely to ensure significant buffers to environmental variation, such as global climate change, thereby securing ongoing survival of process and pattern across the landscape.

***CRITERION 44 (a) (iv): The most important and significant natural habitats for in situ conservation of biological diversity***

The Swartberg Complex critically conserves the unique fynbos of the Karoo Mountain Phytogeographic Centre of endemism and as such, a number of locally endemic, and nationally threatened, plant and animal species are also protected within the Swartberg Complex. The area, characterised by mountain fynbos, transitional to the more arid vegetation of the Central- and Little Karoo, provides a unique opportunity for conservation of habitats, taxa and plant species assemblages not found elsewhere in the Cape Floral Region.

The Swartberg Complex conserves a significant proportion of the Groot Swartberg Mountain Fynbos Complex Broad Habitat Unit (66% of the total BHU). To a lesser extent it represents moderately threatened renosterveld habitat as well as diverse karoo habitats, ensuring that both fynbos and karoo species are represented and conserved. Poorly sampled to date, existing taxonomic data alone do not equal the convincing argument evinced by the outstanding juxtaposition of – and transitions between - climatic, altitudinal and topographical gradients. These gradients provide habitats for a broad floral and faunal diversity, known to be present within this complex but as yet incompletely recorded.

The large area of the Swartberg Complex, the array of buffering reserves and its linkages to, and between, other outstanding protected areas, make this a key component of the constellation of sites proposed for nomination of the Cape Floral Region as a World Heritage Site.

### **8.2d(i) Cultural and aesthetic**

The greater Swartberg area is rich in archaeological and historical artefacts and sites. Amongst these, rock art and tools have been documented in a number of areas in the Swartberg Complex.

The Swartberg pass was declared a South African National Monument in its centenary year in 1988, and is hailed by many as one of the most spectacular mountain passes in the world.

## **SECTION 8.3 DESCRIPTION**

### **8.3a Description of the Swartberg Complex**

#### **8.3a(i) Physical features**

The Swartberg Mountains and the geological formations belong chiefly to the Table Mountain group and, to a lesser extent, to the Bokkeveld and Cango groups. The basic structure of the mountainous areas are large folds originating from the strong north / south stresses that buckled the Cape Super Group to form the Cape Fold Belt. More than one main fold event occurred giving rise to irregular and parallel folds.

A large number of faults, mostly in an east/west orientation and mostly no longer than a few kilometres, occur in the southern fold belt area. An exception is the Cango Fault stretching from west of Ladismith, south of the Swartberg Mountains, and extending eastwards through Baviaanskloof. Impressive rock formations may be seen in both the Swartberg and Meiringspoort passes.

An important water catchment area, for dams supplying agricultural areas and nearby urban areas such as Oudtshoorn, numerous watercourses incise the rugged terrain. The lowlands are highly erodable while many of the mountains are asymmetrical with steep slopes and sheer cliffs on the southern aspect and more gradual slopes on the northern aspect.

#### **8.3a(ii) Climate**

Precipitation is mainly in the form of short-lived thunderstorms distributed fairly evenly throughout the year, although the wettest months are June to August. Across the extent of the Complex, the mean annual rainfall varies from the western part (150 mm to 250 mm), reaching 1 350 mm in the central Groot Swartberg Reserve, and averaging only 480 mm in the east.

The average temperature through the year is 10°C to 22°C. The minimum temperature during the winter (lowest temperatures during June-July) is as low as -3°C while the maximum during the winter is around 23°C. In summer, the minimum is around 15°C with the maximum as high as 45°C. During summer a south-easterly wind is dominant, while in winter the prevailing wind is northwesterly to westerly and is usually associated with rainfall.

### 8.3a(iii) Vegetation, habitats and plant species

The Swartberg Complex conserves part of the Karoo Mountain Phytogeographic Centre of endemism (refer to Table 1.3.1; Figure 1.3.4), which is moderately rich in plant species, of which a number are endemic to the Swartberg environs. Apart from this rich mountain fynbos, the vegetation of the protected area is remarkably diverse, featuring renosterveld, forms of Little Karoo and Nama-Karoo vegetation as well as spekboom veld (a form of Succulent Thicket).

The predominant Broad Habitat Unit is the Groot Swartberg Mountain Fynbos Complex (refer to Table 1.3.2; Figure 1.3.5), which occupies 75% of the protected area (66% of the total BHU). Importantly, inland renosterveld types including Kango Inland Renosterveld (12% of the total BHU) and Matjies Inland Renosterveld (4% of the total BHU) are also represented.

The Swartberg Complex is the only selected protected area to overlap with the Karoo Mountain Phytogeographic Centre, and to a lesser extent, with the Little Karoo Centre. As a consequence a number of plants in the Swartberg Complex have restricted distributions. The high altitude plant communities have limited and broken distributions, which are ascribed to the warming during the Holocene Period. As a result of this warming, these plants could only survive at the higher, and thus cooler, elevations.

The Rare *Protea venusta* as well as the Rare *Agathosma swartbergense*, for example, are restricted to upper slopes of both the Swartberg and the Kammanassie Mountains; the Rare *Erica insignis* is restricted to high altitude rocky crevices on the Groot Swartberg as well the nearby Anysberg Mountains; and, the succulent *Lampranthus swartbergensis*, the cushion-forming *Helichrysum saxicola* (Indeterminate) and the banana-scented *Leucadendron dregei* (Rare) are known only from high altitudes in the Swartberg Mountains. Other Rare Swartberg endemics, found at higher altitudes, include a daisy family member *Berkheya fransisci*, a Cape reed *Staberoha stokoei* and a prostrate Proteaceae family member *Protea pruinosa*, while a number of other threatened endemic species including the Vulnerable *Otholobium rubicundum* are found on the middle slopes and lower of the Swartberg Mountains.

In an analysis of 3 298 selected taxa comprising 24 436 Quarter Degree Square (QDS) records, the Swartberg Complex consistently fell outside of the relatively species-rich areas (Lombard, 2000; Appendix 4) when compared with the other protected areas included for this nomination. In a separate analysis, using point localities for 364 species of Proteaceae comprising 183 322 records, the Complex again fell outside of the species-rich parts of the Cape Floral Region. The Swartberg Complex, also fell outside of the top 50% of the minimum set of Quarter Degree Squares needed to conserve all (selected) species in the dataset and all threatened species extracted from the same dataset (Appendix 4).

Poorly surveyed to date, the Swartberg Complex (and the general area in which it is located) fared relatively poorly overall against the exceptionally rich Boland Mountain Complex and Cederberg Wilderness Area for example. It is considered probable that, following surveying and sampling required through implementation of the State of Biodiversity Programme (refer to section 1.4f) as well as the current programmes currently underway by reserve management to identify and record all taxa found within the Swartberg Complex, re-analysis may provide a different picture of the Swartberg Complex. This is likely, given the diverse habitats (including cliffs and montane wetlands) and the high number of transition zones (between fynbos and renosterveld, or fynbos and karroid vegetation, for example), which often support localised or rare species.

Many early autumn-flowering *Protea* and *Erica* species attract large numbers of sugarbirds and sunbirds and the Swartberg Complex, especially the Swartberg Pass area, is well known for its colourful flower displays including those of the Vulnerable *Gladiolus nigromontanus*, as well as *Erica strigilifolia* and showy *Protea* species such as *Protea eximia* and *P. punctata*.

### 8.3a(iv) Fauna

The mountainous landscapes characteristic of the Swartberg Complex provide suitable habitats for a variety of widely distributed mammals, such as the klipspringer (*Oreotragus oreotragus*), rock



dassie (*Procavia capensis*) and grey rhebok (*Pelea capreolus*), and a range of cliff nesting birds such as the black eagle (*Aquila verreauxii*) and booted eagle (*Hieraaetus pennatus*).

The variety of fauna in the Swartberg reflects the location of this protected area at the interface between the Fynbos and Karoo Biomes (refer to Figure 1.3.2; section 1.3a(iv)). This protected area harbours some mammals uncharacteristic of fynbos areas such as kudu (*Tragelaphus strepsiceros*). Threatened mammals in the Swartberg Complex include leopard (*Panthera pardus*) (Rare) and honey badger (*Mellivora capensis*) (Vulnerable) as well as the Rare termite-eating aardwolf (*Proteles cristatus*) (Skinner *et al.*, 1977; Smithers, 1986; Apps, 2000).

Important species of fish include the minnow-like fish (*Pseudobarbus* spp.) and eels (*Anguilla mossambica*). Amongst other species, three *Pseudobarbus* spp. are particularly important in the Gouritz Catchment of which, *P. asper* and *P. afer* are endemic to the southern Cape and are regarded as Vulnerable (Skelton, 1977) while the third, the slender redbin (*P. tenuis*), is restricted to the Gourits and Keurboom systems and is regarded as Endangered (Impson, D. pers. comm.).

There are approximately 158 species of birds in the Complex, of which the Cape sugarbird (*Promerops cafer*) and orange breasted sunbird (*Nectarinia violacea*) are broadly distributed Cape Floral Region endemics, while Victorin's warbler (*Bradypterus victorini*) and protea canary (*Serinus leucopterus*) are two of the southern Cape endemics recorded here to date. Threatened bird species recorded include the Vulnerable martial eagle (*Polemaetus bellicosus*), Vulnerable kori bustard (*Ardeotis kori*) and Rare white stork (*Ciconia ciconia*).

Of the small mammals present in the Swartberg Complex, the spectacled dormouse (*Graphiurus ocellaris*) is listed as Rare, while the Cape spiny mouse (*Acomys subspinosus*) and Verreaux's mouse (*Praomys verreauxii*), are Cape Floral Region endemics. The full spectrum of birds and small mammals are important for plant survival in the area as they play an important role in pollination and seed dispersal. The rocky terrain and bountiful prey items host a number of reptiles, including the Swartberg endemic, Swartberg African leaf-toed gecko (*Afrogecko swartbergensis*).

Threatened invertebrates in the Complex include six *Colophon* beetle species in the Swartberg of which the Critically Endangered *C. montisatris* is an example. These flightless stag-beetles are considered to be relictual fauna with Gondwanaland linkages, since their closest relatives are today found in Brazil and Australia (Endrödy-Younga, 1988). This is a further example of the valuable role played by this area in conserving biodiversity of the Cape Floral Region during times of global climate change.

### 8.3b History and development of the Swartberg Complex

This area was clearly used by the San for many centuries, as evidenced by the numerous rock paintings and artefacts found in caves all over the reserve. A San digging-stone was discovered on a collection site on the western boundary of the protected area, and a skeleton of a hunter-gatherer was found near Klaarstroom in 1940. Following European settlement, several access routes through the Swartberg Complex, including the Toorwaterpoort train route, as well as the Meiringspoort and Swartberg Pass road accesses were constructed to link the Central- and Little Karoo. Table 8.1 provides an overview of historical events in the Swartberg area.

Table 8.1 A summary of major events in the history of the Swartberg Complex.

Year / period	Description of historical incident or occasion
1700s	European farmers settled in the area.
1830	Gamkaskloof first inhabited by farmers.
1880s	Swartberg Pass built by convict labour.
1963	Road access built to Gamkaskloof.
1978	Private land in the Swartberg Range proclaimed as a Mountain Catchment Area.
1980	Gamkapoort Nature Reserve established.

### **8.3c The most recent records of the Swartberg Complex**

Refer to section 1.3c for information in this regard.

### **8.3d Present state of conservation of the Swartberg Complex**

The Swartberg Complex is a linear protected area comprising the Groot Swartberg and Swartberg East State Forests and Gamkapoort, stretching 140 km from east to west. While not yet formally proclaimed as a nature reserve, this status is being addressed and it is currently managed as part of the Western Cape Provincial Nature Reserve network.

Most of the Swartberg Complex is in an almost pristine state, with low levels of invasion by alien plant or animal species. Areas that require attention are mostly found in Gamkapoort. Parts of this area were previously used as rangelands and some sections require ongoing restorative management, including erosion control and reseeding with locally indigenous species.

Despite these few limited areas under ongoing conservation management, this area is ecologically functional, supporting a high diversity of flora and fauna, with an array of intact natural processes. There is a potential for expansion of this area, beyond the existing boundaries and surrounding reserves, should the proposed mega-reserve recommended by the CAPE Project (refer to Appendix 5) combining this Complex with the Langeberg East Conservation Area be implemented.

Presently, most of the Swartberg Complex is well protected by surrounding reserves and/or land uses that are unlikely to threaten the conservation ideals of the protected area (refer to Figure 1.3.6). Extending for nearly 200 km east and west is a series of Mountain Catchment Areas that intersect with, and adjoin, the Swartberg Complex and the associated reserves. This increases the protection against external threats that may impact on the protected area. Overall, the Swartberg is well protected both legally as well as being buffered by a series of reserves of different conservation status and legal standing (refer to sections 8.4b & 8.4c).

### **8.3e Presentation and promotion of the Swartberg Complex**

Refer to Volume 3 for material relating to the presentation and promotion of the Swartberg Complex.

## **SECTION 8.4 MANAGEMENT**

### **8.4a Ownership**

Ownership of all components of the core Swartberg Complex protected area lies with the State. Refer to section 1.4a for detail in this regard.

### **8.4b Legal status**

Groot Swartberg and Swartberg East were demarcated as State Forests in Government Notices under various Forest Acts between 1912 and 1978 (refer to sections 1.4a(i) & 1.4b(ii)), which have now been replaced by the National Forests Act (Act 84 of 1998). Gamkapoort is State Land. The Western Cape Nature Conservation Board manages all three components as Provincial Nature Reserves<sup>200</sup>. Together the State ownership and the management by the Provincial Conservation Authority impart a high level of legal protection and conservation management to the area (refer to section 8.4c).

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<sup>200</sup> All three areas are known locally as the "Swartberg Nature Reserve".

Private land in the Swartberg Range was proclaimed as a Mountain Catchment Area (Government Gazette No. 1938 of 29 September 1978) in terms of the Mountain Catchment Act no. 63 of 1970 (refer to section 1.4c(vi)).

#### **8.4c Protective measures and means of implementing them**

An array of legislation protects the Swartberg Complex from inappropriate development or harm, providing the basis for protective and sustainable management of natural and cultural resources. This legislation includes national level legislation such as the Constitution (refer to section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), Environmental Conservation Act (section 1.4c(iv)), the National Water Act (section 1.4c(v)), the Mountain Catchment Areas Act (section 1.4c(vi)), the Conservation of Agricultural Resources Act (section 1.4c(vii)), the National Heritage Resources Act (section 1.4c(viii)) and the National Forests Act (section 1.4c(ix)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

The Cape Nature and Environmental Conservation Ordinance, 1974, recently replaced by the Western Cape Nature Conservation Laws Amendment Act, 2000, also applies in this protected area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Western Cape Nature Conservation Board, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), is tasked with implementation and enforcement of protective legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

#### **8.4d Agency with management authority**

The agency with management authority for the Swartberg Complex is the provincial Western Cape Nature Conservation Board. For further details refer to section 1.4d.

#### **8.4e Level at which management is exercised**

The Swartberg Complex is managed by a Reserve Manager, with support from the Regional- and Area Managers of the Western Cape Nature Conservation Board. Refer to sections 1.4e and 8.4k for further detail in this regard.

#### **8.4f Agreed plans relating to the Swartberg Complex**

The most consequential plan influencing this protected area is the CAPE Project proposal for prioritising the establishment of mega-reserves (refer to section 1.4f; Appendix 5). Together with the Langeberg East Conservation Area, the Swartberg Complex is earmarked as a component of the Little Karoo mega-reserve identified, and recommended for implementation, by the CAPE Project (Cowling *et al.* 1999a). If implemented, this reserve will extend from the plains of the Nama Karoo, across the Groot Swartberg and Rooiberg-Gamkaberg complex, via the Gouritz River Valley to the Riversdale Coastal Plain (Cowling & Hejnis, 2000).

Already a vast land area, the vision of the Swartberg Complex becoming part of a mega-reserve, linking the semi-arid landscapes of the Nama-Karoo with the coastal plains, is an exceptionally sound proposal for the conservation of biological corridors, landscape-scale processes and ecological gradients, encompassing (in the words of Boshoff *et al.*, 2000) biome-scale transitions. Refer to section 1.4f for further details of overarching plans, which affect this area.

#### **8.4g Sources and levels of finance**

Refer to section 1.4g for information in this regard.

#### **8.4h Sources of expertise and training**

Refer to section 1.4h for information in this regard.

#### **8.4i Visitor facilities and statistics at the Swartberg Complex**

Visitors to the Swartberg Complex may experience a sense of vastness and tranquillity throughout the year. Picnic and braai (barbecue) facilities are available at Gamkapoort, Swartberg Pass and Meiringspoort. Fishing by permit-holders is allowed in the Gamka River and the Gamkapoort Dam. Various hiking options are possible, ranging from easy day-hikes to a fairly demanding five-day route leading hikers past rock formations, incredible views and unspoiled mountain fynbos.

Visitors to the Gamkaskloof Valley (Die Hel) may either stay in one of two restored houses or camp sites are available. Attractions and activities include picnicking, visiting a Norwegian-style mill, angling in the Gamka River, and sightseeing and relaxing in this natural paradise as well as enjoying a 6 km interpretation hiking trail.

Gamkaskloof has cultural significance and, with the assistance of a locally representative and inclusive Advisory Committee, is being restored and developed as a tourist facility.

The 5-day, 61 km hiking trail caters for a maximum of 18 hikers per night. During 1999, there were 5 275 visitors to the Swartberg Complex not counting those visitors that stop along the two public roads in the Complex for bird watching, butterflying or picnicking. An additional 1 700 visitors per annum use the Mountain Catchment Areas, and the Private Nature Reserves, for hiking and recreational purposes.

#### **8.4j Swartberg Complex management plan and statement of objectives**

For an overview on management plans for the Western Cape Nature Conservation Board, refer to section 1.4j and Appendix 2. There is a strong conservation management theme within the objectives of the Swartberg Complex aimed at the maintenance of a suite of historically occurring plants, animals and their habitats within the protected area. The objectives and initiatives take this further by addressing benefits of adjacent communities and in so doing, are working to ensure the long-term support for this protected area. Similarly, the Environmental Education programmes address the same objectives. A summary of the protected area's objectives is provided below.

##### **Primary conservation objectives:**

- The management and conservation of natural processes and life support systems typical of the Swartberg Complex, and the management and conservation of the catchment area.

##### **Secondary conservation objectives:**

- Protection and rehabilitation of soil surface;
- Maintenance of healthy populations and genetic diversity;
- Preservation of sites of archaeological and historical significance;
- Provision of opportunities and facilities for varying grades of extensive outdoor recreation;
- Identification and initiation of projects for the benefit and involvement of the community;
- The understanding of the dynamics and interrelationships of natural vegetation systems by means of baseline data collection;
- Eradication of alien invasive biota;

- Management and conservation of rare species through maintenance of vegetation dynamics, by means of natural disturbance regimes;
- Protection of vegetation from all unnatural fires;
- Where appropriate and possible, re-establishment of historically indigenous wildlife species;
- Re-establishment of natural vegetation on areas of unnatural disturbance such as old quarries, homestead sites and disused roads;
- Provision of environmental interpretation, by means of interpretative displays at strategic points, general information by means of signboards, and a programme of interpretation;
- Identification and preservation of archaeological sites in the area as well as the maintenance of sites of historical significance;
- Provision of facilities and opportunities for recreation in appropriate zones; and,
- Maintenance and management of the declared State Mountain Catchment Areas to ensure the provision of free flowing pollution-free, and silt-free water.

#### **8.4k Staffing levels for the Swartberg Complex**

A Reserve Manager is located within the Swartberg Complex and is supported by the Karoo Area Manager (Tony Marshall) and a Regional Manager (Ivan Donian), both stationed in the Outeniqua Regional office, one of four such offices in the Western Cape Province (refer to Figure 1.4.1).

On site personnel include 2 Nature Conservators, 2 Foremen, 1 Administrative Clerk, 3 Field Rangers, 1 Storeman and 18 Labourers.

The address of the Outeniqua Regional Office is Private Bag 6546, George, 6530.

The current Reserve Manager is Martin Scott and his address is Private Bag X658, Oudtshoorn, 6620.

## **SECTION 8.5 FACTORS AFFECTING THE SWARTBERG COMPLEX**

### **8.5a Development pressures**

#### **8.5a(i) Current extent of land transformation and encroachment on natural areas**

While current development pressures on this remote area are few, historical agricultural activities in the Gamkaskloof have left some areas where previously cultivated lands and grazing lands, require restoration of the natural flora. This is being addressed through implementation of an integrated restoration programme, encompassing erosion control and reseedling with indigenous, locally-collected species.

There is a concern that erection of fences on surrounding farms may adversely affect gene pools of certain faunal taxa because no introduction of new genetic material is possible. Further, it is possible that some animal species may die during droughts because these fences prevent them from seeking water elsewhere. By the same token, these same fences provide sanctuary for a number of species during the hunting season when migratory species (which are easily able to negotiate these barriers) such as kudu (*Tragelaphus strepsiceros*) are hunted on the neighbouring game farms. These concerns are not as yet resolved, although it is expected that ongoing negotiation with neighbouring landowners and local communities will reconcile conservation of biological diversity with socio-economic development pressures.

### **8.5a(ii) Illegal resource use**

While wildflower picking is not considered to be a problem in this area, poaching of game, in particular, steenbok and kudu, is a management challenge. Local peace officers and conservation authorities work together to monitor and curb this illegal activity.

## **8.5b Environmental pressures**

### **8.5b(i) Alien invasive organisms**

Much of this vast area is close to pristine and is practically free of alien-invasive plant species. However, parts of the Gamkapoort Nature Reserve, which were used as grazing lands for domestic livestock, do have minor infestations of some agricultural- and other weed species and are presently being cleared of alien plant species and restored. Integrated programmes, which include removal of alien invasive species, erosion control (refer to section 8.5b(iii)) and seeding of restoration areas with locally indigenous species, are well under way.

Oleander (*Nerium oleander*), tamarisk (*Tamarix useoides*), Australian brakbos (*Atriplex* spp.), old man saltbush (*Atriplex nummularia*), honey mesquite (*Prosopis glandulosa*) and Spanish reed (*Arundo donax*) have all been recorded in the protected area.

### **8.5b(ii) Fire**

Another threat, primarily to the fynbos areas of the Swartberg Complex, is uncontrolled fires. Fires are most often caused by careless picnickers, but a number have been ascribed to incorrect fire management in neighbouring lands (refer to section 8.5b(ii)) and also to lightning strikes. Fires are closely monitored in this protected area and the reserve management co-operates closely with local landowners to counteract fires during high fire-risk periods.

### **8.5b(iii) Erosion**

Highly localised, and primarily in the drier areas of the Swartberg Complex, tracts of degraded rangeland areas are undergoing restoration programmes to restore indigenous vegetation to areas that were denuded by overgrazing prior to the establishment of Gamkapoort Nature Reserve. Erosion is a common problem in these areas and control mechanisms include reseeding with indigenous pioneer species and brush-packing to slow surface-water flow.

## **8.5c Natural disaster preparedness**

A number of supportive administrative, organisational and other associated structures are available to assist personnel in the event of a natural disaster such as a wildfire. Refer to section 1.5c(i) for further details in this regard.

## **8.5d Visitor / tourism pressures**

Much of this area is rugged and mountainous and is only used for hiking. Visitor numbers are carefully controlled and each trail is monitored on a regular basis by field rangers. Trail maintenance is guided by the management plan and trails may be temporarily closed if necessary.

## **8.5e Number of inhabitants within the Swartberg Complex**

The human inhabitants of the Swartberg Complex number only four people. A further four live in the surrounding Private Nature Reserves while the adjacent farming areas are inhabited by roughly 250 people in total.

## **SECTION 8.6 MONITORING**

Details of monitoring conducted by the Western Cape Nature Conservation Board have been provided in section 1.6. In addition to national programmes outlined in section 1.6, such as the *Protea* Atlas, the Frog Atlas, Bat Atlas, Nest Records and the Birds in Reserves Project, there are a number of monitoring programmes active in the Swartberg Complex. These include monitoring of vegetation and plant species shifts, recording of selected terrestrial and aquatic vertebrate populations, monitoring of visitor impacts and recreational activities and monitoring of the physical environment. Baseline data are accumulated for all of these monitoring programmes and a selection of key indicators used for monitoring change over time of these aspects of the reserve is provided below.

### **8.6a Key indicators**

#### **8.6a(i) Vegetation monitoring programme**

- Monitoring of plant community shifts by means of fixed-point photography.
- Monitoring the influence of management on the numbers and distribution of Rare species by means of vegetation surveys and mapping.
- Monitoring of the success of alien vegetation eradication techniques through mapping extent and decline of alien vegetation.
- The collection of baseline data on the distribution and occurrence of all plant species in the area (herbarium specimens).
- The collection of baseline data and distribution of endangered plant species.
- Ten plots which, are representative of the reserve's flora, serve as indicators of past and current field conditions. Records are kept in the form of photographs.

#### **8.6a(ii) Wildlife monitoring programme**

- The monitoring of the impact of problem animals, involving Rare and Endangered species (such as leopard), on domestic stock by means of carcass evaluations on land adjacent to the protected area.

#### **8.6a(iii) Visitor and recreation monitoring programme**

- Monitoring visitor numbers and use of facilities by means of permits and trail bookings.
- The monitoring of visitor impact on vegetation and soil at all trail huts, picnic sites, all camping sites, overnight accommodation and along trails.
- The monitoring of uncontrolled picnic site use by means of occasional counts both during and outside the holiday season.
- Monitoring the effect of recreation on water quality at selected sites with water pollution potential.
- Monitor sociological effects of the outdoor recreation programme by means of opinion polls.

#### **8.6a(iv) Physical environment monitoring programme**

- Measurement of rainfall in mm/day.
- Measurement of maximum and minimum daily temperatures.

#### **8.6a(v) Heritage site monitoring programme**

- The collection of baseline data, the mapping of their distribution and the occurrence of archaeological, palaeontological and cultural historical sites in the area.

### **8.6b Administrative arrangements for monitoring**

Reserve management personnel (in association with, and supported by, the Western Cape Nature Conservation Board Regional- and Area Managers as well as the Scientific Services and Administrative Divisions) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within the Swartberg Complex.

This area has been, and is regularly used, by researchers from the Western Cape Nature Conservation Board as well as by those from institutions such as the Avian Demography Unit (University of Cape Town), the National Botanical Institute and the University of Natal, for ongoing research initiatives, which include the Bird-, Bat-, Frog- and *Protea* Atlassing projects. By administrative arrangement, information and data emanating from these and other research programmes in this protected area are made available to the Western Cape Nature Conservation Board.

Refer to section 1.6b(i) for information with regard to overarching administrative arrangements for monitoring of programmes within protected areas.

### **8.6c Results of previous reporting**

Responses to previous reporting have included the initiation of a programme for improvement of habitats and vegetation within Gamkapoort, through a restoration initiative for degraded areas within this area, parts of which were previously grazed by domestic livestock. This initiative followed from research by, amongst others, the University of Cape Town (Beukman, 1991) as well as from research on the area by the conservation authorities of the time.

Extensive recording of all fires by conservation authorities, lasting over a number of decades, contributed to formulation of a comprehensive fire-management programme for this area, allowing managers to predict and prevent many of the unnatural fires for the area and to respond quickly to unwanted wildfires within and outside of the protected area.

Refer to section 1.6c for overarching information in this regard.



## CHAPTER 9 BAVIAANSKLOOF

The chapter describes one of the eight protected areas selected to represent the Cape Floral Region for World Heritage Status. This protected area differs from the preceding ones in that most of its property lies within the Eastern Cape Province, close to the eastern limits of the Cape Floral Region, and at the eastern limits of the Cape Fold Belt (refer to Figures 1.1.1 & 1.1.2).

Baviaanskloof (Valley of Baboons) is a valley between parallel east-west running mountain ranges, the Baviaanskloof range to the north and the Kouga Mountain range to the south. Straddling these mountain ranges, and part of the valley between, is the Baviaanskloof protected area.

This area is exceptionally diverse, adding to the already outstanding contribution of other protected areas in the constellation of sites for this nomination with at least 1 161 plant species recorded to date. The Baviaanskloof protected area further contributes at least 52 Red Data Book and 20 endemic plant taxa to the flora of the more westerly protected areas, as well as conserving a high diversity of Broad Habitat Units. These habitats contribute to the presence of an exceptional faunal diversity, and plans are afoot for expansion of the protected area. The Baviaanskloof represents the Souteastern Phytogeographic Centre of endemism. It further includes an extension of the Albany Phytogeographic Centre, which lies largely outside the eastern boundary of the Cape Floral Region.

Baviaanskloof and the surrounding environs abound with examples of Stone Age archaeology. Details of archaeological discoveries, and indeed much of the descriptive and background information in this chapter, were gleaned from Boshoff *et al.* (2000) (refer to Volume 3), in which further detail on the biological and cultural richness of the area may be found.

Justification is given for the inclusion of Baviaanskloof in the constellation of protected areas, as well as material specific to the area. The chapter follows the format required for nomination; where information has appeared earlier in the volume, the appropriate cross-reference is given.

### SECTION 9.1 IDENTIFICATION OF BAVIAANSKLOOF

#### 9.1a Country

The Republic of South Africa

#### 9.1b Province

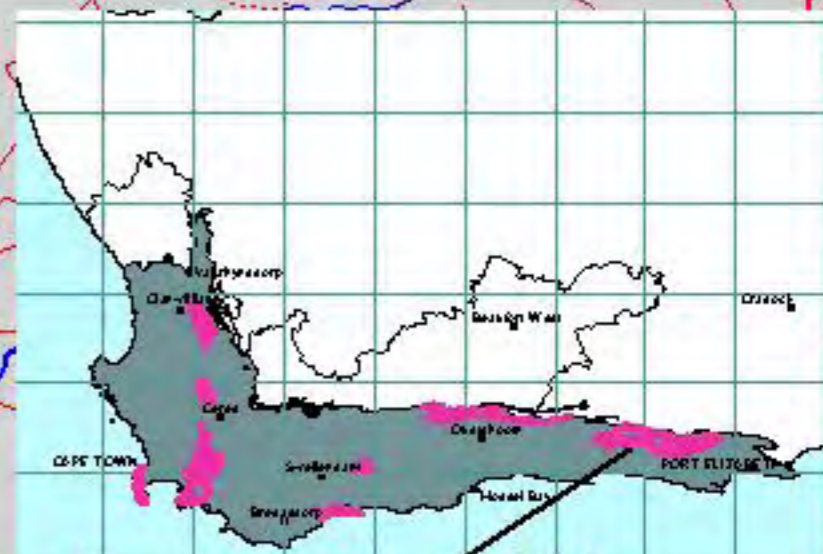
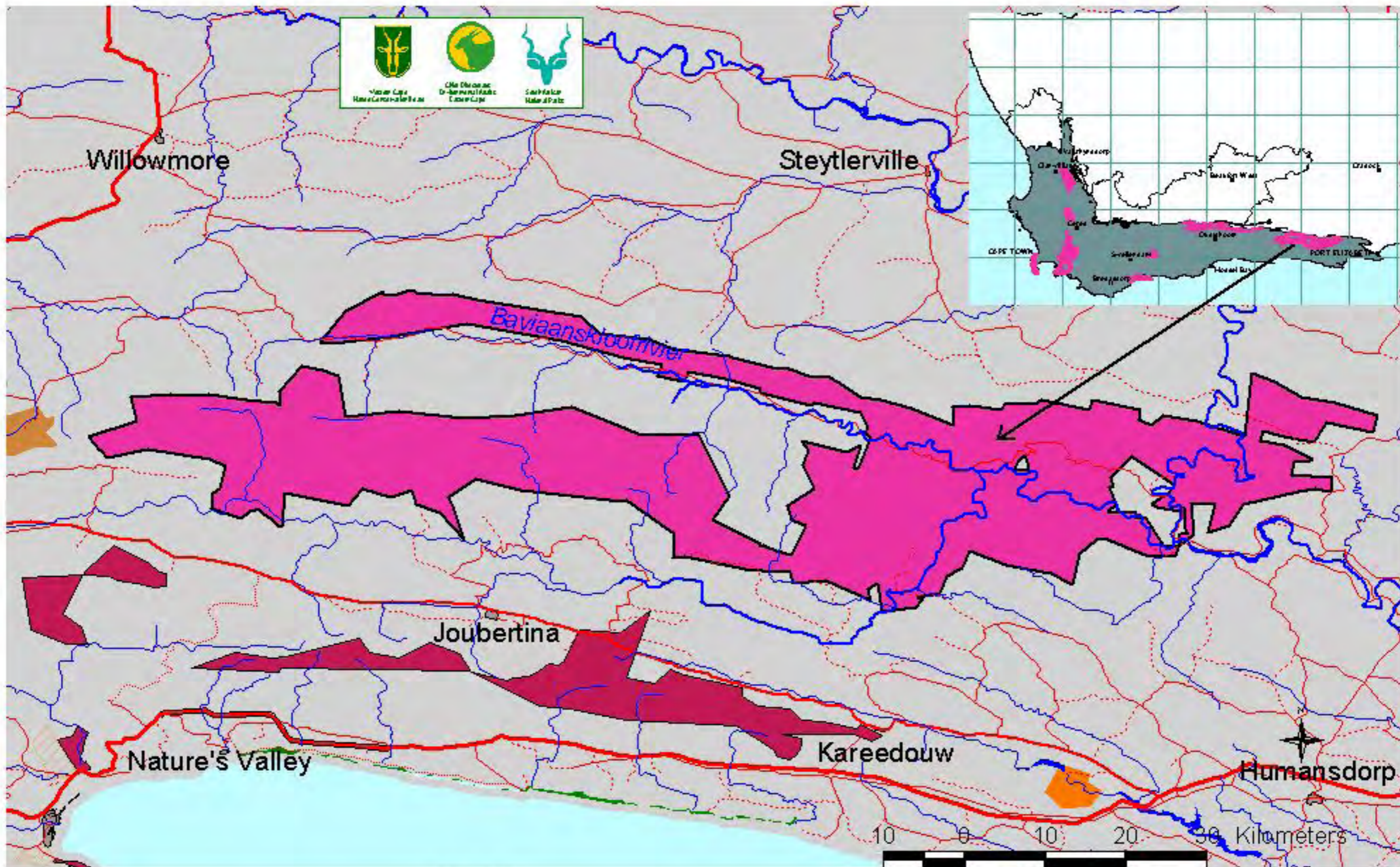
Eastern Cape

#### 9.1c Name of property

Baviaanskloof

#### 9.1d Location on map and identification of geographical co-ordinates

Baviaanskloof lies mostly in the Eastern Cape at the eastern limit of the Cape Floral Region (refer to Figure 1.1.1), with a small portion lying within the political boundary of the Western Cape. Exact geographical co-ordinates are listed in Table 1.1.1. The protected area comprises two parallel mountain ranges - the Baviaanskloof Mountains and the Kouga Mountains - and includes part of the valley between. The southern boundary of Baviaanskloof is about 35 km from the Indian Ocean while its eastern boundary is about 75 km northwest of Port Elizabeth (Figure 9.1). To the south of Baviaanskloof, running east-west between the Kouga and Tsitsikamma mountain ranges, is the valley known as the Langkloof.



**LEGEND**

Rivers	SA National Parks	Proposed conservancies
Roads	Conservancies	SA Natural Heritage Sites
Dams	Provincial Nature Reserves	Mountain Catchment Areas
Towns	Private Nature Reserves	Baviaanskloof Wilderness Area

**FIGURE 9.1**

Baviaanskloof Conservation Area and surrounding reserves

The boundaries of the Baviaanskloof protected area lie within the magisterial districts of Humansdorp, Hankey, Uitenhage, Steytlerville, Willowmore, Uniondale and Joubertina in the Eastern Cape Province. Portions of the Western Kouga Mountains and a detached part known as Misgund are situated in the Western Cape. The protected area lies within the municipal areas of the Kouga, Kou-Kamma, and Cacadu.

### **9.1e Maps and plans showing boundaries of Baviaanskloof**

Figure 1.1.1 gives an overall view of the location of this protected area in relation to the other protected areas to the Cape Floral Region boundary. Figure 9.1 shows the protected area in more detail and Appendix 1 shows the location of Baviaanskloof in relation to the Cape Floral Region at a scale of 1:250 000 and 1:500 000.

### **9.1f Area of Baviaanskloof**

Baviaanskloof comprises one protected area of over 194 000 ha and is thus the largest protected area nominated for the constellation of sites making up the Cape Floral Region (refer to Figures 9.1 & 1.1.1; Table 1.1.1).

## **SECTION 9.2 JUSTIFICATION FOR INSCRIPTION**

### **9.2a Statement of significance**

Baviaanskloof is a key component of the constellation of eight protected areas in this nomination. Conserving the Souteastern Phytogeographic Centre (refer to Table 1.3.1; Figure 1.3.4), this area contains an array of fauna and flora that differ in many respects from the other seven protected areas of nomination. This contribution is augmented by the inclusion of part of the Albany Phytogeographic Centre of endemism in the Baviaanskloof protected area.

Lying in a topographically diverse region and situated within a transition zone between four biomes (*sensu* Rutherford & Westfall, 1986; Figure 1.3.2), plant and animal diversity is considerable. Conserving five Broad Habitat Units (refer to Table 1.3.2; Figure 1.3.5), the diversity of habitats contributes to high levels of endemism for both flora and fauna in this protected area. The flora of this area shows fascinating trends, owing to the juxtaposition of biomes (refer to Figure 1.3.2), dramatic topographical variation and diverse habitats. With well over 1 150 plant species recorded to date, roughly 4.5% of these are Red Data Book species, most of which are confined to fynbos communities. Superb stands of the Vulnerable Willowmore cedar (*Widdringtonia schwarzii*)<sup>201</sup>, endemic to the Baviaanskloof and Kouga Mountains, are conserved within this protected area.

Among the selected areas in this nomination, this protected area is special in conserving extensive areas of grassy fynbos. The grass component is able to support megaherbivores more usually associated with African savanna landscapes than with fynbos vegetation. Baviaanskloof thus differs in its faunal component from all seven of the other protected areas, owing to its location in a transition zone between fauna typical of the Cape Floral Region and the large game species more characteristic of the Ethiopian Fauna of Africa.

The degree of habitat complexity and the fact that the region has provided a relatively stable refuge for the persistence of palaeoendemic species, contribute to the exceptionally rich and interesting fauna. As far as is currently known, 58 mammal-, 310 bird-, 17 amphibian-, 56 reptile- and 15 fish species occur in the area. According to IUCN conservation status, ten Rare mammal species as

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<sup>201</sup> This species is closely related to the Endangered Clanwilliam cedar (*Widdringtonia cedarbergensis*)– refer to section 2.3a(iii), which, like its relative, was over-exploited for many decades owing to the high quality timber.

well as 13 Rare and 6 Vulnerable bird species have been recorded in the protected area to date. In addition, three Rare fish- and three Rare reptile species are known to occur in Baviaanskloof.

Analyses of data sets, for selected plant taxa, showed Baviaanskloof to fall in one of the poorer areas (of the seven sites comprising the second phase of selection for the nomination) with respect to species richness (Lombard, 2000; Appendix 4). This trend was also apparent in analyses of Red Data Book plant species and Proteaceae species. It must be emphasized that these data were for selected taxa and do not show the complete diversity across all taxa (Lombard, 2000). The flora of Baviaanskloof is considered to be highly diverse, particularly at the supraspecific level, boasting at least 135 families and some 556 genera. It is also possible that future analyses, which examine taxa more typical of the unique transition zone in which Baviaanskloof lies, will show Baviaanskloof to have a higher diversity and conservation value than may be concluded from these analyses. Further, the area has not been adequately sampled to date (Boshoff *et al.*, 2000) and it is therefore likely that total plant species diversity for the area is far greater than is currently recorded.

Apart from representing the diverse transitions between fynbos and more savanna-like vegetation as well as to an Ethiopian fauna, Baviaanskloof is considered to be essential to this nomination in terms of its contribution to the conservation of the Souteastern- and Albany Phytogeographic Centres of endemism and of the unique Broad Habitat Units at the eastern limits of the Cape Floral Region. Were these aspects not included in this nomination, representation of the primary elements of the Cape Floral Region would be incomplete.

### **9.2b Comparative analysis**

Comparisons between the component protected areas are not appropriate in this nomination, refer to section 1.2b.

### **9.2c Authenticity / Integrity**

Baviaanskloof is State-owned land (refer to section 1.4a), managed as a Wilderness Area (refer to section 1.4b(iii)) by the Eastern Cape Tourism Board in association with the Chief Directorate Environmental Affairs; Eastern Cape (refer to section 1.4e(ii)).

Threats to the Baviaanskloof protected area are few. The area is large and lies some 20 km from a string of conservation areas (including reserves, and privately-owned mountain catchment areas), which almost link Baviaanskloof with the Swartberg Complex to the west (refer to Figures 1.1.1 and 1.3.6). The northern boundary of the protected area abuts onto the Nama-Karoo, which is relatively untransformed and unlikely to be developed, therefore offering good protection. While the occurrence of alien invasive vegetation is relatively limited in this area, in some areas, where alien plant invasion has been a management challenge, whole stands of alien plants have been removed and re-establishment of indigenous vegetation is progressing well.

Overall, the considerable size of the protected area (refer to Table 1.1.1) ensures that important natural processes will prevail (refer to Table 1.2.4), ensuring the long-term sustainability of Baviaanskloof. In addition, the imminent proclamation of this protected area as a Wilderness Area, as well as plans for the purchase and incorporation of further land to augment the core protected area, bode well for the future and integrity of this vast wilderness.

### **9.2d Criteria under which inscription is proposed**

As for all eight protected areas in this nomination for the Cape Floral Region, Baviaanskloof is being nominated as a natural property based on satisfying two criteria.

**CRITERION 44 (a) (ii): Outstanding example representing significant ongoing ecological and biological processes in evolution**

Identified as one of three potential mega-reserves for the Cape Floral Region (Cowling *et al.*, 1999a; Appendix 5), the large size of this protected area, the largest by far in the constellation, ensures that important natural processes, essential for the maintenance of habitats and survival of species, continue to operate without requiring management intervention (refer to Table 1.2.4). In this regard, large scale processes such as natural fire regimes that assist in maintaining evolutionary processes, plant-herbivore and predator-prey relationships, diversification across geographical gradients including a functional east-west biological corridor represent some of these large-scale phenomena that operate across these mountain ranges.

Conserving a number of ancient taxa, including Gondwanan relictual invertebrates (*Colophon* spp.) and prehistoric gymnosperms from the cycad family (Zamiaceae), Baviaanskloof has established its place as a reservoir for preservation of biological diversity and process over millions of years.

Proposed expansion to this already vast area (the largest conservation area in the Eastern Cape), is already taking place with the recent purchase of valuable valley land. Exciting conservation plans exist for re-establishment of large mammalian herbivores, which historically occurred in the protected area. These initiatives promise to ensure that Baviaanskloof will play a major role in the conservation of flora and fauna typical of this part of the Cape Floral Region.

**CRITERION 44 (a) (iv): The most important and significant natural habitats for in situ conservation of biological diversity**

Representing two Phytogeographic Centres of endemism (refer to Table 1.3.1), Baviaanskloof is, by any standards, florally very rich, ranking as one of the richest areas in the eastern Cape Floral Region, in terms of both habitat and plant diversity. It is the only protected area to represent the Souteastern Centre (refer to Figure 1.3.4), and representation of the Albany Phytogeographic Centre of endemism is an additional benefit accompanying the inclusion of this area in the nomination.

Preserving three mountain fynbos Broad Habitat Units (refer to Table 1.3.2), Baviaanskloof is exceptional in being the only selected protected area to conserve a significant extent of grassy fynbos and, in addition, a form of mesic succulent thicket (refer to Figure 1.3.5).

Located within the transition zone of four biomes (refer to Figure 1.3.2), a curious blend of floral diversity – representing both ancient and evolutionary “new” taxa – is found in this protected area. Of importance is the occurrence of the ancient cycads (*Encephalartos* spp., family Zamiaceae) as well as many families and genera commonly associated with the more subtropical parts of southern Africa (such as the monotypic endemic *Smelophyllum capense*). Its transitional nature contributes strongly to the high genetic diversity of the flora and further adds to the unique flora of this region.

The fauna of Baviaanskloof are exceptionally rich and the area provides a relatively stable refuge for palaeoendemics including invertebrates (e.g. the flightless stag beetles - *Colophon* spp.) and fish species such as the Cape galaxia (*Galaxias zebratus*).

**9.2d(i) Cultural and aesthetic considerations**

While this area is not being nominated in terms of Cultural and Aesthetic criteria, Baviaanskloof is valuable in both respects. The original inhabitants were hunter-gatherers and Khoi stockmen, present until more than a century after the arrival of European settlers in the Baviaanskloof Valley (refer to section 9.3b).

The archaeologically significant find, during 1999, of 2000 year-old mummified remains of a San hunter-gatherer, as well as a number of other archaeologically valuable artefacts and remains in the Baviaanskloof protected area, have both national and international significance, requiring the strongest protection of cultural heritage.

Near the eastern limits of the Cape Fold Belt (refer to Figure 1.1.2), the area is world-renowned for its spectacular mountain vistas, as well as for its excellent hiking and rock-climbing routes.

## **SECTION 9.3 DESCRIPTION**

### **9.3a Description of Baviaanskloof**

#### **9.3a(i) Physical features**

Baviaanskloof includes the Kouga, Baviaanskloof and Groot Winterhoek mountain ranges<sup>202</sup>. The area is characterised by high mountains, including the highest peaks in the Souteastern Cape (Cockscomb 1 758 m and Smutsberg 1 757 m), elevated plateaus (650-900 m above sea level) and deep ravines, in particular those cut by the Kouga-, Baviaanskloof- and Groot Rivers.

The protected area covers the mountains around the Baviaanskloof River (refer to Figure 1.1.2). Near to the eastern limits of the Cape Fold Belt, the mountains comprise hard, resistant quartzite sandstone from the Table Mountain Group, and alluvial gravels and sands cover the valley floors.

Baviaanskloof is an extremely important water catchment area for the Eastern Cape, responsible for water supply to the Nelson Mandela Metropole (centred around Port Elizabeth) as well as the surrounding agricultural districts.

#### **9.3a(ii) Climate**

As a result of its easterly location, relative to the winter rainfall areas of the southwestern Cape, Baviaanskloof has non-seasonal rainfall. However, the proportion of summer rainfall in the area increases towards the east. Rainfall is mostly cyclonic and orographic with frequent thunderstorms during summer (Bond, 1981). Average annual rainfall varies from between 425 mm on the drier northern slopes to 723 mm on the wetter southern slopes, with the average for the three mountain ranges about 524 mm per annum. Snow occurs annually on the high mountain peaks.

High daily and seasonal temperature fluctuations occur in the area. The average daily maximum temperature in the low-lying areas is about 32°C in January and 18°C in July. The average daily minimum temperature is about 15°C in January and 5°C in July, with extremes varying between 5°C and -3°C. Frost occurs from the beginning of June to the end of August. In summer the prevailing wind direction is south, to southeast, and in winter the prevailing wind direction is northwest. Dry, hot berg winds are experienced during autumn and winter months.

#### **9.3a(iii) Vegetation, habitats and plant species**

Representing the Southeastern Phytogeographic Centre of endemism (refer to Table 1.3.1; Figure 1.3.4) as well as the Albany Phytogeographic Centre, Baviaanskloof is situated in a transitional zone where four different biomes (Fynbos, Nama-Karoo, Thicket and Forest) form a complex overlapping vegetation pattern (refer to Figures 1.3.2 & 1.3.3). Thus, diversity for this protected area at the ecosystem scale is extraordinarily high.

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<sup>202</sup> This latter mountain range should not be confused with the Groot Winterhoek Wilderness Area (refer to Chapter 3), a geographically distinct and distant area to the west of the Cape Floral Region.

The significance of this juxtaposition of different ecosystems is extremely important. Within the boundaries of this protected area are included an almost complete spectrum of pattern and process of the diverse southern African region. Fire-prone fynbos shrublands exist side-by-side with bulk grazer-driven grasslands, megaherbivore-maintained thicket and browser-controlled savanna, while protected valleys support functionally distinct forest ecosystems. Nowhere else in the Cape Floral Region is it possible to find such an extraordinary array of functionally different vegetation types and associated ecosystems.

Five main Broad Habitat Units are conserved within the vast Baviaanskloof landscape, and this protected area on its own achieves the conservation targets for all five (refer to Table 1.3.2; Figure 1.3.5). These Broad Habitat Units importantly include three mountain fynbos complexes, a form of grassy fynbos and a form of mesic succulent Thicket.

Current plant records show a total of 1 161 species for Baviaanskloof, with Boshoff *et al.* (2000) noting that this list is certainly incomplete. In terms of plant species, the Baviaanskloof flora ranks as one of the richest in the eastern Cape Floral Region; and, when standardised per unit area, the flora of the Cederberg Wilderness Area is only 1.65 times richer. Although the latter has more species than Baviaanskloof, these species are concentrated in fewer genera and families (refer to Table 9.1), while, according to existing (and probably underestimated) records, Baviaanskloof includes 147 more genera, and 38 more families than Cederberg. Thus, at the supraspecific level, the flora of Baviaanskloof is extremely rich. Whereas the western floras include numerous clusters of closely related species, the Baviaanskloof flora encompasses a greater range of genetic diversity. Examples here include the genetically distinct and very ancient cycads (*Encephalartos* spp., family Zamiaceae) as well as many families and genera commonly associated with the more subtropical parts of southern Africa (such as *Smelophyllum* (a monotypic endemic)).

Table 9.1 Numbers of families, genera and species found in the existing Baviaanskloof and in the Cederberg Wilderness Area floras (adapted from Boshoff *et al.*, 2000).

Protected area	Number of families	Number of genera	Number of species
Cederberg	97	409	1778
Baviaanskloof	135	556	1161

The incidence of Rare and endemic species in Baviaanskloof is high by global standards. To date, at least 52 species in the protected area are listed Red Data Book taxa and 20 species are known to be endemic to the region. Most of the threatened species occur in fynbos and many of these are naturally Rare owing to their limited distribution. These include the Rare Kouga Mountain endemic, *Paranomus esterhuyseniae* (the Kouga sceptre), as well as other Proteaceae family members such as the Rare *Leucadendron loeriense*, a species restricted to the Groot Winterhoek, Baviaanskloof and Elandsberg Mountains. Other Red Data Book species such as the locally endemic, sweet scented, *Leucadendron sorocephalodes* (Vulnerable) are threatened owing to too-frequent fires, which have passed through their high-altitude habitats, while the Baviaanskloof protected area provides a future for the Endangered pea-family member *Otholobium carnosum*, a species endemic to the Baviaanskloof and Kouga Mountains.

Marking the western limits of a number of species more typical of Afrotropical flora, such as *Streptocarpus meyerii*, the flora of Baviaanskloof shows relatively strong links with those of the mesic summer-rainfall areas, especially the coastal forests of the Indian Ocean Belt and also the temperate, Afromontane grasslands of the Drakensberg uplands. This transitional nature contributes strongly to the high genetic diversity of the flora and further adds to the unique flora of this region compared with the other protected areas in this nomination.

### 9.3a(iv) Fauna

Southern and southwestern South Africa is recognised as a region of high faunal biodiversity and high endemism. The existing Baviaanskloof protected area is somewhat on the fringes of this faunal "hotspot" and has a rich faunal component. A number of species, not yet recorded from Baviaanskloof, are considered likely to occur in the protected area, but may have been overlooked

due to low levels of data collection. Further sampling is expected to show the faunal biodiversity of Baviaanskloof to be even richer and more interesting than has been documented to date.

Animals such as black rhinoceros (*Diceros bicornis*), African elephant (*Loxodonta africana*) and hippopotamus (*Hippopotamus amphibius*), although once present in the rest of the Cape Floral Region, no longer inhabit the protected area owing to the impacts of agriculture and intensive hunting following the onset of European colonialism. Plans are in progress to re-establish these wonderful animals, owing to the high potential of this area to support these megaherbivores. The majestic kudu (*Tragelaphus strepsiceros*) was the largest herbivore remaining in Baviaanskloof until re-introduction of seven eland (*Taurotragus oryx*) in 1989, with a further 11 added to the population in 1991. By 1994 the eland population had increased to 38 animals. Eleven Cape mountain zebra (*Equus zebra zebra*) were re-established into Baviaanskloof in 1990 and, by 1994, the population had increased to 16 animals.

Small mammal diversity within the area is relatively high, representing a combination of savannah and fynbos species, including the widespread fynbos endemic Verreaux's mouse (*Praomys verreauxii*).

With some 310 recorded bird species (over a third of the total for South Africa), Baviaanskloof is recognised as a Globally Important Bird Area on account of the high overall diversity of birds; the presence of globally threatened species (including blue crane (*Anthropoides paradiseus*) and lesser kestrel (*Falco naumanni*)); globally near-threatened species (including black harrier (*Circus maurus*) and ground woodpecker (*Geocolaptes olivaceus*)); nationally threatened species (including striped fluff-tail (*Sarothrura affinis*) and Stanley's bustard (*Neotis denhami*)); and, near-threatened species (including black stork (*Ciconia nigra*) and peregrine falcon (*Falco peregrinus*)). In addition, all of the Cape Region-restricted bird species occur here, including Cape sugarbird (*Promerops cafer*) and protea canary (*Serinus leucopterus*).

Large raptors, found in Baviaanskloof include booted eagle (*Hieraetus pennatus*), crowned eagle (*Stephanoaetus coronatus*), black eagle (*Aquila verreauxii*), fish eagle (*Haliaeetus vocifer*) and the Vulnerable martial eagle (*Polemaetus bellicosus*), which are noted by Boshoff *et al.* (2000) as being the avian equivalent of the "Big Five".

Twenty three of 56 reptile species recorded in Baviaanskloof are endemic to South Africa. Ten are Cape Floral Region endemics while three, including the Endangered Smith's dwarf chameleon (*Bradypodion taeniabronchum*), are endemic to Baviaanskloof and environs. Despite the lack of focussed surveys on amphibians of Baviaanskloof, amphibian fauna includes an astonishing 17 amphibian species recorded to date.

At least 15 species of indigenous fish, mostly belonging to the Southern Temperate fauna<sup>203</sup>, are present in Baviaanskloof. Two threatened species of redfin minnow, *Pseudobarbus afer* (Low Risk) and *P. asper* (Vulnerable) are present, and the protected area has been identified as a key area for future conservation of these species (Boshoff *et al.*, 2000).

While data for invertebrate fauna are inadequate, existing records suggest a rich total diversity with high levels of endemism. For example, six of nine cicadas (Family Cicadellidae) are Cape endemics, while to date, 55 butterfly species, including two threatened species, have been recorded. One butterfly genus (*Thestor*) is considered to be so closely associated with fynbos as to represent a "Capensis element". The high degree of endemism among the invertebrates reflects the high palaeoendemism of the area<sup>204</sup>. Important invertebrate palaeoendemics comprise a rich diversity of taxa including, amongst others, snails and slugs, earwigs and stoneflies, with *Colophon* beetle species also present in montane habitats (refer to section 1.3a(iv)).

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<sup>203</sup> These possibly represent Gondwanan palaeoendemics. For example the closest living relatives of the Cape galaxia (*Galaxias zebratus*) occur in southern Chile, another Gondwanan remnant.

<sup>204</sup> The montane habitats provided microclimatic refugia, allowing temperate species to persist in the face of climatic change (Boshoff *et al.*, 2000).



### 9.3b History and development

Artefacts from rock shelters in Baviaanskloof indicate human habitation from at least the Middle Stone Age (100 000 to 30 000 years before present). After a period of low population density between 60 000 and 20 000 years before present, stable Late Stone Age human populations became established in a series of phases.

There is much evidence of the former presence of the San and Khoi in the Baviaanskloof area, in the form of bone artefacts, floral and faunal remains, the 2000 year-old mummified remains of a San hunter-gatherer and a wealth of rock art.

Interestingly, 9 000 year old seed storage pits lined with vegetal matter (especially leaves of the geophyte *Boophane disticha*) have been recorded and are the oldest examples of such pits yet found in southern Africa. There is a high probability that the Baviaanskloof area holds more sites with well-preserved plant material than any other region in southern Africa.

A number of stone-walls remain in a good state of repair in parts of Baviaanskloof. Anecdotal evidence has it, that these were constructed during the 19<sup>th</sup> century by the Makatese, a Bantu-speaking group, brought to the area from the Orange Free State Province specifically for their masonry skills. Some remained and became assimilated into the area. A summary of recent historical events (adapted from Boshoff *et al.*, 2000) is listed in Table 9.2.

Table 9.2 A summary of major events in the history of Baviaanskloof.

Year / period	Description of historical incident or occasion
April 1738	The first European, a German missionary (Georg Schmidt), enters the Baviaanskloof.
1820s	British Settlers came to the Gamtoos River valley.
1880s	The last band of San in the Kouga Mountains massacred by a commando of farmers. Thomas Bain completed a road from the western entrance of the valley to Grass Neck Pass.
1923	Baviaanskloof comes under the management of the Department of Forestry.
1930	The first resident forester in the Forest Reserve appointed.
1940	Boundaries and fences erected to separate state and private land.
1977	Land on either side of Kouga Dam transferred to the Department of Forestry.
1 April 1987	Management of Baviaanskloof transferred to the Provincial Administration of the Cape of Good Hope.
1987 to 1993	Baviaanskloof managed as a Wilderness Area by Cape Nature Conservation (Cape Provincial Administration).
1994-2001	Baviaanskloof managed by the Chief Directorate Environmental Affairs; Eastern Cape.
April 2001	Baviaanskloof is placed under control of the Eastern Cape Tourism Board.

### 9.3c The form and date of the most recent records of Baviaanskloof

Records for Baviaanskloof are held at one of the three offices (Geelhoutbos, Patensie, Joubertina) responsible for management of Baviaanskloof. These are collated and sent to either the Western Regional Office and/or to the Head Office in Bisho, depending upon the type of information recorded. Refer to section 1.3c for further information in this regard.

### 9.3d Present state of conservation of Baviaanskloof

Since 1987, Baviaanskloof has been managed as a Wilderness Area, described in the Forestry Act of 1984<sup>205</sup>, although not yet formally declared as such (refer to section 9.4b). Visitor numbers, access and use of the core protected area, are strictly controlled. Recent division of Baviaanskloof into use-based zones facilitates both recreation- and conservation objectives for the area.

<sup>205</sup> Recently replaced by the National Forestry Act, Act 84 of 1998 (refer to section 1.4c(ix)).

Some of the initiatives, leading towards the declaration of Wilderness Area status, include the purchase of further conservation-worthy land; the rehabilitation of redundant jeep tracks; removal of hundreds of kilometres of internal fences; erection of proper game-fencing where necessary; and, the re-establishment of selected large herbivores, have contributed significantly to upgrading the conservation status of Baviaanskloof over the past years.

Three separate areas (8 separate title deeds) of 3 248 ha that fall under the management of Baviaanskloof are situated to the west of the protected area near Willowmore. Importantly, these reserves lie between Baviaanskloof and the Swartberg Complex (refer to Chapter 8). Similarly the Stinkhoutberg Nature Reserve lies to the east- and the Tsitsikamma Mountains lie to the south of Baviaanskloof (Figure 9.1). In addition, three Private Nature Reserves are adjacent to the protected area on the south and southwestern sides. These neighbouring reserves protect Baviaanskloof, linking it with other conservation-oriented land and providing the already vast protected area with further potential to survive as a significant component of the protected areas chosen to represent the Cape Floral Region.

### **9.3e Presentation and promotion of Baviaanskloof**

Volume 3 provides material on the presentation and promotion of Baviaanskloof. Specifically, the most complete reference work to date on the Baviaanskloof protected area is that compiled by Boshoff *et al.* (2000) (Volume 3) from which much of the text for this chapter has been taken.

## **SECTION 9.4 MANAGEMENT**

### **9.4a Ownership**

Baviaanskloof is almost wholly owned by the State. Refer to section 1.4a for information in this regard.

### **9.4b Legal status**

Historically, many of the high-lying areas of the Kouga and Baviaanskloof Mountains have always been State land (Crown land) and have never been privately owned. Large areas of mountain land were bought by the State in the early seventies as part of the government's mountain catchment protection policy. With the building of the Kouga Dam, land on both sides of the Kouga River was bought out and transferred to the Department of Forestry in 1977. Since 1986 a further 16 000 ha has been acquired (with the aid of private funds) to consolidate the core section of Baviaanskloof (refer to section 9.3d).

Although all essentially State Land (belonging to the State) and thus enjoying protective measures under diverse legislation<sup>206</sup>, the legal status of the land can be divided into three categories, namely some 125 000 ha of Demarcated State Forest Land, roughly 30 000 ha of Undemarcated State Forest Land<sup>207</sup> and a further 17 000 ha of Allocated State Land<sup>208</sup> (the latter State Land category having been acquired since 1986).

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<sup>206</sup> Legislation protecting, for example, either a change of land use or privatisation of, State Land includes the National Environmental Management Act (refer to section 1.4c(iii)) and the Environmental Conservation Act (refer to section 1.4c(iv)), amongst other (refer to Appendix 8).

<sup>207</sup> These two State Land categories are described in the National Forests Act (Act 84 of 1998) as being either designated as State Forest Land (the former) or having been withdrawn from demarcation as State Forest Land (the latter) and thus no longer being used for forestry (refer to section 1.4b(ii)).

<sup>208</sup> Allocated State Land is State Land, which has been allocated for a specific purpose, in this case for conservation of natural resources. As such the land is subject to legislative protective measures under the same array of legislation as the two State Forest Land categories identified above.

The area has been managed (by all managing authorities) according to the principles of a Wilderness Area since the early eighties, even though it has not yet been declared as such. On 1 April 1987 the management of the area was transferred from the Department of Forestry to Cape Nature Conservation as part of the devolution policy of the government.

Recently, during 1994, management of the area was delegated to the Chief Directorate Environmental Affairs; Eastern Cape. From April, 2001 the Baviaanskloof protected area (along with all 27 other provincial conservation areas in the Eastern Cape), came under the management of the Game Reserve and Conservation Division of the Eastern Cape Tourism Board, under the auspices of the Chief Directorate Environmental Affairs; Eastern Cape.

Even though the area has not as yet been formally declared a Wilderness Area, this will be achieved as soon as the concept policy (of the Department of Environmental Affairs, Culture and Tourism) on the Classification of Terrestrial and Marine Protected Areas has been approved and the necessary legislation is in place for formal declaration of the Wilderness Area. This should take place during 2002.

#### **9.4c Protective measures and means of implementing them**

An array of legislation protects this area from inappropriate development or harm and provides the basis for protective and sustainable management of natural and cultural resources. This legislation includes national level legislation such as the Constitution (section 1.4c(i)), National Environmental Management Act (section 1.4c(iii)), Environmental Conservation Act (section 1.4c(iv)), National Water Act (section 1.4c(v)), Mountain Catchment Areas Act (section 1.4c(vi)), Conservation of Agricultural Resources Act (section 1.4c(vii)), National Heritage Resources Act (section 1.4c(viii)) and the National Forests Act (section 1.4c(ix)) as well as regulations such as the Environmental Impact Assessment regulations (section 1.4c(iv)).

The Cape Nature and Conservation Ordinance, 1974, also applies in this area, owing to the far-reaching statutory powers of the Ordinance relating to conservation of flora and fauna within, and outside of, Provincial Nature Reserves.

The Eastern Cape Tourism Board and the Chief Directorate Environmental Affairs; Eastern Cape, under the Minister of Environmental, Cultural Affairs and Sport (in an arrangement of co-operative environmental governance with relevant national and provincial departments), are tasked with implementation and enforcement of protective legislation and agreements. Where the Provincial Administration is unable to undertake this responsibility without assistance or where adjudication of management decisions or actions is required, for example in the case of a conflict of interest, the relevant National Department may be called upon to implement or enforce the requisite protective measures.

#### **9.4d Agency with management authority**

The agency with management authority for Baviaanskloof is the Game Reserve and Conservation Division of the Eastern Cape Tourism Board, in association with the Chief Directorate Environmental Affairs; Eastern Cape. For further details refer to section 1.4d.

Privately-owned Mountain Catchment Area land is currently officially managed by the Chief Directorate Environmental Affairs; Eastern Cape.

#### **9.4e Level at which management is exercised**

Baviaanskloof is managed at Reserve level by three Reserve Managers, who are in turn supported by a Sub-regional Manager as well as the structures within both the Eastern Cape Tourism Board and the Chief Directorate Environmental Affairs; Eastern Cape.

Refer to sections 1.4e and 9.4k for further information in this regard.

#### **9.4f Agreed plans relating to Baviaanskloof**

The mid-1990s saw the development of the Baviaanskloof protected area. The management concept incorporated setting targets for the promotion, maintenance and management of biodiversity pattern and process. A key conservation strategy, to consolidate and expand the western sector of Baviaanskloof, was initiated by the Chief Directorate Environmental Affairs; Eastern Cape in 1997. This concept involves the outright purchase of the 56 000 ha of private land flanking the Baviaanskloof River. This area, which includes tracts of land suitable for large indigenous mammals, is proposed for zoning as a nature-based tourism destination. A second component of the proposal is the creation of a sustainable, hunting and nature tourism-based economy on about 20 000 ha to the north of the existing Baviaanskloof protected area. Here private tenure would continue and landowners would be encouraged to pool resources for management and tourism benefits using the “conservancy” model (refer to section 1.4b(v)).

The first priority is the expansion and consolidation of the western sector. The next priority should be the expansion northwards into the Nama-Karoo and southwards to the Kouga River. Since an outstanding priority, in this largest of the South African Provinces, is to provide work opportunities for local communities, such initiatives are planned to include explicit targets for job creation and the concomitant development of other socio-economic opportunities.

Exciting plans, which propose to consolidate and expand the existing Baviaanskloof protected area into a mega-reserve covering some 500 000 ha, are well under way. Known as the Greater Baviaanskloof Project (GBP), this project aims to realize the conservation-, tourism- and water catchment potential of the area. A Memorandum of Understanding between the national Ministers for Environmental Affairs and Tourism; Water Affairs and Forestry; and, Land Affairs; and the Eastern Cape Provincial MEC for Economic Affairs, Environment and Tourism has been drafted and is awaiting signature by all parties. This Memorandum of Understanding includes an Institutional Framework for implementation of the GBP, as well as details for the constitution of a fully representative Steering Committee for the planning, approval and implementation of the GBP. National, Provincial and Local levels of government are represented on this committee, as are nominated representatives from civil society (e.g. non-government or civic-based organisations).

Such an expanded conservation-oriented area should allow ecological processes to continue indefinitely, sustaining evolutionary processes and resulting in ongoing survival and speciation of both plants and animals. In short, the aim is to identify a conservation-dedicated area that will have an enhanced evolutionary future. The expanded reserve has the potential to provide habitat for 46 medium- and large-sized mammal species. These would represent almost the full complement of mammals that occurred naturally within the Cape Floral Region (refer to Boshoff *et al.*, 2000). The recent grant (approved in principle during 2001) of one million dollars from the Global Environmental Facility will aid this process immensely.

A Tourism Development Plan for Baviaanskloof (refer to Appendix 2) has been developed to direct the development of tourism possibilities in the area in the short- and longer term. The vision for this plan is influenced by factors which include marketing opportunities; zonation for recreational and tourism opportunities; and, the intensity of allowable development within and surrounding the Baviaanskloof protected area.

Refer to section 1.4f for further details of overarching plans, which affect this area and further details may be found in Boshoff *et al.* (2000) in Volume 3.

#### **9.4g Sources and levels of finance**

Currently, primary funding is provided through allocated annual budgets as described in section 1.4g, while some revenues are generated through accommodation, entry fee tariffs and lucrative game auctions.

Further sources of funding have been received over the past decades from private organisations such as the World Wide Fund for Nature – South Africa (WWF-SA) - for purchasing private land to augment the core protected area. Refer to Boshoff *et al.*, 2000 for further details in this regard. More recently, the Global Environmental Facility have approved in principle a donation of one

million dollars for the conservation of Baviaanskloof, in recognition of this protected area's cultural and natural heritage significance.

Refer to section 1.4g for further detail in this regard.

#### **9.4h Sources of expertise and training**

Refer to section 1.4h for information in this regard.

#### **9.4i Visitor facilities and statistics of Baviaanskloof**

Geelhoutbos, situated in the central part of Baviaanskloof, has five wooden chalets, a supervisor's residence and staff quarters (shortly to become a chalet) for visiting officials. Each bungalow contains six beds and the staff-quarters contains eight beds (total of 38 bed nights). All units have self-catering facilities and are fully booked over weekends and holidays. Due to limited space and visitor carrying capacity, no further development is planned in the immediate vicinity of the existing infrastructure.

Rooihoek and Doodsklip are wilderness-style camping sites (used by anglers and hikers) next to the Kouga River at the upper end of the impounded water of the Kouga Dam. A maximum of thirty people (five groups with a maximum of six people) are allowed at each of the two campsites. Camping facilities include only basic infrastructure such as fireplaces and toilets. The area is ideal for the typical eco-tourist.

Some 5 400 visitors (not including day visitors) passed through Baviaanskloof between January and August 2000.

More tourism facilities are planned and the maintenance of existing and future tourism infrastructure is an important management priority. Sites that have been identified for future tourism development include Poortjies, Komdomo, De Doorns, Goedehoop, Apieskloof and Akkerdal.

#### **9.4j The Baviaanskloof management plan and statement of objectives**

A copy of the Management Plan for the Baviaanskloof protected area is provided in Appendix 2. The management objectives for Baviaanskloof are:

- conservation of a pristine mountain landscape and its great diversity of habitats with associated plant and animal species. Conservation of the area in such a way that the ecological processes occur as naturally as possible;
- establishment and maintenance of a proclaimed Wilderness Area in the Eastern Cape, which will form part of a national wilderness network;
- implementation of a biosphere reserve concept in the area with Baviaanskloof forming the core of a larger conservation-dedicated area, which includes adjacent private land;
- conservation of the Mountain Catchment Area for the provision of clean water to local consumers and the Port Elizabeth metropolitan area on a long-term basis;
- provision for a broad spectrum of educational and recreational opportunities aimed at appropriate use of wilderness;
- significant contribution to the quality of life of local inhabitants by involving them with tourism;
- conservation of cultural heritage from the pre-historic and historic periods; and,
- promotion and creation of appropriate research opportunities in the area.

#### **9.4k Baviaanskloof staffing levels**

Three Reserve Managers are located within Baviaanskloof in the Cockscomb, Formosa and Baviaanskloof sectors. They are supported by a Sub-regional Manager, Mr Jan Kapp and a Deputy Director of Environment for the Western Region, Mr Leon Els, who are based in Port Elizabeth. These managers report to a Director based in the provincial capital at Bisho.

The reserve manager of the Baviaanskloof Sector is Derek Clarke and the Cockscomb manager is LD van der Merwe. Their address is PO Box 218, Patensie, 6335, while the manager at Formosa is Hein Gerber and his address is PO Box 117, Joubertina, 6410.

The staff, comprising some 75 permanent personnel, include field rangers, administrative staff and general workers, the latter supervised by a sector foreman in each of the three sectors.

### **SECTION 9.5 FACTORS AFFECTING BAVIAANSKLOOF**

#### **9.5a Development pressures**

##### **9.5a(i) Current extent of land transformation and encroachment on natural areas**

Large areas of adjacent private land (especially on the southern slopes of the Kouga Mountains) are mountainous and are only marginally suited to any type of farming. In recent times there has been a tendency (with the encouragement of Chief Directorate Environmental Affairs; Eastern Cape) for private landowners, neighbouring the protected area, to declare their land as private nature reserves.

Demands on natural resources in the upper Baviaanskloof area are further increased by plans to extend livestock grazing areas, which might be accompanied by frequent burning of mountain vegetation to stimulate grass regrowth at the expense of fynbos.

##### **9.5a(ii) Illegal or unsustainable resource use**

With the increasing demand for honeybush tea (*Cyclopia* spp.) from the Cape Floral Region, some private landowners in the Baviaanskloof environs are considering harvesting these plants for commercial purposes. Currently the demand outstrips supply and this may lead to overexploitation of natural populations. Furthermore, the current initiative to establish honeybush tea orchards could see the loss of large tracts of pristine fynbos vegetation and valuable water catchment areas.

##### **9.5a(iii) Threats due to non-sustainable activities outside the protected areas**

Overstocking with domestic livestock is still common on some private properties in the area, especially in the western sector, which is considered to be suitable for expanding the Baviaanskloof protected area. This overstocking, resultant overgrazing and increased erosion, is leading to increased siltation of river systems, thereby reducing water quality in the rivers. Further, large-scale transformation of the course of the Baviaanskloof River by farmers in the western sector has led to the drainage of wetland areas in the valley, with negative impacts on ecosystem functioning.

A number of privately sponsored developments have taken place, or are in proposal stage, for areas bordering on the Baviaanskloof protected area. Some of these (e.g. private nature reserves and tourist lodges that have management goals consistent with those of the wilderness area management objectives of Baviaanskloof) pose no threat. Other proposed developments, however, if not appropriately located and sustainably managed to protect the environment, may present problems for future consolidation and expansion of the protected areas.

## **9.5b Environmental pressures**

### **9.5b(i) Alien invasive organisms**

The occurrence of alien vegetation is relatively limited in the area. The upper catchments of the Rachels-, Huis-, and Drinkwaterkloof have infestations of *Acacia mearnsii* and alien-clearing is in process in these areas. A number of other alien invasives including *Hakea sericea*, *Acacia saligna* and *Nerium oleander* occur in small populations in various habitats in the area. The Kouga River requires annual clearing of alien vegetation, owing to seed being washed in from adjacent private land. *Azolla filiculoides* (an invasive water weed) is present in some of the river courses.

Invasive alien trees negatively impact bank stability of river channels and block watercourses. Even though the present management authority has, in association with DWAF's Working for Water Programme (refer to section 1.4f), made good progress with eradication of alien plants, some areas remain infested. As is the case with other alien-invaded areas, until these are eradicated, with regrowth controlled, they continue to pose a threat to the biodiversity of the protected area.

Re-introduction of game to private land surrounding Baviaanskloof is potentially an environmentally positive step, however species not indigenous to the area have been introduced, including impala (*Aepyceros melampus*), bontebok (*Damaliscus dorcas dorcas*) and blue wildebeest (*Connochaetes taurinus*). These species may have negative ecological impacts, which may further have economic consequences through the impact on the conservation and tourism value of the land.

### **9.5b(ii) Fire**

Since 1986, the fire management policy for this area has been to adopt a "hands-off" approach to natural fires, phasing out prescribed burning, while ensuring that natural fires, within Baviaanskloof, do not pose a threat to neighbouring landowners (Boshoff *et al.*, 2000). Removal of alien invasive vegetation has greatly improved fire management for this protected area and, where possible, fires started on adjacent privately-owned land, are prevented from entering Baviaanskloof. Unseasonal fires entering from neighbouring land nonetheless remain a threat to this vast area, particularly during times of drought.

### **9.5b(iii) Erosion**

Erosion following fires, particularly the hotter fires burning through stands of high biomass alien vegetation can leave an erosion-prone landscape. Steady removal of alien invasive stands has reduced this threat enormously. Nonetheless, a number of roads created during the 1970s to improve access to some of the more remote sections of Baviaanskloof, have become sources of erosion, requiring upgrading and rehabilitation in order to prevent further erosion.

## **9.5c Natural disaster preparedness**

The main natural disasters in this area are flood-related. The position of all visitors is monitored so that collaborative efforts by local and regional disaster management teams, peace officers and emergency services, can ensure the safety of stranded tourists (either by helicopter or appropriate emergency vehicles). Refer to section 1.5c(ii) for further details in this regard.

## **9.5d Visitor / tourism pressures**

The main threat to Baviaanskloof is one of carrying capacity. Recent demands for visitor services within the protected area exceed the existing supply of camping and picnicking sites. This is partly attributable to the fact that much of the mountainous protected area is unsuitable for large picnic and camping sites.

A long-term plan is being implemented, which entails buying low-lying, less conservation-worthy land between the mountains. This land is more suitable for the building of picnic areas, camping sites and huts, thereby keeping visitor facility pressures away from the mountainous areas.

### **9.5e Number of inhabitants within Baviaanskloof**

Permanent staff members and their families are the only inhabitants within the three sectors of the Baviaanskloof protected area, a total of 93 people.

## **SECTION 9.6 MONITORING**

Specific monitoring projects for Baviaanskloof include:

- Monitoring of alien plant distribution and eradication;
- Monitoring of Cape mountain zebra (*Equus zebra zebra*) and eland (*Taurotragus oryx*) re-establishment;
- Monitoring of visitor numbers and visitor impacts;
- Rainfall monitoring; and,
- Water quality monitoring of the Kouga River and Kouga Dam<sup>209</sup>

### **9.6a Key indicators**

Key indicators applied for the various monitoring programmes include:

#### **9.6a(i) Alien plant distribution and eradication**

- Area (in hectares) cleared of alien vegetation.
- Indigenous plant re-establishment (species diversity of indigenous vegetation in alien-cleared areas measured).

#### **9.6a(ii) Faunal re-establishment programmes**

- Number of offspring and survival rate; deaths (natural and unnatural causes) of Cape mountain zebra (*Equus zebra zebra*) and eland (*Taurotragus oryx*) recorded every three months.

#### **9.6a(iii) Visitor numbers and visitor impacts**

- Number of visitors per sector/season.
- Impact of visitors on facilities (path maintenance, facility upgrading, etc.).

#### **9.6a(iv) Rainfall monitoring**

- Rainfall measured (mm) in each sector on two of the aspects (north and south facing slopes).

#### **9.6a(v) Water quality monitoring of the Kouga River and Kouga Dam**

- Water quality measured by the Gamtoos Irrigation Board (specific details of water quality indicators not available).

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<sup>209</sup> Water monitoring is done by the Gamtoos Irrigation Board, a statutory board independent of the Chief Directorate Environmental Affairs; Eastern Cape.



### **9.6b Administrative arrangements for monitoring**

A number of research and monitoring projects are conducted by the reserve management personnel at Baviaanskloof as well as by various research bodies including the Gamtoos Irrigation Board. Geographical Information System (GIS) facilities are available to staff at Baviaanskloof and new data (e.g. water quality data and new plant records) are entered into GIS databases.

All data collected during monitoring exercises is provided to the Head Office at Bisho. This information is assimilated into general records at the Head Office and processed for future budgetary, management and planning requirements for the protected area.

Reserve management personnel (in association with, and supported by, the Sub-regional Manager as well as the Research, Policy Planning and Information Systems Programme and Administration Programme) are responsible for liaison with external monitoring agencies; and/or management-; and/or co-ordination of monitoring programmes within Baviaanskloof.

Monitoring programmes undertaken by institutes or agencies, external to the Provincial Conservation Authorities, are linked to the provincial structures through various means. These include structured reporting channels and structured administrative requirements that include permitting procedures for collection of research material (e.g. plant- or animal specimens for identification or research purposes). These permitting requirements stipulate that researchers must supply information on the specimen/s collected, locality, purpose for which taken, etc. in order to ensure that these data are adequately relayed to the central database of the Eastern Cape Nature Conservation Authorities.

### **9.6c Results of previous reporting**

Previous reporting on the Baviaanskloof protected area is fairly extensive owing to the location of several research and tertiary education institutions within a relatively small radius of the area. These include the JLB Smith Institute of Ichthyology, Universities of Grahamstown and Port Elizabeth (the home of the Terrestrial Ecology Research Unit – refer to Boshoff *et al.*, 2000) and the Albany Museum.

For example, a workshop on the conservation status and management problems of the Kouga-Baviaanskloof (Kerley & Els, 1989) may have provided a stepping-stone to the long-term planning initiatives that are presently unfolding, towards the planning and implementation of the Greater Baviaanskloof Project (refer to section 1.4f), while the current day reporting by for example, Cowling *et al.* (1999a) and Boshoff *et al.* (2000) is paving the way towards an exciting and sustainable future for this extraordinary area.

Refer to section 1.6c for further information in this regard.

## GLOSSARY OF TERMS

**Berg Wind** – The vernacular term for a hot, dry wind similar to the North American Chinook Wind. They are most frequent in winter, resulting from winds from the higher interior blowing coastward, and which increase in temperature with descent.

**Biodiversity** – A broad term denoting variability among living organisms and the ecological complexes in which they are found. Including landforms and habitats, the term further embraces ecosystems, taxa, and genetic variation.

**Broad Habitat Unit** – (*sensu* Cowling *et al.*, 1999a) a category of vegetation, or more correctly, a land class that is a surrogate for vegetation pattern. This biodiversity entity was developed by the CAPE Project and derived by intersecting layers of Homogeneous Climate Zones, geology and topography in a geographic information system, and guided by recognised vegetation types (*sensu* Low and Rebelo, 1996).

**Biome** - A broad vegetation category, characterised by the mix of plant life-forms and also climatic features. In South Africa these are the Fynbos, Succulent Karoo, Nama-Karoo, Grassland, Savanna, Forest and Thicket biomes (*sensu* Rutherford & Westfall, 1986).

**CAPE Project** - In 1998, a project called the Cape Action Plan for the Environment (CAPE) was started to conserve the terrestrial, marine and freshwater biodiversity of the Cape Floral Region. CAPE is funded by the Global Environmental Facility (GEF) and is managed by the World Wide fund for Nature (WWF-SA) in partnership with scientists, conservation agencies, government departments and non-government organisations (NGOs). The aims of this two-year project were: -

- To identify conservation priorities;
- To develop a long-term strategy and vision;
- To draft a 5-year action plan; and,
- to identify funding sources.

An assessment of biodiversity conservation within the Cape Floral Region was completed and integrated with legal, policy, institutional, financial, social, and economic aspects in the region. Based on this situation assessment, a strategy that forms the basis for business and implementation plans has been compiled and includes a vision, goal and objectives.

Implementation of this plan began in 2001 and is now called Cape Action for People and the Environment (CAPE).

**Catchment** - Also known as a watershed. The area defined by topography that demarcates the major linked, drainage lines in an area. The Mountain Catchment Areas Act provides for the biodiversity protection, conservation, use, management and control of land situated in mountain catchment areas (refer to section 1.4c(vi)). There are approximately 14 000 km<sup>2</sup> of Mountain Catchment Areas within the Cape Floral Region. These mountain areas have been set aside with several objectives that include water and soil conservation, and appropriate management of fire and alien plants. Mountain Catchment Areas are protected by the Mountain Catchment Areas Act and Mountain Catchment Areas are predominantly state land.

**Conservancy** - An arrangement among neighbouring landowners based on voluntary co-operative environmental management of an area by its surrounding community and users (refer to sections 1.4b(v) and 1.4c(xx)). The aim is more effective conservation and management of the fauna and flora in the area.

**Conservation area** – A broad category used to describe any area (under State- or private ownership) that has natural resource conservation as its primary objective.

**Diversity** – There are various means of measuring the variety of life and nature. Three measures of diversity are referred to in this text:

- **Alpha** diversity refers to the number of taxa in a habitat or homogeneous community;
- **Beta** diversity refers to the change in taxa along habitat gradients; and,
- **Gamma** diversity refers to the change in taxa in similar habitats along geographical gradients.

**Endemism** - In this document, unless otherwise specified, endemism refers to organisms that occur naturally only within the boundaries of the Cape Floral Region. Local endemics are those restricted to a smaller, defined area.

**Fynbos** - The distinctive and species-rich vegetation of the Cape Floral Region, is a shrubland known as fynbos (“fine-bush”). It comprises mainly fine-leaved shrubs such as heaths (especially of the Ericaceae), larger-leaved showy-flowered elements of the Proteaceae, bunches or fields of reed-like Restionaceae, and a diversity of geophytes (bulb-like plants) including, amongst others, the Iridaceae. The proteas and ericas are integral elements of fynbos, while the restios clearly distinguish fynbos from other southern African vegetation types. Fynbos favours the nutrient-poor, coarse, alkaline soils characteristic of the region. Along the coast, on alkaline, marine sands, fynbos occurs in a mosaic with thicket species.

**Hotspots** – Areas that have been identified as important areas for conservation attention. Often these are areas that have above-average concentrations of endemic, threatened or otherwise important species.

**ISEP** - A Precis-based Information System for Endangered Plants, an initiative by the Scientific Services Division of the Western Cape Nature Conservation Board, designed to capture baseline data on **threatened** plant taxa.

**Protected areas** - (c.f. Reserves). In this document the term, protected areas, is used to describe the seven core conservation areas selected to represent the Cape Floral Region in the bid for World Heritage Site listing.

**Renosterveld** – This is a fine-leaved shrubland, which grows on the slightly richer, finer soils of the Cape Floral Region, often on forelands and in valleys. It differs from fynbos in its soil preference, and its low representation of Proteaceae. It is exceptionally rich in geophytic and annual plant species and includes many species of Asteraceae. Growing on richer soils in the accessible lowlands, renosterveld has been mostly destroyed by agricultural activities and persists today only as small fragmented remnants.

**Reserves** - Within this nomination, the term “reserves” is used to describe the conservation-orientated land adjacent to the core protected areas. They include a wide range of conservation land such as private reserves, biosphere reserves, catchments, conservancies, local Municipal reserves *etc.*

**Threatened taxa** – The term threatened species is used specifically to denote those taxa currently listed in various Red Data Books for South Africa or the Southern African Region. It is important to distinguish between those species that are naturally Rare, owing to restricted or limited distribution, and those that are under threat of extinction. Many of the threatened taxa found in the protected areas are naturally Rare. Most of the Red Data Lists are currently under revision, and a number of species are being put forward by various conservation agencies and authorities for a changed IUCN listing, either “upgrading” the status of the species (e.g. from Rare to Vulnerable) or “downgrading” the status (e.g. from Vulnerable to Not Threatened).

**Vlei** – Generic South African term for a perennial or seasonal wetland, encompassing seeps, swamps, marshes, and estuaries.

## GLOSSARY OF ACRONYMS

CAPE Project	Cape Action Plan for the Environment
CFC	Cape Faunal Centre
CFR	Cape Floral Region (also known as the Cape Floristic Region and the Cape Floral Kingdom)
CMA	Cape Metropolitan Area
CMC	Cape Metropolitan Council (now City of Cape Town)
CPNP	Cape Peninsula National Park
CPPNE	Cape Peninsula Protected Natural Environment
DEAT	Department of Environmental Affairs and Tourism
EIS	Environmental Information System
IEMS	Integrated Environmental Management System
GEF	Global Environmental Facility
GIS	Geographical Information Systems
GPS	Global Positioning System
MAR	Mean Annual Rainfall
MTO	Mountain to Ocean (previously SAFCOL – refer below)
Mya	Million years ago
NBI	National Botanical Institute
NGOs	Non-Government Organisations
PAWC	Provincial Administration of the Western Cape
PWD	Public Works Department
SAFCOL	South African Forestry Company Ltd (now MTO – see above)
SAHRA	South African Heritage Resource Authority
SANDF	South African National Defence Force
SANParks	South African National Parks
SPA	South Peninsula Administration
TMACC	Table Mountain Aerial Cableway Company
WCNCB	Western Cape Nature Conservation Board

**Nomination of the Cape Floral Region,  
South Africa,  
as a World Heritage Site**

**Signature on behalf of the State Party**

*Signed:* .....

*Full Name:* .....

*Title:* .....

*Date:* .....

*Place:* .....

**Western Cape  
Nature Conservation Board**

**Scientific Services**

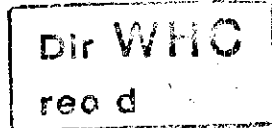
Private Bag 5014, STELLENBOSCH 7599  
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Tel: (021) 866 8000 / Fax: (021) 866 1523  
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Ref.: JNO25/6/11/2(e)

Enquiries: Guy Palmer

Date: 3/2/2004

Mr. F Bandarin  
The Director  
UNESCO World Heritage Centre  
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75352 Paris 07 SP

Dear Mr Bandarin

**EDITORIAL CORRECTION TO THE TEXT OF THE CAPE FLORAL REGION NOMINATION**

During the site inspection by Jim Thorsell the following editorial errors, relating to criteria iii, were noted.

Although clearly stated on page 18, 1.2d "Criteria under which inscription is proposed, and justification for inscription" that the eight sites satisfy two criteria, namely ii and iv, on page 5, section 1.2, at the bottom of the page, it states that "The nominated sites fulfill three of the criteria....."

This paragraph should read, "The nominated sites fulfill two of the criteria for inclusion in the World Heritage List as a natural property, namely criteria (ii) and (iv) defined in Paragraph 44.(a) of UNESCO's Operational Guidelines for the Implementation of the World Heritage Convention (refer to 1.2d)."

On page 10, the last bullet under 1.2a, "the CFR contains a large variety of outstanding.....unsurpassed in global terms." Should be deleted.

On page 14, the second bullet under 1.2c(i) "the natural properties.....of the aesthetic value." Should also be deleted.

As far as I have been able to ascertain these are the only alterations that are required. A corrected CD version will be supplied.

My sincere apologies for this oversight and the inconvenience that it is causing.

Yours sincerely

Guy Palmer

pp Manager: Scientific Services

# **World Heritage Site Nomination: Plant and vertebrate distributions in relation to nominated World Heritage Sites in the Cape Floristic Region, South Africa**

*Report from A.T. Lombard, Conservation Systems, 25 October 2000  
Client: Common Ground, Ant Maddock*

## **Introduction**

Seven sites in the Cape Floristic Region (CFR), South Africa, are currently being nominated for World Heritage Site status (see Figure 1). Fairly complete plant, and less complete vertebrate, distribution databases exist for the CFR, and these were overlaid on the seven sites in a Geographic Information System (GIS, ArcView), in order to determine how many of these species are represented within the sites. The seven sites were also overlaid on two further subsets of maps: (i) maps of species richness, and (ii) maps of minimum sets of reserves for species.

## **Methods**

### **Databases**

All five databases outlined below represent indigenous species only. All distribution data were clipped to the area of the CFR (Figure 1).

(i) All species (QDS scale)

Selected plant species (classified to the subspecific level). Scale of distributions is a quarter-degree square (QDS, 15' x 15'), or an eighth-degree square (EDS, 7 ½ x 7 ½'). This database is not a complete list of plants for the CFR, but it does represent 3298 taxa.

<i>Species</i>	<i>Source</i>	<i>Scale</i>	<i>No. Records</i>	<i>No. Taxa</i>
Restios	Peter Linder (UCT*)	QDS	3822	367
Ericas	Fernando Ojeda (UCT)	QDS	5274	540
Other species	Tony Rebelo (NBI**)	QDS	14764	1791
Red data book (RDB) species	John Donaldson (NBI)	QDS	4386	1587
Proteas	Tony Rebelo (NBI)	EDS	9737	349
These five data sets were combined give a final data set of 24436 distribution records, representing 3298 taxa and 218 QDSs.				
All species	All of the above	QDS	24436	3298

\*University of Cape Town

\*\*National Botanical Institute

(ii) RDB species (QDS scale)

From the All species database, a subset of just the RDB species was created, to give a final dataset of 4949 distribution records, representing 1588 taxa and 215 QDSs.

(iii) Endemic families (QDS scale)

From the All species database, a subset of just the taxa that belong to CFR-endemic families was created, to give a final dataset of 894 distribution records, representing 111 taxa and 126 QDSs.

(iv) Proteas (point localities)

Protea species (classified to the subspecific level). Scale of distributions is point localities. Total number of distribution records = 183322, representing 364 taxa.



(v) Vertebrates (point localities)

Selected vertebrate species (classified to the subspecific level). Scale of distributions is point localities.

<i>Species</i>	<i>Source</i>	<i>No. Records</i>	<i>No. Taxa</i>
Freshwater Fish	CNC*, Paul Skelton (JLB**), Jim Cambray (AM <sup>+</sup> )	3195	121
Amphibians	CNC	1793	48
Reptiles	CNC, Bill Branch (PEM <sup>§</sup> )	3492	176
These three data sets were combined give a final dataset of 8480 distribution records, representing 345 taxa.			
Vertebrates	All of the above	8480	345

\*Cape Nature Conservation

\*\*J.L.B. Smith Institute of Ichthyology

+Albany Museum

§Port Elizabeth Museum

### **Nominated World Heritage Sites (WHS)**

A GIS (ArcView) shape file of the seven sites was provided by Annelise le Roux of Cape Nature Conservation (Figure 1). At present, a decision has not been made whether to include the Baviaanskloof Wilderness Area or not. The results reported here thus deal with both situations.

Owing to the QDS scale of datasets (i) – (iii), it was necessary to overlay the WHS on a QDS grid in the GIS, in order to determine which QDSs “contained” WHS or not. This was achieved by overlaying the WHS map on a map of untransformed land in the CFR, obtained from the CAPE project (Cowling *et al.* 1999). Untransformed land is defined as land that is not transformed by cultivation, plantations, urbanization, or high-density aliens. Thereafter, the percentage of untransformed land taken up by any WHS in any QDS was calculated. If this percentage was  $\geq 30\%$ , then the QDS was deemed to “contain” a WHS, and the species list for that QDS was deemed to “occur” in the WHS.

A total of 43 QDSs contained portions of WHS, but only 16 of these QDSs had  $\geq 30\%$  of their untransformed areas made up by WHS, and were thus deemed to “contain” WHS for the species analyses (Figure 2).

Owing to the point locality scale of datasets (iv) – (v), the WHS could simply be overlaid on the point distribution data, in order to produce a more accurate list of species that occur within WHS.

Table 1 lists the total land area of the CFR (both transformed and untransformed), and the total area that falls within the nominated WHS.

Table 1. Area of the CFR, and the total area that falls within the nominated WHS.

<i>Area</i>	<i>Area (km<sup>2</sup>)</i>	<i>% Area</i>
Total area of CFR	122589.54	100.00
Total area in WHS (including Baviaanskloof)	5415.62	4.42
Total area in WHS (excluding Baviaanskloof)	3625.34	2.96

### **Species richness analysis**

Two species richness analyses were completed, for two of the plant datasets at a QDS scale (All species and RDB species). A third analysis was completed for the Protea database at an EDS scale (a subset of the All species database). Numbers of different species were calculated in each QDS or EDS, and plotted over a map of the nominated World Heritage Sites.

It is important to note that sites of species richness are not always representative of the full complement of species in an area. In order to represent the full complement of species, reserve-selection analyses must be undertaken to provide a minimum set of sites that would represent all species. These analyses are described below.

### **Minimum set analysis**

A reserve-selection analysis was run on the same three datasets used for the species richness analysis. The reserve-selection algorithm used was based on summed rarity (Rebelo & Siegfried 1992). It selects the minimum number of QDS (or EDS) that would represent every species in the database. The results of minimum-set analyses do not have to coincide with species richness hotspots. The minimum set of QDS/EDS for each analysis was subjected to an endemism-vulnerability analysis (see Lombard *et al.* 1999 for methods), in order to rank them in an order for implementation. A rank = 1 indicates the most important cell. The results of these analyses were plotted over a map of the nominated World Heritage Sites.

## Results and Discussion

### Species representation within nominated WHS

Table 2 lists the number (and %) of species in five database subsets that occur in the CFR, and in the nominated WHS. The WHS represent almost half of the plant species analysed here for the CFR, even though they comprise less than five % of the CFR's area (Table 1). Almost one third of the Red Data Book species analysed here occur within the WHS, and two thirds of the species in CFR-endemic families also occur within the WHS. If point locality data are used, almost 60% of the proteas in the CFR occur in WHS. This result emphasizes the fact that the QDS plant data analyses may have underestimated the number of plants within WHS, rather than overestimated them. The vertebrate point locality data show that half of the vertebrates species analysed here occur in the WHS. The WHS thus perform exceptionally well at species representation in the CFR.

Table 2. The number (and %) of species in five database subsets that occur in the CFR, and in the nominated WHS.

<i>Database</i>	<i>Scale of data</i>	<i>Total no. taxa in CFR</i>	<i>Total no. taxa in WHS (including Baviaanskloof)</i>	<i>% of taxa in WHS (including Baviaanskloof)</i>	<i>Total no. taxa in WHS (excluding Baviaanskloof)</i>	<i>% of taxa in WHS (excluding Baviaanskloof)</i>
All species	QDS	3298	1579	48%	1520	46%
RDB species	QDS	1588	440	28%	417	26%
Endemic families	QDS	111 (taxa in CFR-endemic families)	74	67%	74	67%
Proteas	Points	364	215	59%	204	56%
Vertebrates	Points	345	169	49%	160	46%

### **WHS versus sites of species richness**

Figure 3 shows the overlay of the nominated WHS with a species richness analysis, where the number of different plant species (taken from the All species database) within a QDS are plotted for the CFR. The Hottentot's-Holland Complex falls within a species richness hotspot. Four other sites (Cederberg Wilderness Area (WA), Grootwinterhoek WA, De Hoop Nature Reserve and Grootvadersbosch WA) fall within the second richest areas, whereas the Swartberg Complex and the Baviaanskloof WA fall in poorer areas.

Figure 4 shows the overlay of the WHS with a Red Data Book plant species richness analysis (taken from the Red Data Book plant species database). Again, the Hottentot's-Holland Complex falls within a species richness hotspot. Three other sites (Cederberg WA, Grootwinterhoek WA and De Hoop Nature Reserve) fall within the second richest areas, followed by the Swartberg Complex, the Grootvadersbosch WA and the Baviaanskloof WA, which fall in poorer areas.

Figure 5 shows the overlay of the WHS with a Protea species richness analysis (taken from the All species plant database, at an EDS scale). Again, the Hottentot's-Holland Complex falls within a species richness hotspot. Four other sites (Cederberg WA, Grootwinterhoek WA, De Hoop Nature Reserve and Grootvadersbosch WA) fall within the second richest areas, followed by the Swartberg Complex and the Baviaanskloof WA, which fall in poorer areas.

### **WHS versus sites selected by a minimum set reserve-selection analysis**

Figure 6 shows the overlay of the nominated WHS with a minimum set analysis of the All species database. Five of the WHS (Hottentot's-Holland Complex, Cederberg WA, Grootwinterhoek WA, De Hoop Nature Reserve and Grootvadersbosch WA) fall within the top 25% of the minimum set QDS (ranked according to implementation order). There is less overlap between the minimum set and the Swartberg Complex and the Baviaanskloof WA.

Figure 7 shows the overlay of the WHS with a minimum set analysis of the Red Data Book plant species database. Four of the WHS (Hottentot's-Holland Complex, Cederberg WA, Grootwinterhoek WA and De Hoop Nature Reserve) fall within the top 25% of the minimum set QDS (ranked according to implementation order). The Grootvadersbosch WA falls in the top 50%. Again, there is less overlap between the minimum set and the Swartberg Complex and the Baviaanskloof WA.

Figure 8 shows the overlay of the WHS with a minimum set analysis of the EDS Protea database. There is a good overlap of the minimum set with five of the WHS (Hottentot's-Holland Complex, Cederberg WA, Grootwinterhoek WA, De Hoop Nature Reserve and Grootvadersbosch WA), and less overlap occurs with the remaining two WHS (the Swartberg Complex and the Baviaanskloof WA).

## Conclusion

Based on the analyses reported here, the nominated WHS are exceptionally well placed in the CFR to capture plant species diversity. They can be ranked in the following order of importance:

1. Hottentot's-Holland Complex
- 2-3. Cederberg WA and Grootwinterhoek WA
- 4-5. Grootvadersbosch WA and De Hoop Nature Reserve
6. Swartberg Complex
7. Baviaanskloof WA

Please note that these results are for selected plant species only, and do not reflect the total biodiversity across all taxa.

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## **Acknowledgements**

The following people are thanked for providing datasets: Prof. Peter Linder of the Bolus Herbarium, Botany Department, University of Cape Town; Drs John Donaldson and Tony Rebelo of the National Botanical Institute; Dr Paul Skelton of the J.L.B. Smith Institute of Ichthyology; Dr Jim Cambray of the Albany Museum; and Dr Bill Branch of the Port Elizabeth Museum. I thank the CAPE Project for use of the Transformed land data layer, and thanks to Nicholas Cole for help with mapping.

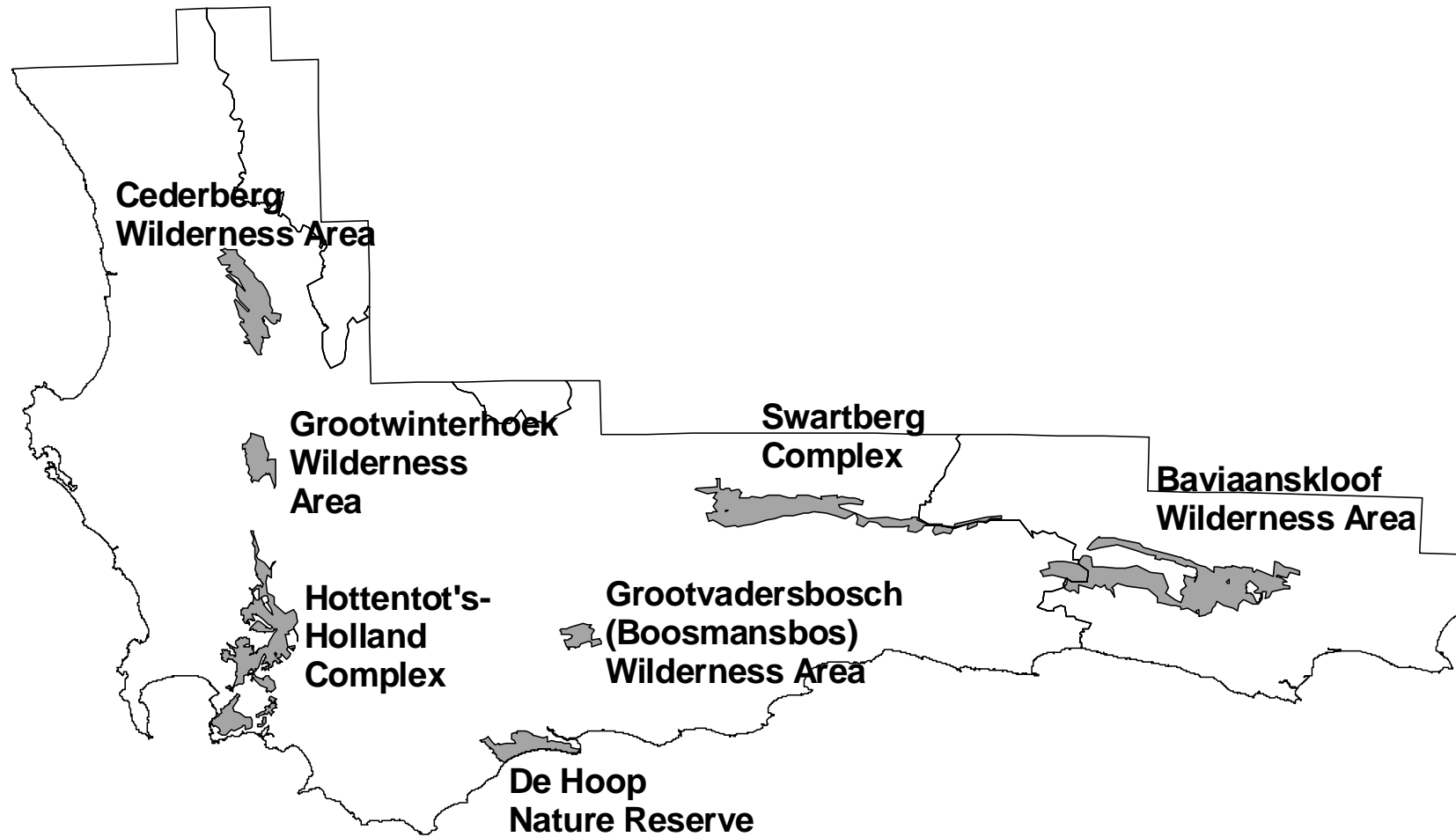


Figure 1. The Cape Floristic Region, South Africa, with the seven sites being nominated for World Heritage Site status.

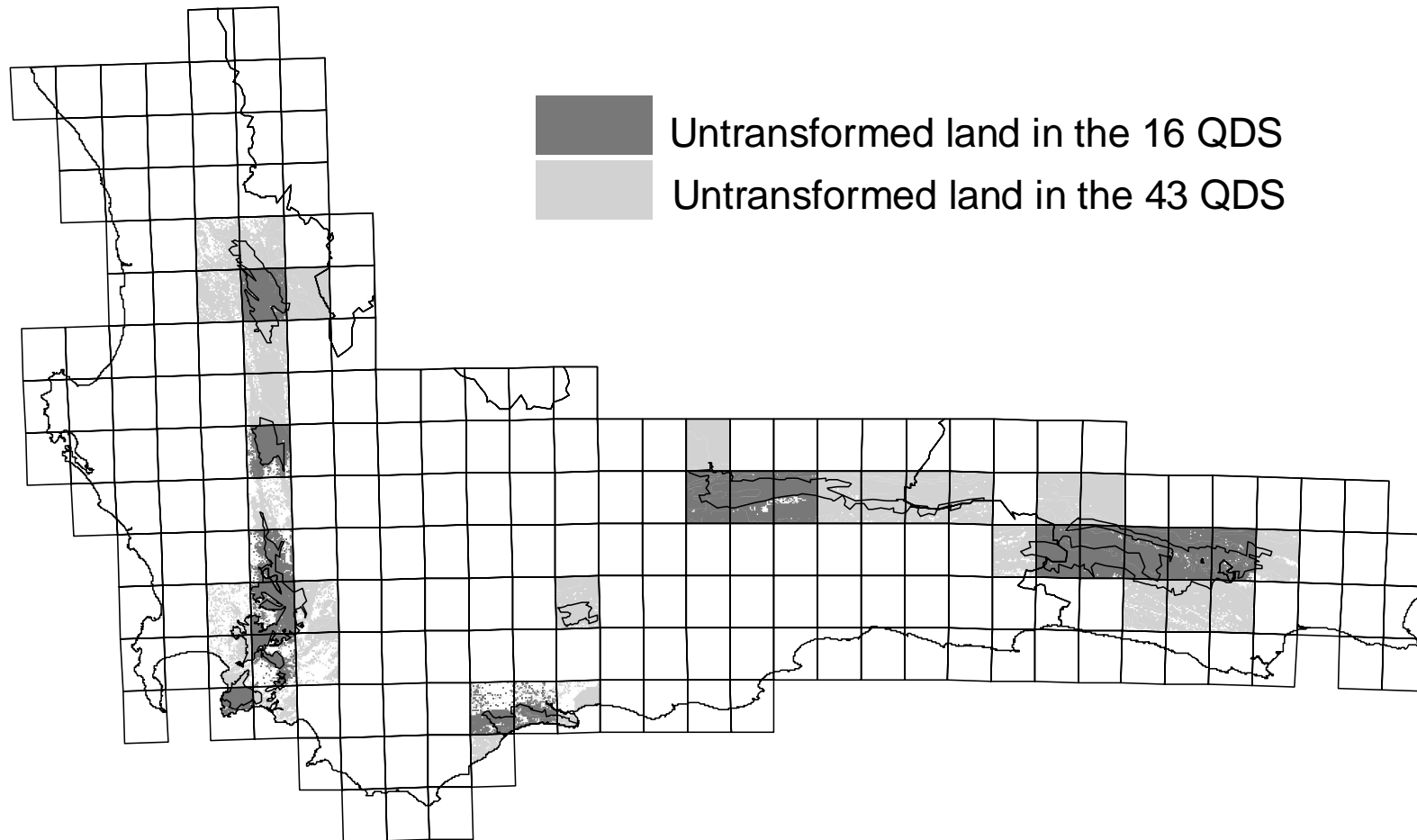


Figure 2. Untransformed areas of the 43 QDS that contain any of the seven nominated WHS, and the 16 QDSs that have  $\geq 30\%$  of their untransformed areas made up by a WHS.



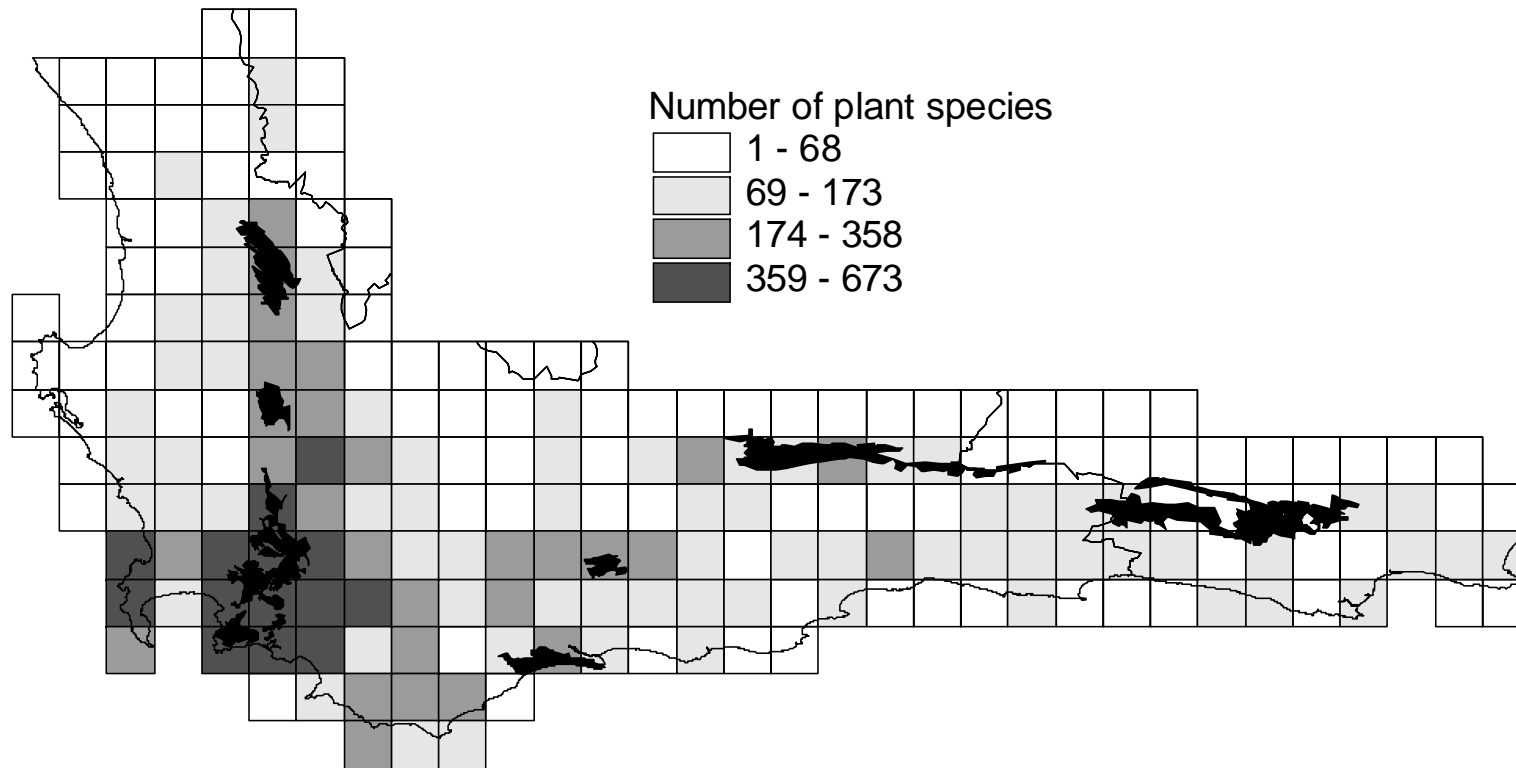


Figure 3. Species richness, per QDS, for the All Species plant database, and the position of the nominated World Heritage Sites (in black).

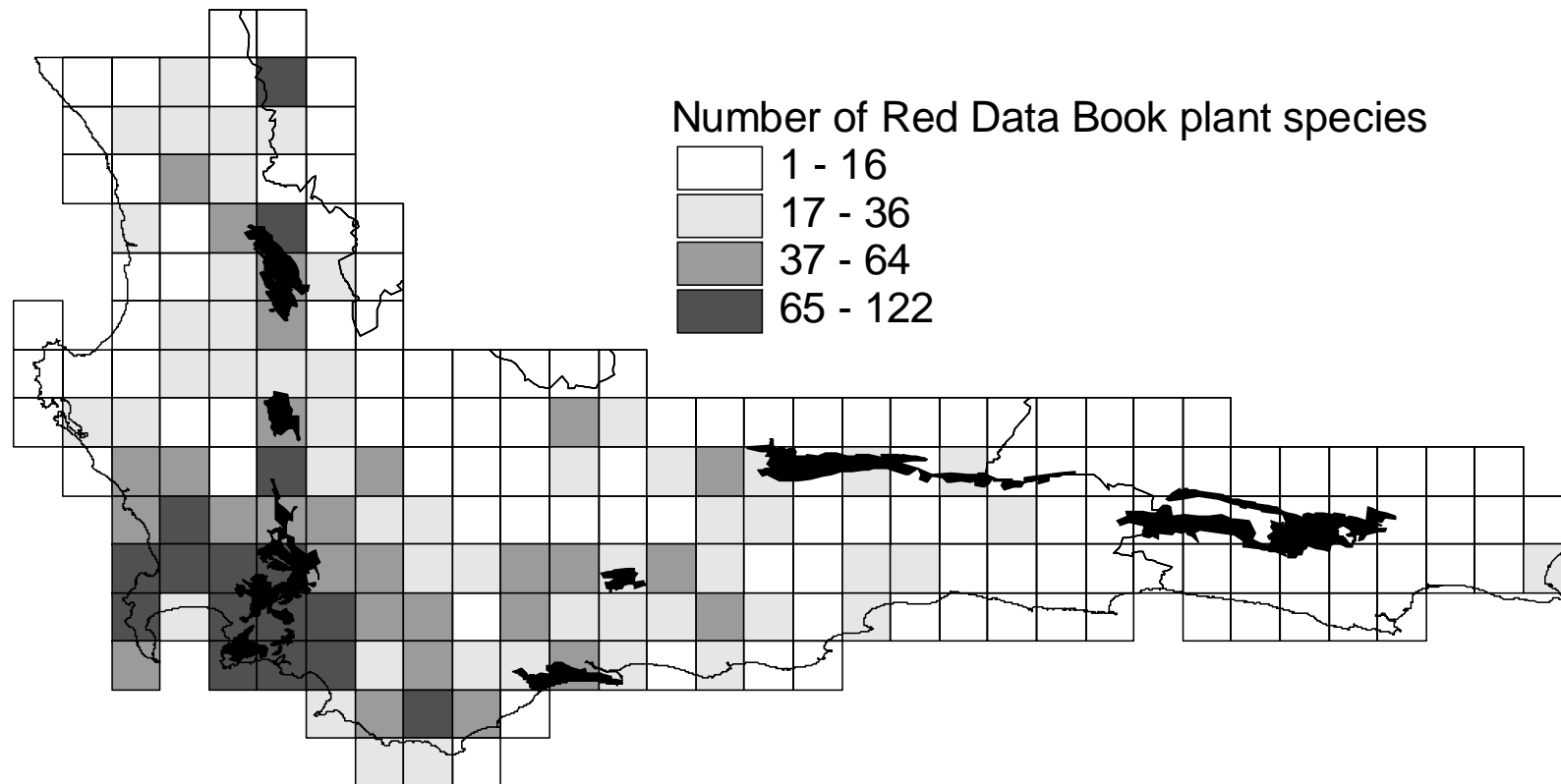


Figure 4. Species richness, per QDS, for the Red Data Book plant species database, and the position of the nominated World Heritage Sites (in black).

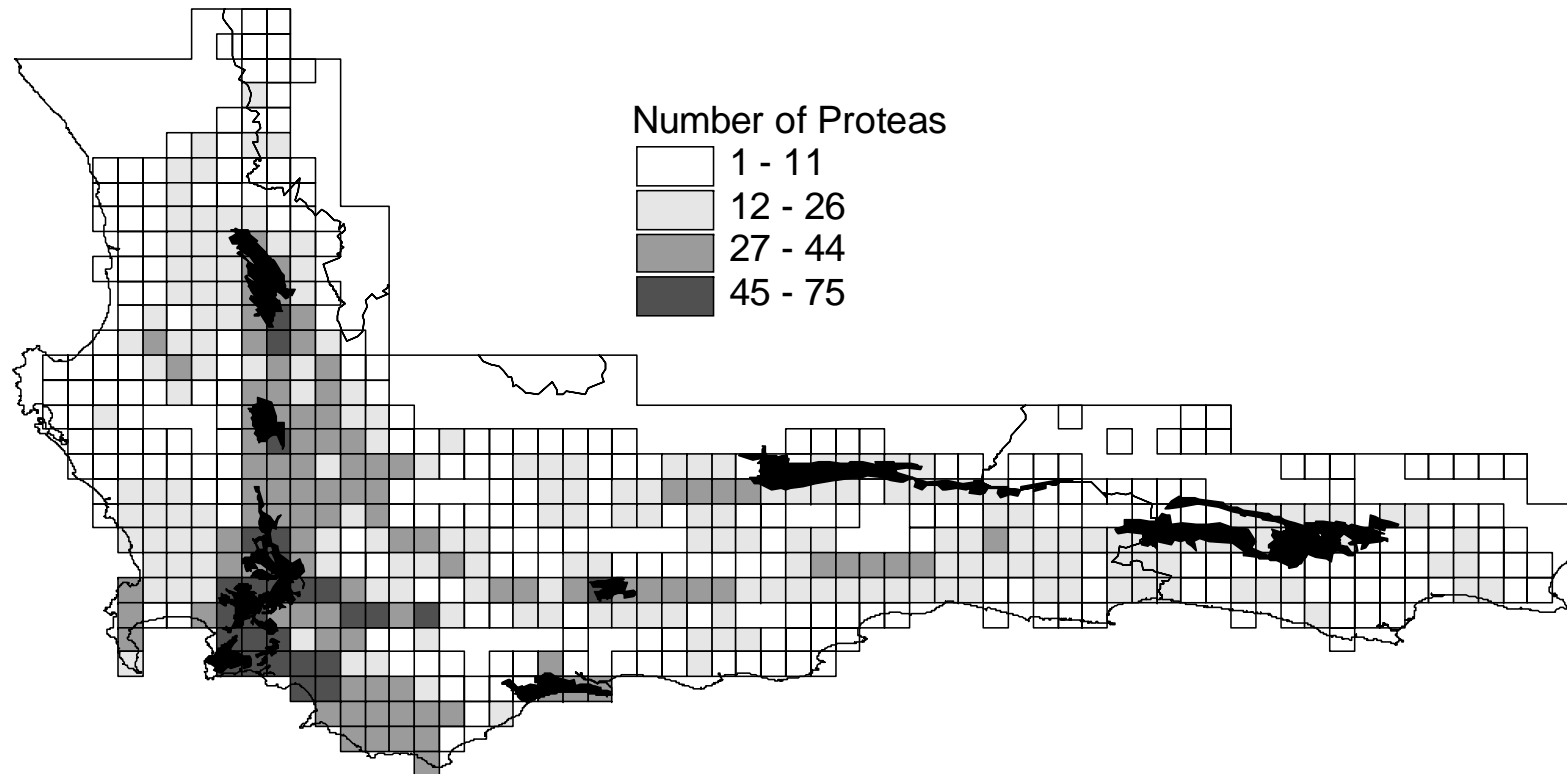


Figure 5. Species richness, per EDS, for the EDS Protea database, and the position of the nominated World Heritage Sites (in black).

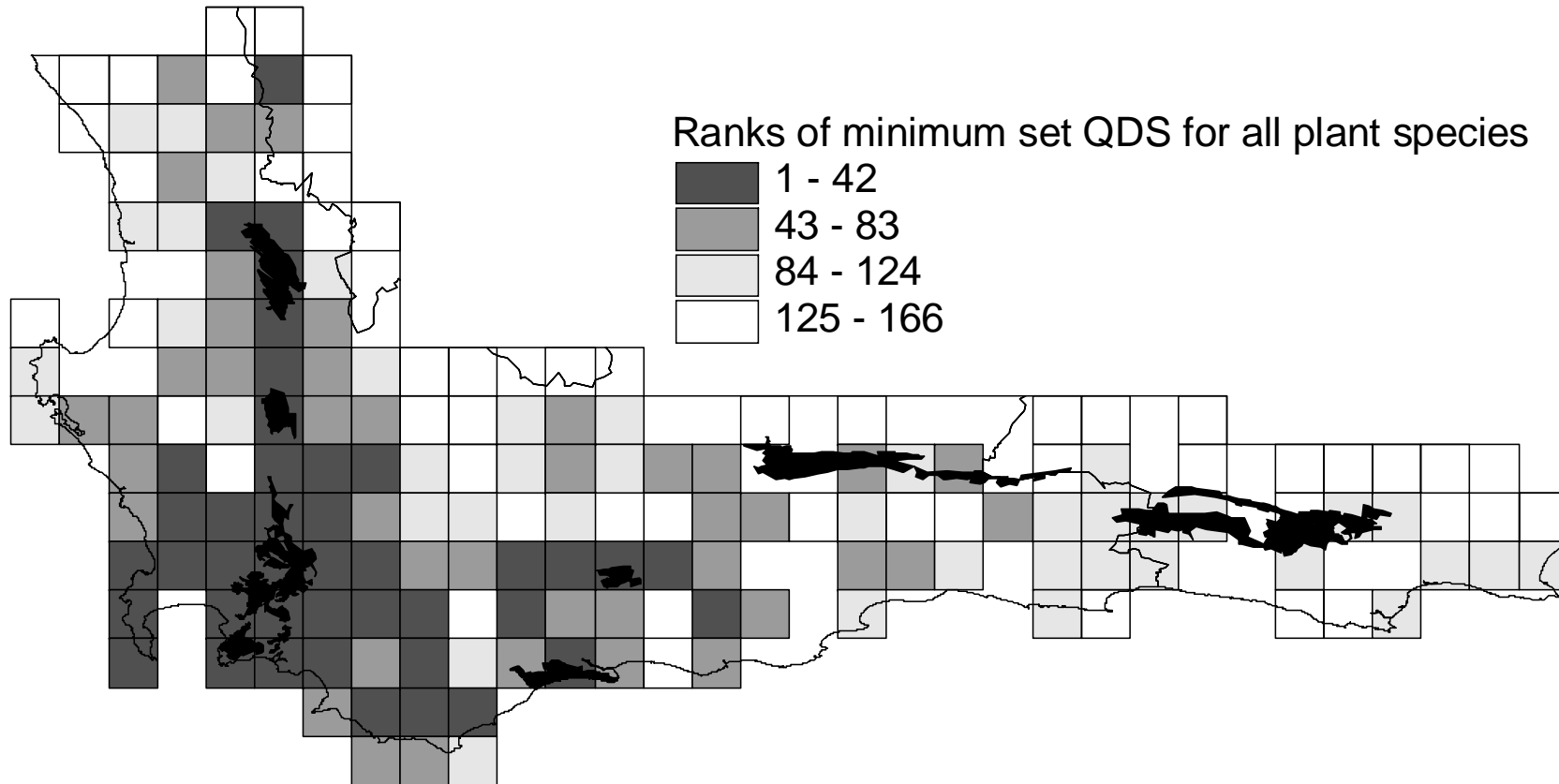


Figure 6. The 166 QDS selected by the minimum set analysis for the All species plant database, and their ranks of importance (implementation order). The nominated World Heritage Sites are shown in black.

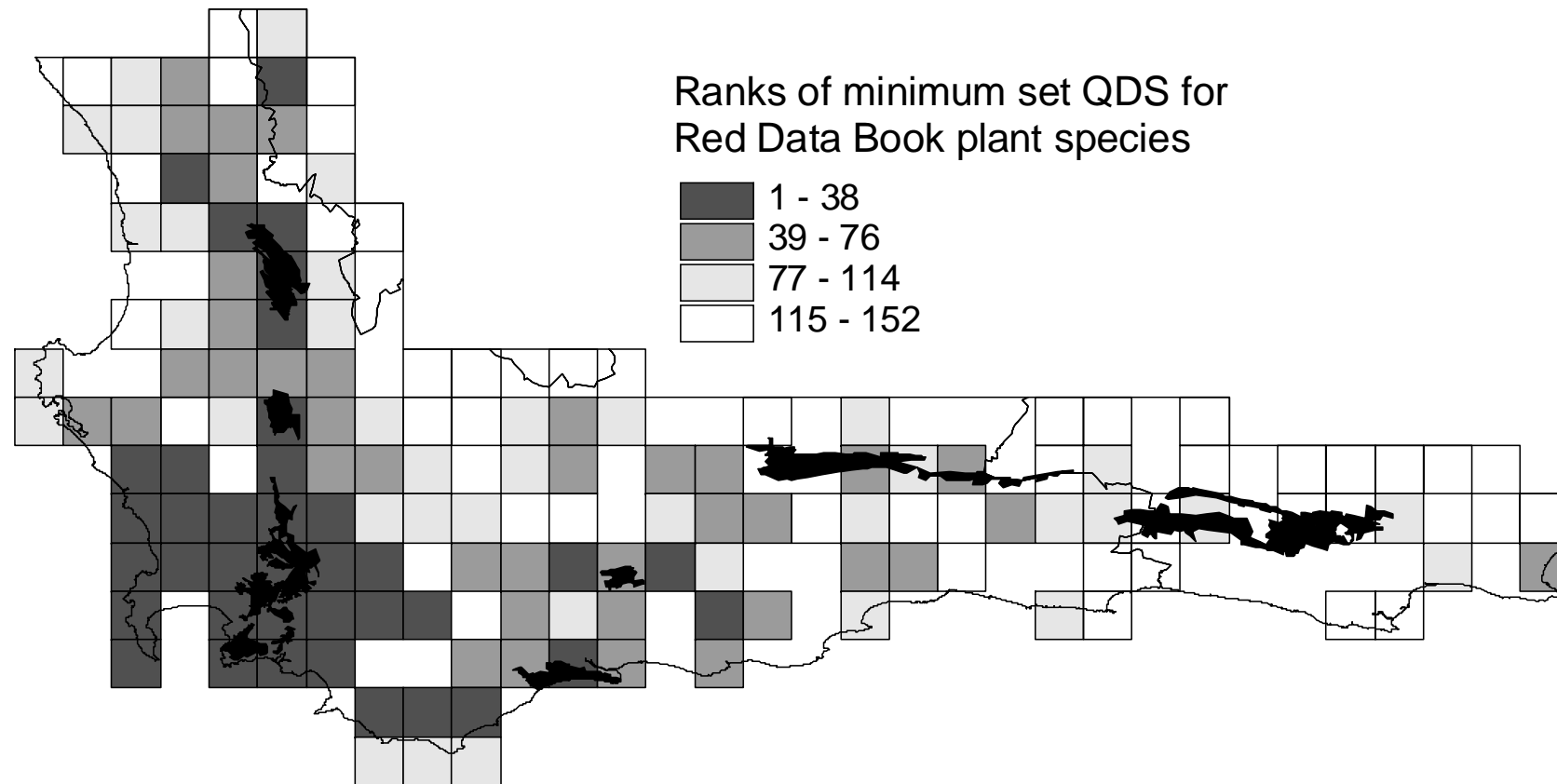


Figure 7. The 152 QDS selected by the minimum set analysis for the RDB plant database, and their ranks of importance (implementation order). The nominated World Heritage Sites are shown in black.

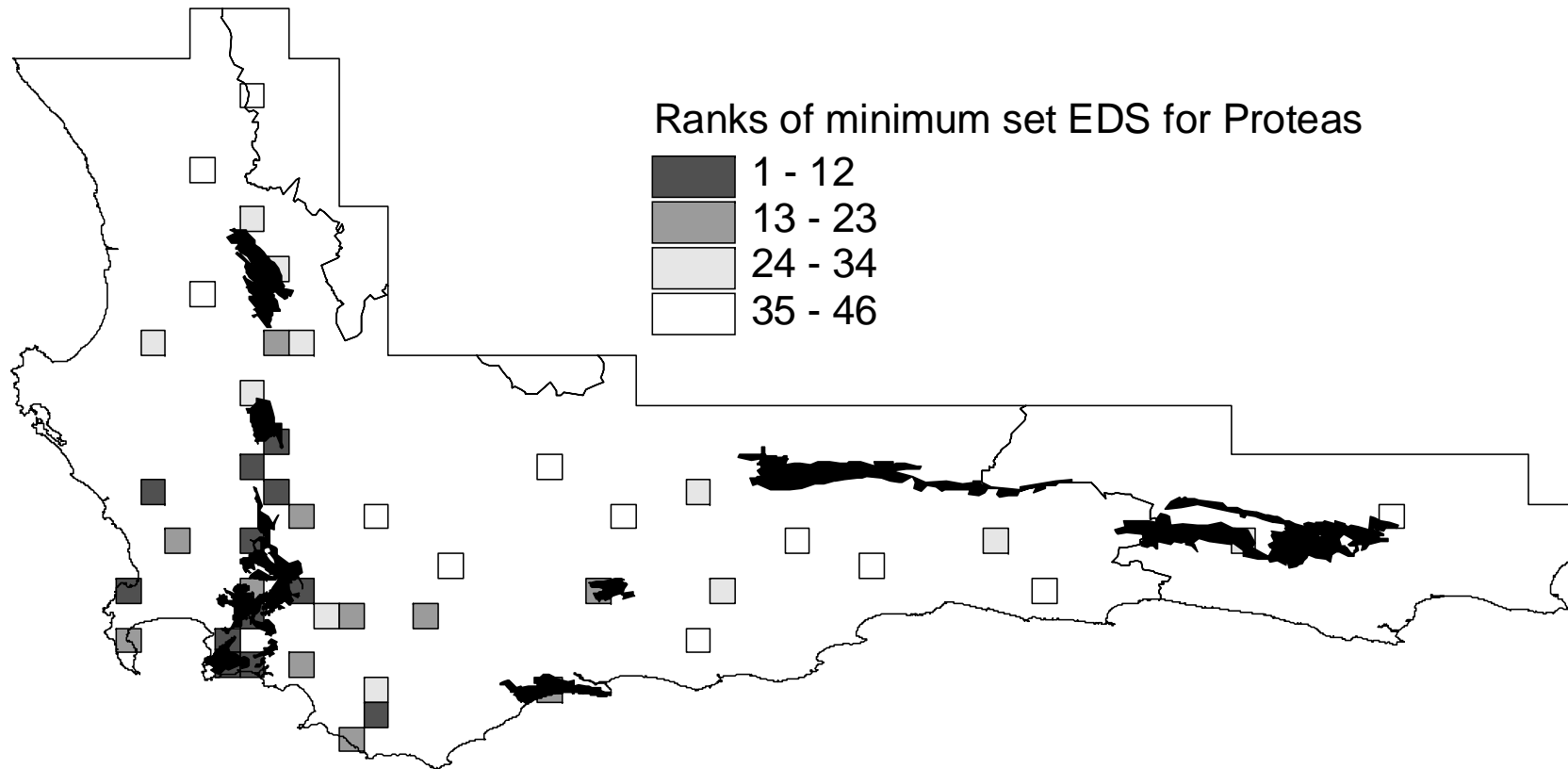


Figure 8. The 46 EDS selected by the minimum set analysis for the EDS Protea database, and their ranks of importance (implementation order). The nominated World Heritage Sites are shown in black.

# **Assessment of the conservation value of proposed World Heritage Sites for the Cape Floral Kingdom**



**Terrestrial Ecological Research Unit  
University of Port Elizabeth**

**July 2000**

# **Assessment of the conservation value of proposed World Heritage Sites for the Cape Floral Kingdom**

**RM Cowling and CE Hejnis**

*Terrestrial Ecological Research Unit, University of Port Elizabeth, PO Box 1600, Port Elizabeth 6000, South Africa*

TERU Report No. 29  
July 2000



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## Context

Six sites as part of a constellation have been proposed as World Heritage Sites (WHS) in the Phase 2 nomination for the Cape Floral Kingdom (CFK) (Table 1). All of these sites are currently proclaimed provincial nature reserves managed by Western Cape Nature Conservation Board (WCNCB).

**Table 1. Names and area (ha) of proposed World Heritage Sites (WHS) for the Cape Floral Kingdom (CFK).**

---

Cederberg	65 620
Groot Winterhoek	27 493
Kogelberg–Limietberg	113 116
De Hoop	32 474
Boosmansbos	15 203
Groot Swartberg	111 794

---

The aim of this report is two-fold:

- To assess the potential WHS in terms their effectiveness in achieving explicit conservation targets for the representation of biodiversity patterns and processes.
- To recommend buffer zones and corridors to enhance the biological sustainability or persistence of these sites.

These we do by using the terrestrial conservation planning outputs generated by the Global Environmental Facility-funded Cape Action Plan for the Environment (CAPE) Project. These outputs comprise a framework for a strategic and systematic conservation plan for the CFK based on the achievement of explicit and defensible targets for the conservation of the Kingdom's biodiversity patterns and processes. Details on the approach and outcomes of this plan are presented in Cowling et al (1999a). The approach used involves a series of steps:

- compile data on biodiversity pattern and process;
- assess current and future threats to biodiversity;
- set targets for the representation of biodiversity pattern and process;
- assess gaps in the existing reserve system;
- design and locate a system of conservation areas to fulfill all conservation targets.

Concepts salient to this report are explained in the next section.

## **Concepts**

### **Planning domain**

The map-delimited area identified for a conservation planning project. In the case of this report, the CFK and an approximately 60 km-wide buffer on its inland boundary.

### **Planning units**

These are the units of selection for conservation planning, usually defined by grid cells or cadastral units. The planning units used in the CAPE Project and in this report, are 1/16<sup>th</sup> degree cells (approximately 4 000 ha in size).

### **Biodiversity patterns**

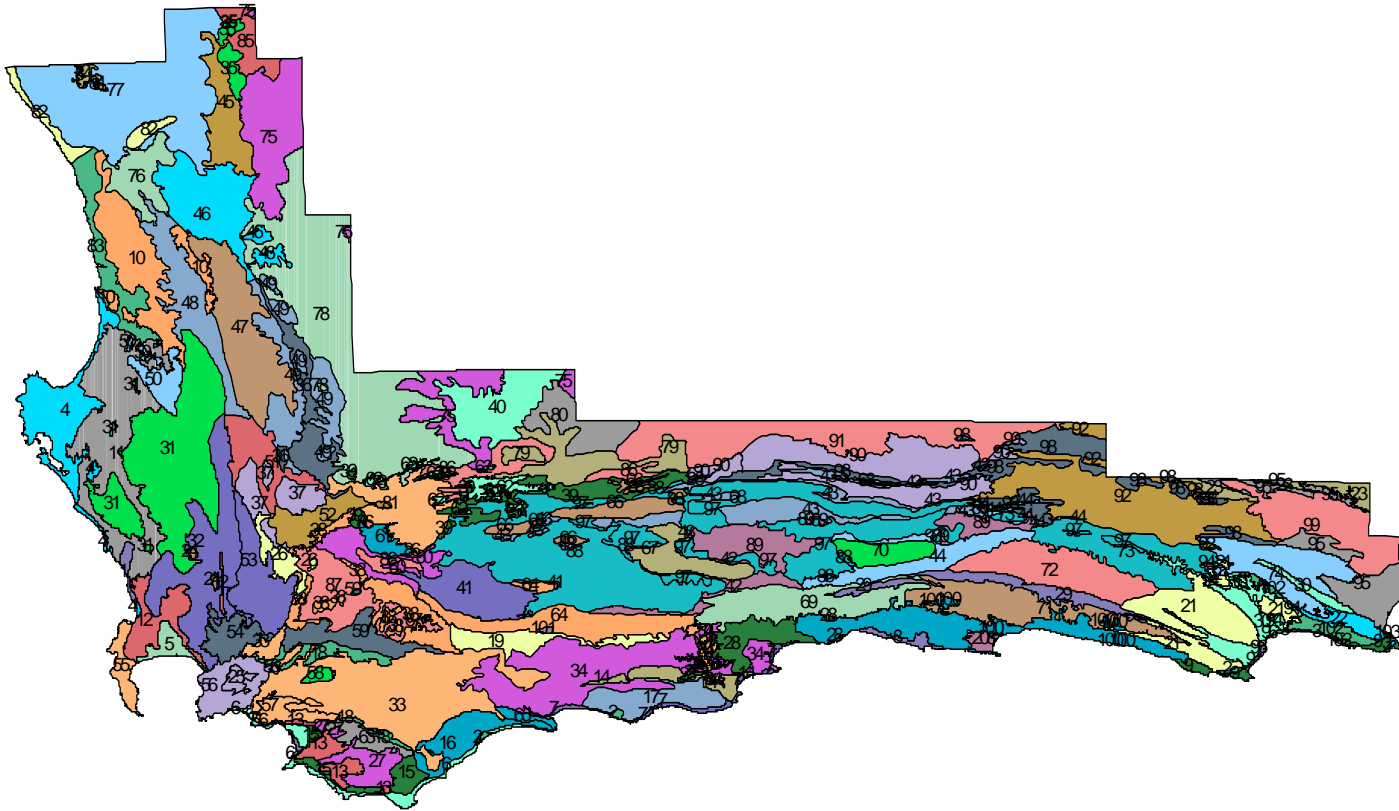
In a conservation planning context, biodiversity patterns refer to the static distribution in a planning domain of entities such as land classes, ecosystems, taxa (including species) and genes. Most conservation planning focuses on the representation of pattern in a system of conservation areas.

The biodiversity entity used in the CAPE Project was the Broad Habitat Unit (BHU) – a land class that is a surrogate for vegetation pattern. The BHUs were derived by intersecting layers of Homogeneous Climate Zones, geology and topography in a geographic information system. A map of the BHUs, indicating their unique numbers is shown in Figure 1. The identity and area of BHUs in each of the proposed WHS are given in Appendix 1. A total of 102 BHUs were identified for the planning domain; of these, 88 are restricted to the CFK. Cowling and Hejnis (in press) provide an account of the derivation of BHUs, a description of their biological and biophysical characteristics, and an assessment of their potential for conservation planning.




































































































### **Biodiversity processes**

In a conservation planning context, biodiversity processes refer to the ecological and evolutionary processes (dynamic phenomena) that maintain and generate biodiversity patterns. Examples include the maintenance of viable populations, disturbance regimes, dispersal and migratory movements, potential for lineage diversification, and resilience to climate change.

Since conservation planning is a spatially-based science, it is essential to identify the spatial components of biodiversity processes. Approaches to this are illustrated in Cowling et al (1999a, b). Table 2 shows the role that different sized reserves play in the conservation of biodiversity processes in the CFK.



**Figure 1. 102 Broad Habitat Units (BHUs) identified by Cowling and Hejnis (in press) for the CAPE Project. Numbers refer to unique codes for each BHU (see overleaf for legend).**

- |    |  |    |  |     |  |
|----|--|----|--|-----|--|
| 1  |  South West Dune Pioneer                | 41 |  Montagu Inland Renosterveld                | 81  |  Touws Vygieveld                    |
| 2  |  South Dune Pioneer                     | 42 |  Cannaland Inland Renosterveld              | 82  |  Namaqualand Strandveld             |
| 3  |  South East Dune Pioneer                | 43 |  Kango Inland Renosterveld                  | 83  |  Lamberts Bay Strandveld            |
| 4  |  Langebaan Fynbos / Thicket Mosaic      | 44 |  Uniondale Inland Renosterveld              | 84  |  Garies Broken Veld                 |
| 5  |  Cape Flats Fynbos / Thicket Mosaic     | 45 |  Bokkeveld Mountain Fynbos Complex          | 85  |  Loeriesfontein Broken Veld         |
| 6  |  Agulhas Fynbos / Thicket Mosaic        | 46 |  Gifberg Mountain Fynbos Complex            | 86  |  Witrantjies Broken Veld            |
| 7  |  Stilbaai Fynbos / Thicket Mosaic       | 47 |  Cederberg Mountain Fynbos Complex          | 87  |  Robertson Broken Veld              |
| 8  |  Goukamma Fynbos / Thicket Mosaic       | 48 |  Olifants River Mountain Fynbos Complex     | 88  |  Little Karoo Broken Veld           |
| 9  |  St Francis Fynbos / Thicket Mosaic     | 49 |  Swartruggens Mountain Fynbos Complex       | 89  |  Oudtshoorn Broken Veld             |
| 10 |  Leipoldville Sand Plain Fynbos         | 50 |  Piketberg Mountain Fynbos Complex          | 90  |  Prince Albert Broken Veld          |
| 11 |  Hopefield Sand Plain Fynbos            | 51 |  Groot Winterhoek Mountain Fynbos Complex   | 91  |  Gamka Broken Veld                  |
| 12 |  Blackheath Sand Plain Fynbos           | 52 |  Matroosberg Mountain Fynbos Complex        | 92  |  Steytlerville Broken Veld          |
| 13 |  Springfield Sand Plain Fynbos          | 53 |  Hawequas Mountain Fynbos Complex           | 93  |  Gouritz Mesic Succulent Thicket    |
| 14 |  Albertinia Sand Plain Fynbos           | 54 |  Franschoek Mountain Fynbos Complex         | 94  |  Gamtoos Mesic Succulent Thicket    |
| 15 |  Hagelkraal Limestone Fynbos            | 55 |  Cape Peninsula Mountain Fynbos Complex     | 95  |  Sundays Mesic Succulent Thicket    |
| 16 |  De Hoop Limestone Fynbos               | 56 |  Kogelberg Mountain Fynbos Complex          | 96  |  Aloes Mesic Succulent Thicket      |
| 17 |  Canca Limestone Fynbos                 | 57 |  Klein River Mountain Fynbos Complex        | 97  |  Spekboom Xeric Succulent Thicket   |
| 18 |  Genadendal Grassy Fynbos               | 58 |  Caledon Swartberg Mountain Fynbos Complex  | 98  |  Willowmore Xeric Succulent Thicket |
| 19 |  Suurbrak Grassy Fynbos                 | 59 |  Riviersonderend Mountain Fynbos Complex    | 99  |  Addo Xeric Succulent Thicket       |
| 20 |  Keurbooms Grassy Fynbos                | 60 |  Koo Langeberg Mountain Fynbos Complex      | 100 |  Knysna Afromontane Forest          |
| 21 |  Humansdorp Grassy Fynbos               | 61 |  Waboomsberg Mountain Fynbos Complex        | 101 |  Swellendam Afromontane Forest      |
| 22 |  Algoa Grassy Fynbos                    | 62 |  Witteberg Mountain Fynbos Complex          | 102 |  Alexandria Indian Ocean Forest     |
| 23 |  Zuurberg Grassy Fynbos                 | 63 |  Bredasdorp Mountain Fynbos Complex         |     |  |
| 24 |  Perdeberg Fynbos / Renosterveld Mosaic | 64 |  Southern Langeberg Mountain Fynbos Complex |     |  |
| 25 |  Elgin Fynbos / Renosterveld Mosaic     | 65 |  Potberg Mountain Fynbos Complex            |     |  |
| 26 |  Breede Fynbos / Renosterveld Mosaic    | 66 |  Klein Swartberg Mountain Fynbos Complex    |     |  |
| 27 |  Elim Fynbos / Renosterveld Mosaic      | 67 |  Rooiberg Mountain Fynbos Complex           |     |  |
| 28 |  Blanco Fynbos / Renosterveld Mosaic    | 68 |  Groot Swartberg Mountain Fynbos Complex    |     |  |
| 29 |  Langkloof Fynbos / Renosterveld Mosaic | 69 |  Outeniqua Mountain Fynbos Complex          |     |  |
| 30 |  Kromme Fynbos / Renosterveld Mosaic    | 70 |  Kamanassie Mountain Fynbos Complex         |     |  |
| 31 |  Swartland Coast Renosterveld           | 71 |  Tsitsikamma Mountain Fynbos Complex        |     |  |
| 32 |  Boland Coast Renosterveld              | 72 |  Kouga Mountain Fynbos Complex              |     |  |
| 33 |  Overberg Coast Renosterveld            | 73 |  Baviaanskloof Mountain Fynbos Complex      |     |  |
| 34 |  Riversdale Coast Renosterveld          | 74 |  Cockscomb Mountain Fynbos Complex          |     |  |
| 35 |  Niewoudtville Inland Renosterveld      | 75 |  Western Mountain Vygieveld                 |     |  |
| 36 |  Kouebokkeveld Inland Renosterveld      | 76 |  Klawer Vygieveld                           |     |  |
| 37 |  Waveren-Bokkeveld Inland Renosterveld  | 77 |  Knersvlakte Vygieveld                      |     |  |
| 38 |  Ashton Inland Renosterveld             | 78 |  Tanqua Vygieveld                           |     |  |
| 39 |  Matjies Inland Renosterveld           | 79 |  Laingsberg Vygieveld                      |     |  |
| 40 |  Roggeveld Inland Renosterveld        | 80 |  Moordenaars Vygieveld                    |     |  |

**Table 2. Ecological and evolutionary processes conserved in different-sized reserves in the Cape Floral Kingdom. The role in process conservation identified for each reserve type is nested according to spatial scale: reserves larger than the specified type will also conserve the processes listed there. Adapted from Cowling et al (1999a).**

Reserve type (size in ha)	Process
Very small conservation areas (5-500)	Maintain microevolutionary processes within some plant populations
	Maintain plant-pollinator relations including those that promote plant diversification
Small conservation areas (ca. 1 000)	Sustain regular, whole-patch fires, thereby maintaining some of the associated ecological processes
	Maintain ecological diversification of plant lineages in relation to fine-scale edaphic gradients
	Maintain plant-herbivore relationships associated with medium-sized mammals in many eastern BHUs Support managed, compartment-based, fire regime, thereby maintaining most fire-associated ecological and evolutionary processes
Medium-sized conservation areas (5 000 – 10 000)	Maintain diversification of plant lineages in relation to mesoclimatic and larger-scale edaphic gradients
	Maintain, for smaller mobile dunefields, inland movement of sands and gradients of soil development important for soil-specific plant assemblages and diversification of plant species.
Large conservation areas (25 000 – 100 000)	Support - under certain circumstances - a natural fire regime, thereby maintaining associated ecological and evolutionary processes
	Maintain plant-herbivore relationships associated with some megaherbivores, and predator-prey relationships associated with smaller predators

Depending on location, maintain diversification of plant lineages in relation to some macroclimatic and finer-scale geographical gradients

Facilitate, in reserves that span the upland-lowland gradient, diversification of basal, upland animal lineages in lowland habitats

Maintain, for larger mobile dunefields, inland movement of sands and gradients of soil development important for soil-specific plant assemblages and diversification of plant species.

Protect riverine habitats that function as biological corridors for plant and animal migrations

Maintain seasonal migration of fauna

Facilitate shifts in species' distribution along macroclimatic gradients in response to climate change

Mega  
conservation  
areas  
(250 000 –  
1 000 000)

Support natural fire regime, thereby maintaining associated ecological and evolutionary processes

Depending on location, maintain plant-herbivore relationships associated with all megaherbivores, and predator-prey relationships associated with top predators

Mega  
corridor  
reserves  
(250 000 –  
500 000)

Role in process conservation dependent on shape and size of corridor

Maintain migratory routes and evolutionary fronts between major climatic zones

Facilitate shifts in species' distribution along macro-scale gradients, in response to climate change

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### **Reserve categories**

For the purposes of the CAPE Project, the conservation system was divided into two categories (Cowling et al 1999a): Category 1 reserves (national parks, provincial reserves and Dept Water Affairs and Forestry (DWAF) reserves) are those supported by strong legal and institutional structures; Category 2 reserves (conservancies, DWAF demarcated forests, private demarcated forests, local authority reserves, mountain catchment areas, natural heritage sites, protected natural environments and private nature reserves) comprise a heterogeneous assemblage with varying degrees of protection and defensibility. In this report, Category 1 reserves are regarded as core conservation areas (**mandatory reserves**) for the assessment of reservation targets and in the irreplaceability analysis (see below). Category 1 and 2 reserves are combined as mandatory when assessing buffer zones and corridors for the proposed WHS.

### **Conservation targets**

Conservation targets are explicit and defensible quantitative reservation targets for biodiversity features (pattern and process). These are usually framed in terms of area of land class, number of populations of specified taxa, or the number and/or dimensions of the spatial components of processes.

For the CAPE Project, BHU (pattern) targets (expressed as ha of extant habitat) comprised baseline and retention components (Cowling et al 1999a). The former, expressed as a percentage of the pre-European area of each BHU, was adjusted to accommodate for topography (montane versus lowland) and geography (western versus eastern) effects on patterns of plant species richness (western montane BHUs were allocated 25%, western lowland BHUs 15%, and all eastern BHUs 10% of their pre-European areas). The retention component, expressed as ha of extant (or remnant) habitat, comprised an additional target that accommodated threats faced by a BHU as well as the current extent of transformation. This means that BHUs that are highly threatened by agriculture, urbanization and alien plants, and are already extensively transformed by any of these factors, will receive a higher weighting than BHUs that have a low threat status and are still relatively intact. Details on the computation of BHU targets are given in Cowling et al (1999b). Appendix 2 shows the different components of targets for all of the BHUs that were considered.

Process targets for the CFK, expressed as quantitative targets for the spatial components of key larger-scale processes, are presented in Appendix 3.



### **Irreplaceability**

Irreplaceability is a measure assigned to an area (e.g. a planning unit) that reflects the importance of that area, in the context of the planning domain, for the achievement of the regional conservation targets. Irreplaceability can be defined in two ways (Pressey et al 1994):

1. The potential contribution of any site to a conservation goal or the likelihood of that site being required to achieve the goal;
2. The extent to which the options for achieving a system of conservation areas that is representative (achieves all the conservation targets) are reduced if that site is lost or made unavailable.

A map of irreplaceability values is, therefore, a map of options: in areas of high irreplaceability, all (most) extant habitat is required to achieve targets; in areas of low irreplaceability, there is greater flexibility in the array of available sites required to meet a regional conservation goal (Pressey 1999)

The technical aspects of the calculation of irreplaceability values are discussed in Pressey et al (1994) and Ferrier et al (2000). A very readable account is given in Anon (1999a). Simply put, planning units that contribute a relatively large amount of area that is required to achieve a target, have high irreplaceability – the loss of that area would substantially compromise the achievement of that target; whereas planning units that contribute a small proportion of the area required to achieve a target have low irreplaceability. In the extreme case, where all of the extant habitat is required to achieve a target (as is the case for Swartland Coast Renosterveld and several other lowland BHUs in the southwestern CFK), irreplaceability scores a maximum of 1. On the other hand, planning units that comprise BHUs where the extant habitat available exceeds the target several fold (e.g. many Mountain Complexes), have very low irreplaceability. When existing reserves are considered in the calculation of irreplaceability, values may be zero.

### **Persistence goals**

These are achieved by strategies that maximize the potential for biodiversity persistence in the face of ongoing habitat loss. Maximizing persistence is achieved by accommodating both pattern and process targets, and by minimizing the extent to which conservation targets are compromised by habitat loss while the system of conservation areas is developing (Cowling et al 1999b). Priority areas for implementation are those that are scored highly for both irreplaceability (of biodiversity processes) and vulnerability to threatening processes.

## **Methods**

### **Identification of planning units in relation to proposed WHS**

The WHS were allocated to planning units by intersecting the WHS coverage (supplied by WCNCB) with the planning unit grid used for the CAPE Project. Grid cells > 50% WHS were allocated to the WHS system; grid cells < 50% WHS were excluded from the system (Figure 2). Clearly, this categorization – an unavoidable consequence of software requirements – introduced biases regarding the conservation effectiveness of the WHS.

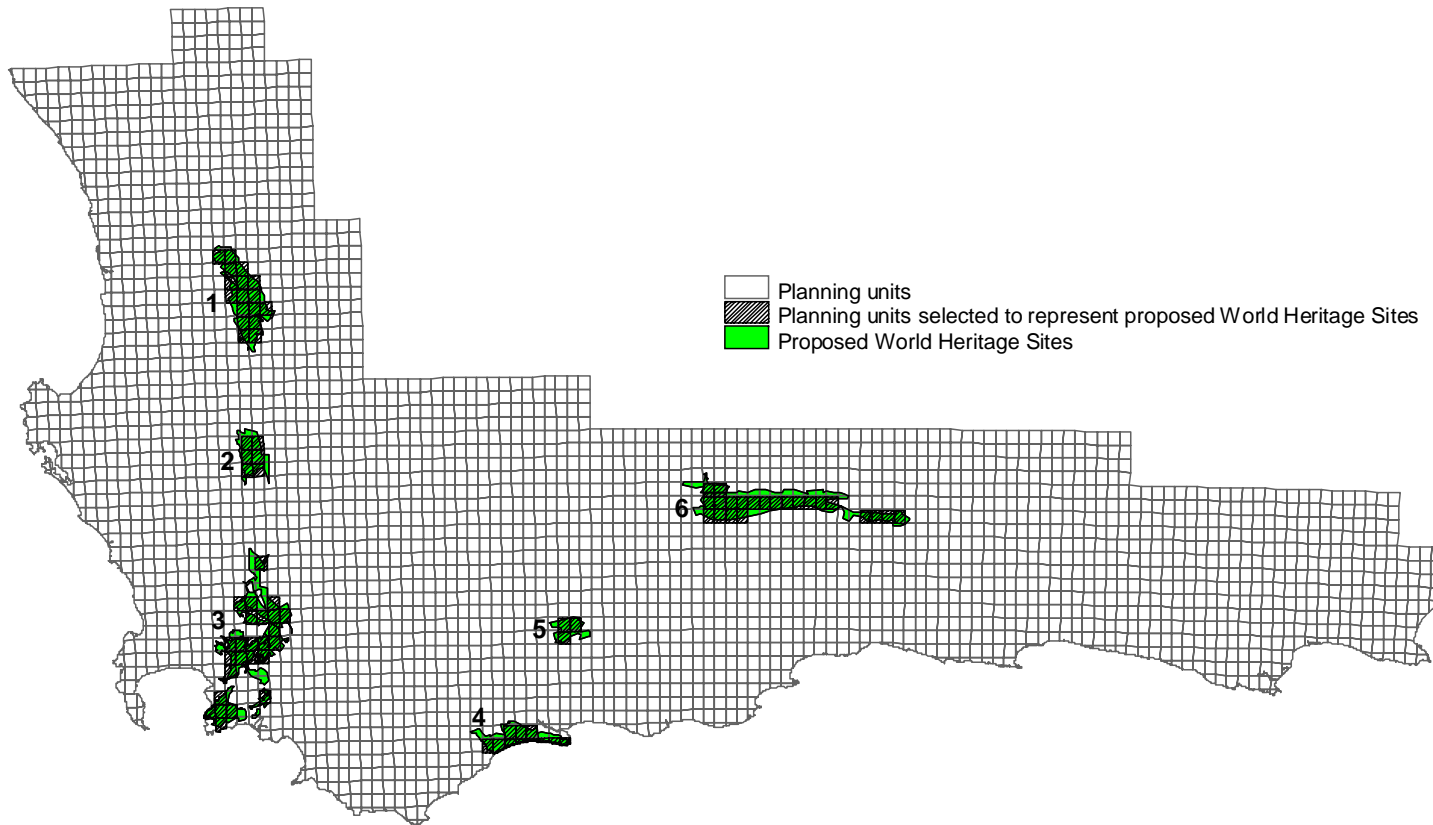
### **Irreplaceability analysis**

The irreplaceability analysis provided an assessment of the extent to which the potential WHS are effective in conserving biodiversity pattern or, more explicitly, achieving identified targets for the reservation of BHUs (see Appendix 2). Outputs of the analysis include an irreplaceability map and a features-to-target table (the percentage of the target satisfied by the reserved sites).

Irreplaceability of planning units was calculated using C-Plan, a decision-support system which, together with a GIS (in this case ArcView 3.2). The system maps the options for achieving an explicit conservation goal in a region, allows users to decide which sites should be placed under some form of conservation management, accepts and displays these decisions, and then lays out the new pattern of options that results. Anon (1999a) provides the technical background and operational features of C-Plan while Pressey et al (1995) describe an application of the software.

We conducted three irreplaceability analyses:

1. Only WHS planning units specified as mandatory reserves.
2. WHS plus all other Category 1 reserve planning units (units with > 50% covered by Category 1 reserves) specified as mandatory reserves.
3. WHS plus all Category 1 and Category 2 reserves, plus all other planning units selected by Cowling et al (1999a) to achieve process targets listed in Appendix 3.



**Figure 2. Planning units (1/16<sup>th</sup> degree cells) selected to represent proposed World Heritage Sites. Selected units include > 50% WHS. 1 = Cederberg WHS; 2 = Groot Winterhoek; 3 = Kogelberg-Limietberg; 4 = De Hoop; 5 = Boosmansbos, 6 = Groot Swartberg.**

**Identification of buffer zones and corridors**

Buffer zones and corridors for the proposed WHS were identified using the “design for processes” analysis undertaken by Cowling et al (1999a) for the CAPE Project. In this analysis, a system of conservation areas was designed to achieve process targets by selecting in C-Plan those planning units that corresponded to the spatial components identified in Appendix 3. The rationale for the selection of planning units, and number of units selected, is given in Appendix 4. The system was assembled sequentially, starting with stage 1 (Juxtaposition of Edaphically Different Habitats), and ending with stage 7 (a “mopping up” exercise to capture units of high irreplaceability that encompass transitions between primary BHUs and biomes). For the purpose of the analysis, both Category 1 (including the proposed WHS) and Category 2 reserves were specified as mandatory reserves (494 planning units); an additional 555 units were chosen to achieve the process goals.

## Results and discussion

### **BHU conservation effectiveness of proposed WHS**

The proposed WHS comprise 355 196 ha or 4.04% of the CFK. Five of the six proposed WHS are located entirely in the mountains of the CFK while one WHS (De Hoop) straddles mountain and lowland landscapes. BHU richness per WHS ranged from 10 (Groot Swartberg) to two (Groot Winterhoek) (Appendix 1). With the exception of the Kogelberg-Limietberg and De Hoop sites, a single BHU covered most of the area of the proposed WHS. The Groot Swartberg included BHUs from the highest number of primary (see Appendix 2) BHUs (Mountain Complex, Inland Renosterveld, Vygieveld, Broken Veld and Xeric Succulent Thicket). BHUs with reservation targets greater than 50% of their extant area (see Appendix 2) were represented in the Groot Winterhoek site (Waveren-Bokkeveld), Kogelberg-Limietberg (Boland, Elgin, Genadendal and Overberg), De Hoop (Agulhas, De Hoop, Overberg and Potberg) and Boosmansbos (Swellendam). Given that as a result of extensive transformation options for achieving targets for these BHUs are severely constrained, and in some cases impossible (e.g. Boland, Overberg and Elgin), inclusion of areas of these BHUs is highly significant for the conservation of biodiversity pattern in the CFK. Unfortunately, however, with the exception of the De Hoop site, the WHS include very small areas of these poorly conserved and vulnerable BHUs (Appendix 1).

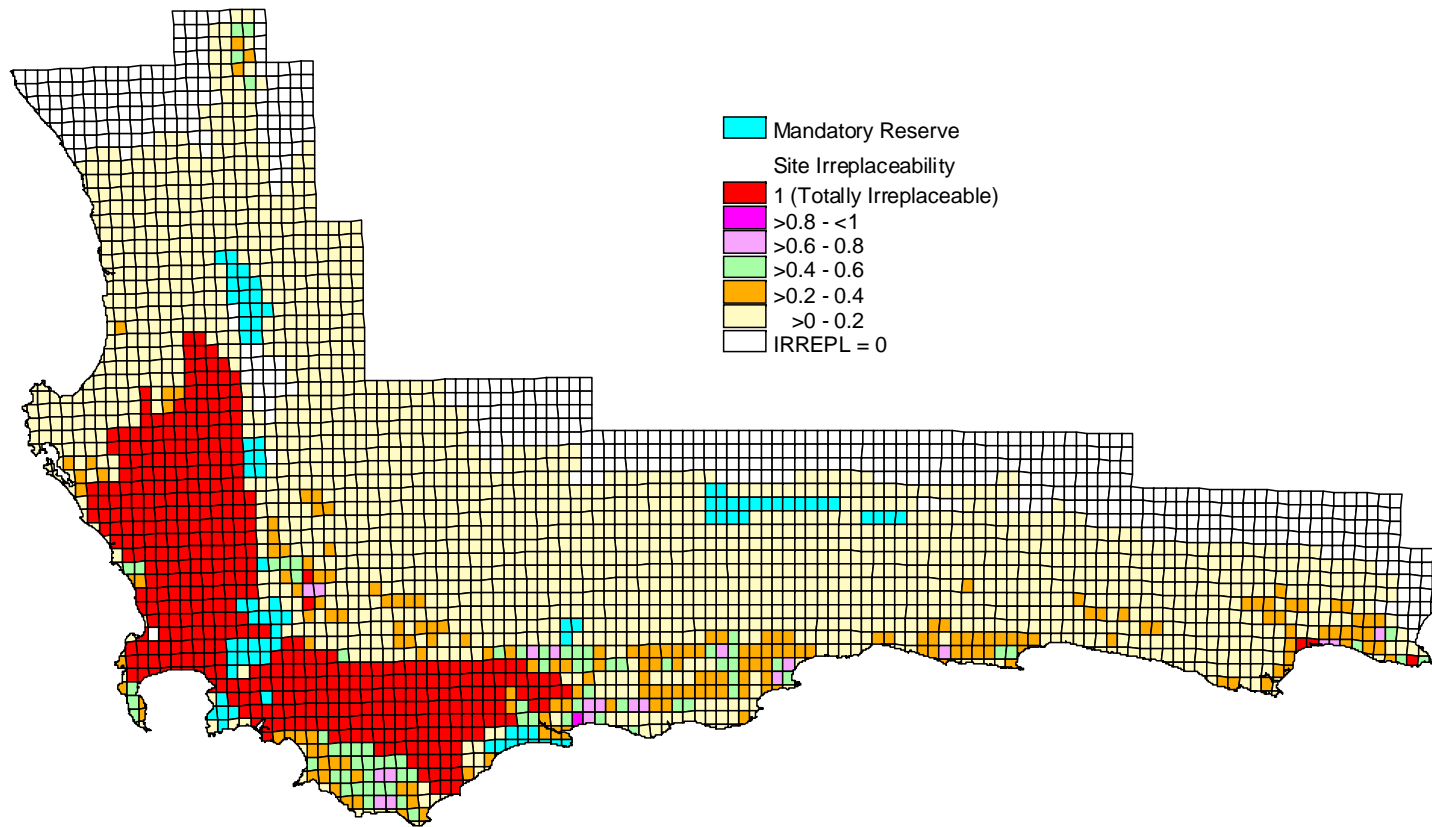
As can be seen in Table 3, the proposed WHS are generally very effective in achieving the reservation targets for the Mountain Complex BHUs in which they are centred (see Appendix 1). The De Hoop site contributes substantively to targets for three lowland BHUs, namely Agulhas, De Hoop and South Dune Pioneer. The Boosmansbos site essentially achieves the target for the Swellendam BHU, while the Groot Swartberg site goes some way to achieving targets for the Kango and Spekboom BHUs. Only in the case of the S. Langeberg BHU (Boosmansbos site) and Hawequas BHU (Kogelberg-Limietberg site) does the contribution of additional Category 1 reserves substantively increase the target achieved.

The proposed WHS make an important contribution to the reservation of the 15 BHUs shown in Table 3. However, they make no or negligible contribution to achieving reservation targets for the remaining 73 BHUs in the CFK (Appendix 5). In many cases, especially on the south-western lowlands, these BHUs have been extensively transformed and each fragment of remnant habitat is required to achieve targets (Appendix 2). The irreplaceability of planning units that include fragments of these BHUs is absolute (i.e. total irreplaceability) (Figure 3). Given the requirements of integrity for WHS listing, reserves in these areas of high irreplaceability would not be candidates for WHS.

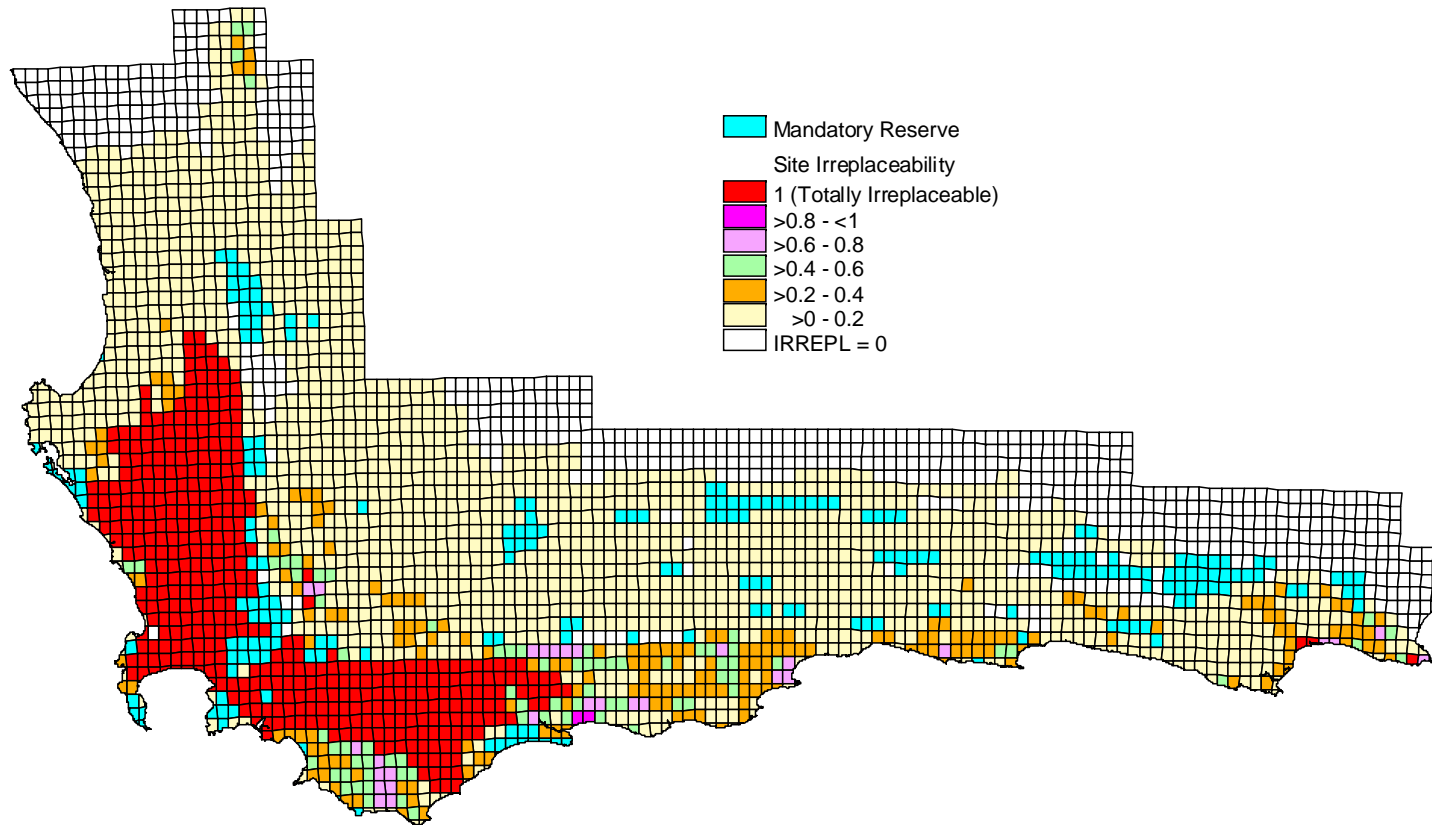
**Table 3. Conservation effectiveness, in terms of achieving substantive reservation targets (> 15% of achievable target) for Broad Habitat Units (BHUs), of proposed WHS and additional Category 1 (C1) reserves in the Cape Floral Kingdom. See Appendix 2 for targets and text for definition of C1 reserves. BHUs marked with an asterisk are not classified as Mountain Complexes (see Figure 1).**

WHS	BHU	Target achieved (WHS only) (%)	Target achieved (WHS + C1) (%)
Cederberg	Cederberg	114.4	114.4
Groot Winterhoek	Groot Winterhoek	104.8	104.8
Kogelberg	Hawequas	75.0	108.4
-Limietberg	Franschhoek	135.7	135.7
	Kogelberg	71.5	71.5
De Hoop	Agulhas*	38.8	46.3
	De Hoop*	35.4	35.4
	South Dune	48.8	54.2
	Pioneer*		
	Potberg	90.0	90.0
Boosmansbos	S. Langeberg	69.1	106.2
	Swellendam*	98.9	98.9
Groot Swartbeg	Groot Swartberg	535.6	535.6
	Kango*	38.8	46.3
	Spekboom*	18.2	25.3

The irreplaceability analysis for all Category 1 reserves (including the proposed WHS) shows a marked improvement in the achievement of reservation targets for many Mountain Complex and some lowland BHUs, relative to the analysis for the WHS alone (Appendix 5, Figure 4, cf Figure 3). This indicates that reserves in addition to the proposed WHS play an important role in achieving pattern targets in the CFK.



**Figure 3. Patterns of irreplaceability across the planning domain, selecting World Heritage Sites as mandatory reserves (Stage 1 analysis: Appendix 5).**



**Figure 4. Patterns of irreplaceability across the planning domain, selecting Category 1 reserves (including World Heritage Sites) as mandatory reserves (Stage 2 analysis: Appendix 5).**



### **Planning requirements for persistence: buffers and corridors**

The inclusion within the potential WHS of significant biodiversity patterns will not necessarily ensure the long term persistence of those patterns. In order to ensure persistence, a system of conservation areas must accommodate the processes that maintain and generate biodiversity (Cowling et al 1999b). Processes salient for biodiversity persistence, as well as their spatial components, methods of identification and targets, are shown in Table 2 and Appendix 3 (see also Cowling et al 1999a).

Within the context of biodiversity processes in the CFK, all of the potential WHS fall in the category of medium-sized to large (15 – 100 000 ha) conservation areas. Table 2 lists the processes that reserves of different sizes can potentially accommodate. These size-related process potentials must be regarded as crude predictions, subject to constraints of shape, connectivity and overall heterogeneity. The proposed WHS with the least potential to accommodate processes and, therefore, maintain biodiversity are the relatively small and biologically uniform Boosmansbos and Groot Winterhoek sites; the site with the greatest potential is the relatively large and environmentally and biologically heterogeneous Groot Swartberg site. The other WHS sites are intermediate in this respect. The De Hoop site encompasses an entire sand movement corridor, and includes a large area of the biologically important transition between limestone (De Hoop BHU) and acid (Potberg BHU) habitats. Given that the impacts on climate change of global warming are predicted to be much greater in the western, winter-rainfall and generally driest parts of the CFK (Rutherford et al 1999), the Boosmansbos, De Hoop and, to a lesser extent, Groot Swartberg sites may ultimately be the most secure.

Given that none of the proposed WHS has the potential to accommodate all of the biodiversity processes necessary for the long-term persistence and generation of biodiversity (cf Table 2), and all are vulnerable to some extent to the impacts of climate change, it is essential to identify buffer zones and corridors for each site that will increase the likelihood of achieving persistence goals. In the remainder of this section, we use the outcomes of the “design for processes” analysis for the CAPE Project (Figure 5) to identify appropriate buffers and corridors for each WHS.

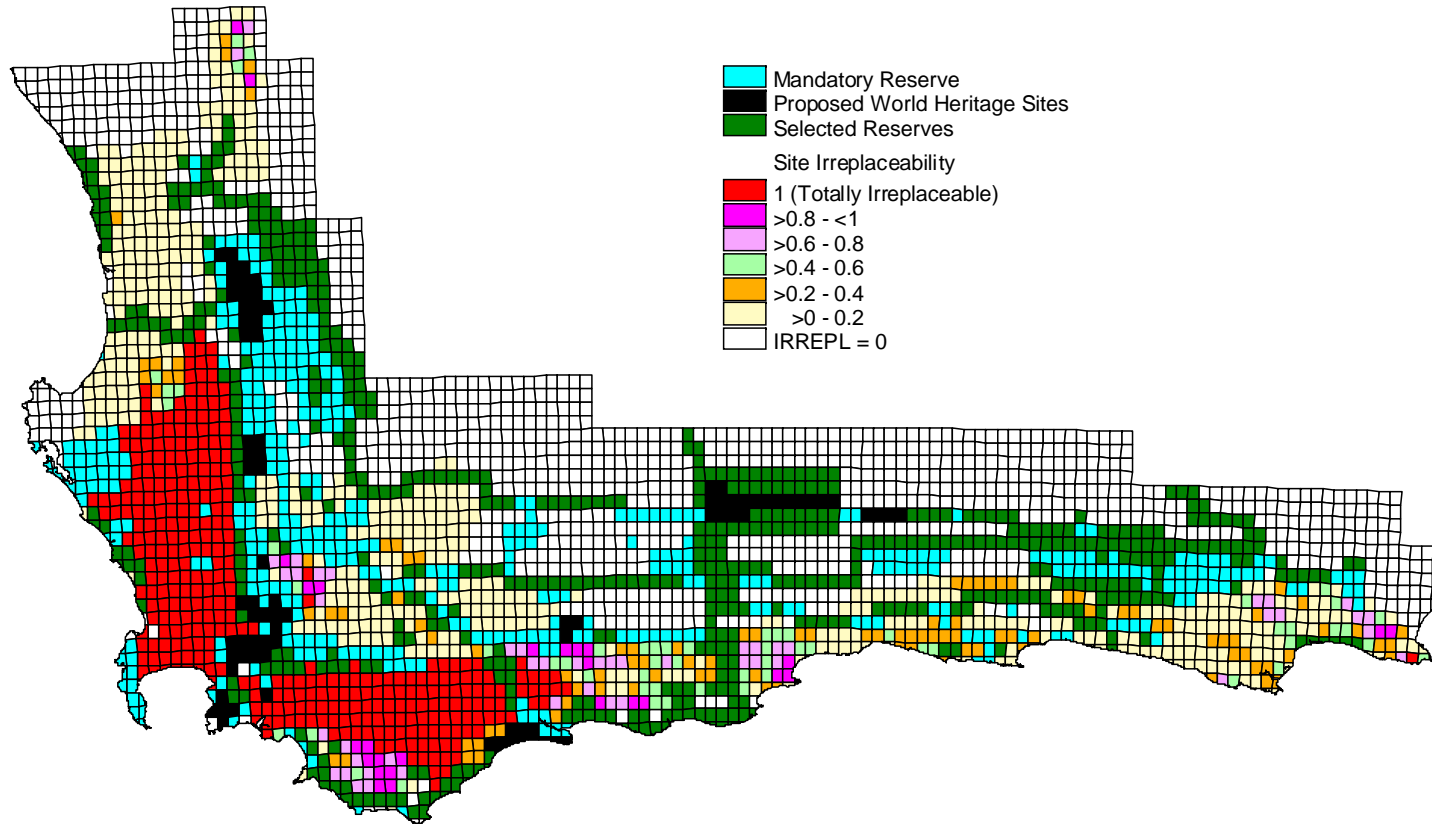


Figure 5. Outcome of the "design for processes" analysis for the CAPE Project, showing the location of the six proposed World Heritage Sites (Stage 3 analysis in Appendix 5).

### *Cederberg*

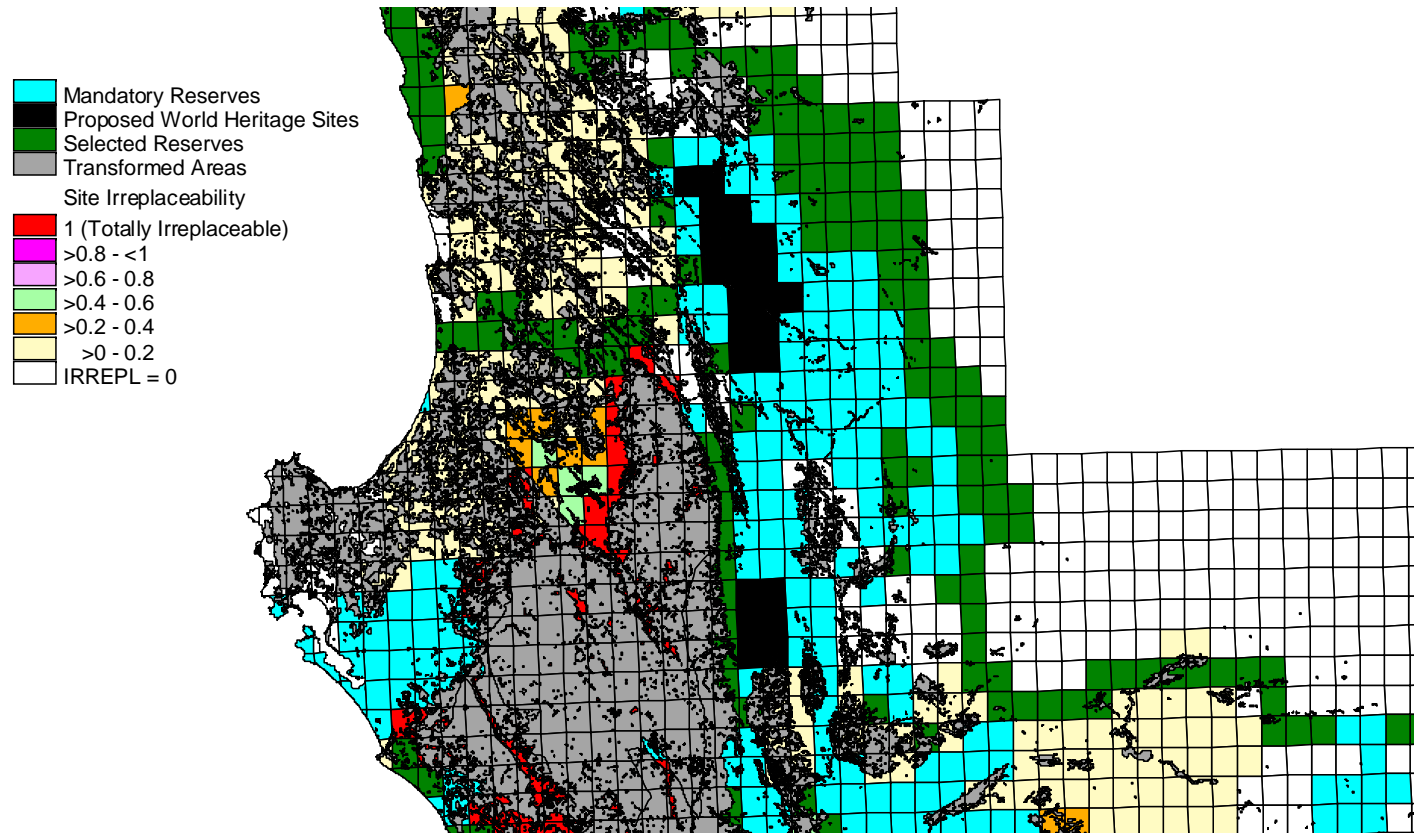
The Cederberg area has been identified in the CAPE Project as one of the three mega reserves for the CFK (see Table 2, Cowling et al 1999a). The implementation of this mega reserve will involve the incorporation of all Category 1 and Category 2 reserves (mainly mountain catchment areas but also some private nature reserves and conservancies) in the vicinity, as well as the establishment of new conservation areas to provide a corridor to the coast, and encompass the Doorn River migratory corridor and karroid (Tanqua BHU) habitat (Figure 6). This will ensure the maintenance of the full suite of biodiversity processes for the northwestern montane region of the CFK. It will also provide wide buffer zone for the proposed Cederberg WHS. Even without the identification of new conservation areas (the green planning units in Figure 6), the proposed Cederberg WHS is well buffered by other Category 1 and Category 2 reserves.

### *Groot Winterhoek*

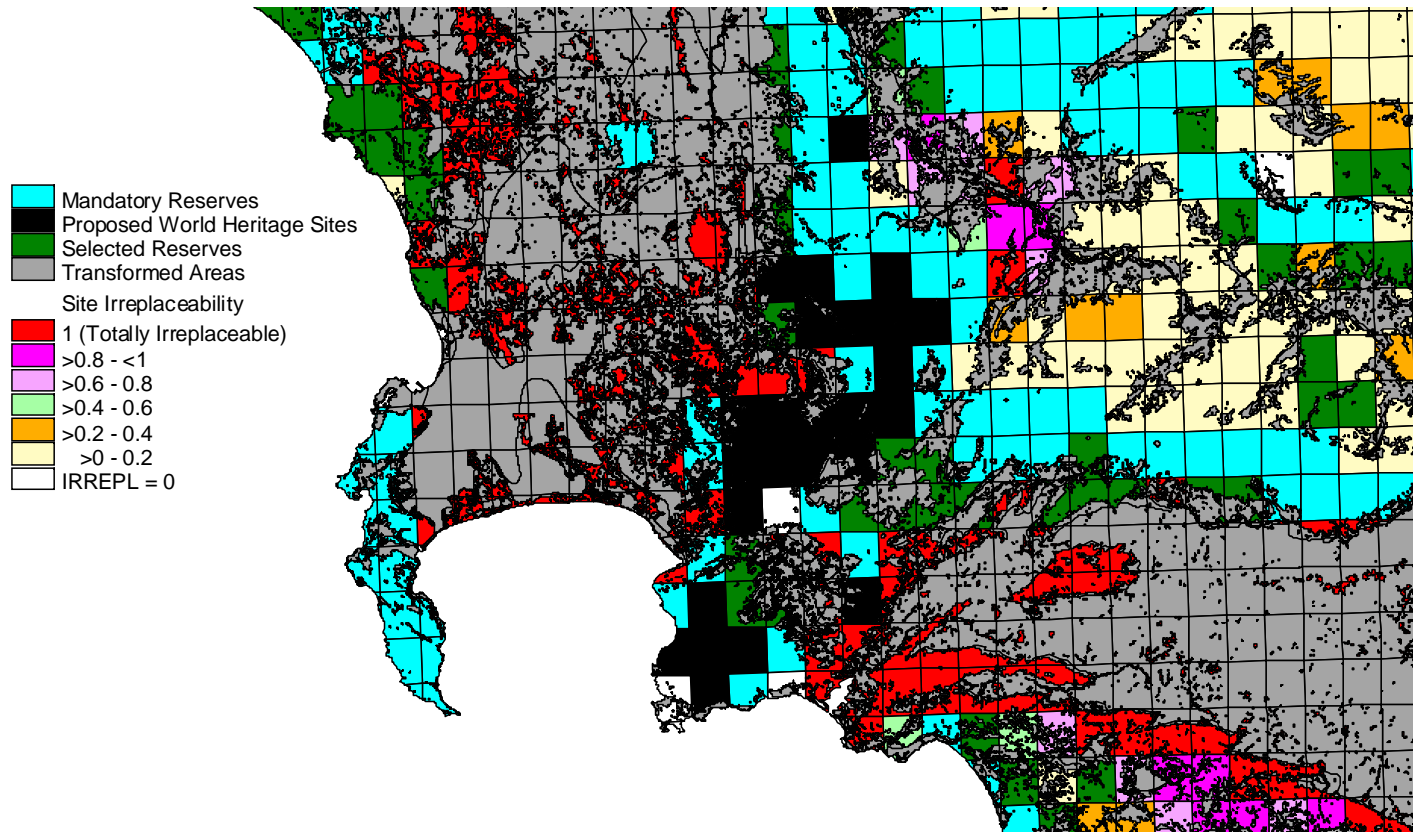
This proposed WHS is well buffered to the east, and linked northwards to the Cederberg, and southwards to the Kogelberg-Limietberg areas by proclaimed mountain catchment (Category 2 reserve) (Figure 6). Implementation to achieve persistence goals must be aimed at securing the conservation status of these corridors. Particular attention must be given to incorporating as strict reservation the intact habitat in the green cell (selected reserve) along the south-trending corridor (Nuwekloof pass area). The fact that much of this habitat is vulnerable to agricultural transformation (Cowling et al 1999a) increases the urgency of conserving this irreplaceable (in terms of processes) remnant. Attention must also be given to extending the conservation system westwards, thereby incorporating irreplaceable Coast Renosterveld habitat; encompassing the transition from montane to lowland habitat, and providing a western buffer.

### *Kogelberg-Limietberg*

This site lies amidst the most densely populated and extensively transformed part of the CFK. Hence opportunities for the creation of buffer zones and corridors are limited, especially towards the west (Figure 7). Of great concern is the maintenance of the widest possible corridor between the Kogelberg and Franschoek BHUs in the vicinity of Sir Lowry's Pass. Also of strategic importance for the achievement of persistence goals is the maintenance of the east-trending corridor linking the Hawequas and Kogelberg BHUs to the Riviersonderend BHU. Both of these actions will require the strengthening of the conservation status of the appropriate Category 2 reserves as well as the establishment of new conservation areas (green cells in Figure 7). The site also includes relatively large tracts of habitat transformed by alien plants: the continued spread of these will compromise the fulfillment of persistence goals.



**Figure 6 Planning detail of “design for processes” analysis (ex Figure 5): Proposed Cederberg and Groot Winterhoek World Heritage Sites. Also shown are areas transformed by agriculture, urbanization and dense stands of alien plants.**



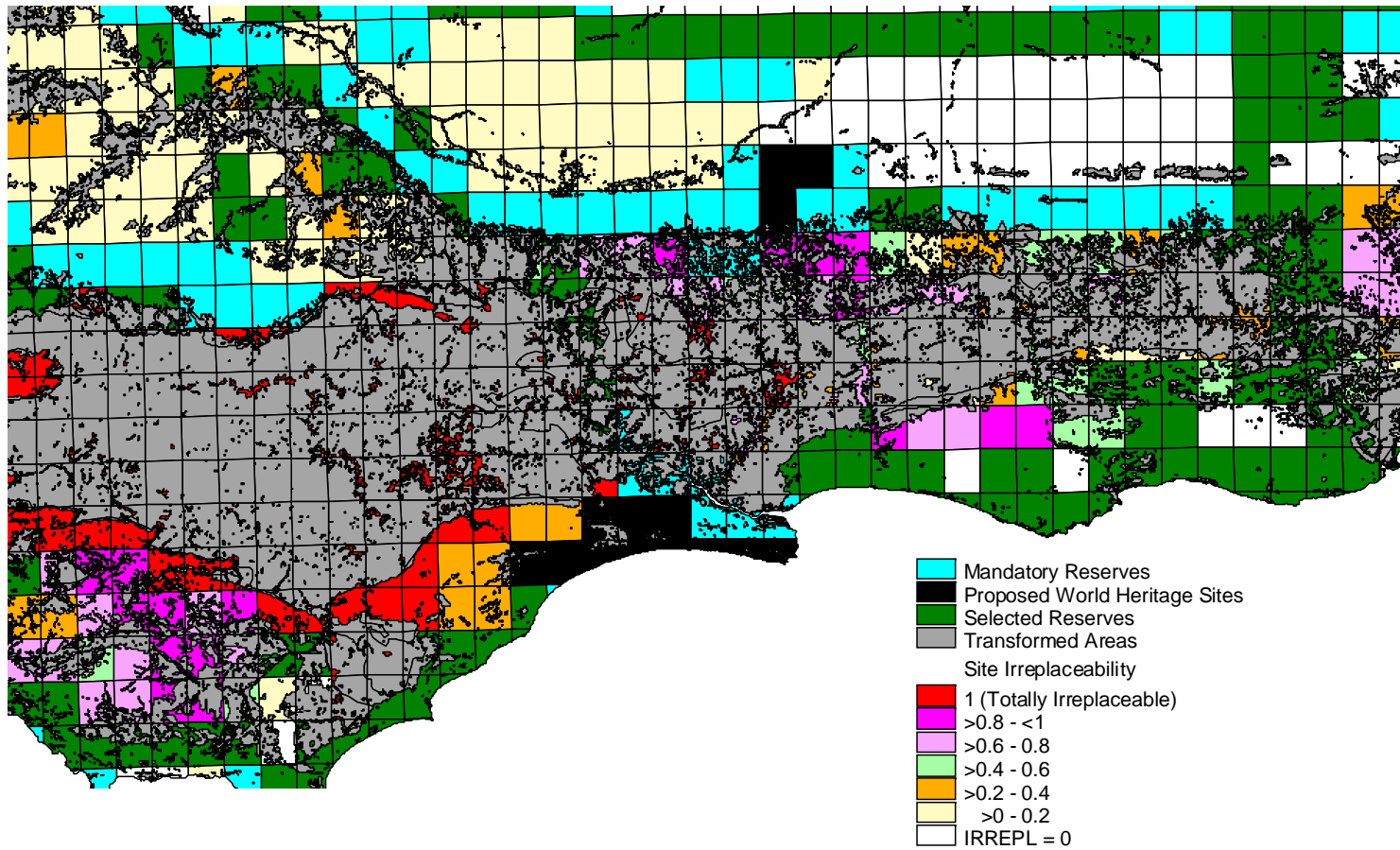
**Figure 7 Planning detail of “design for processes” analysis (ex Figure 5): Proposed Kogelberg-Limietberg World Heritage Sites. Also shown are areas transformed by agriculture, urbanization and dense stands of alien plants.**

### *De Hoop*

Opportunities for the achievement of persistence goals for the proposed De Hoop WHS are constrained by the extensively transformed Coast Renosterveld habitat to the north of the site (Figure 8). Therefore, the establishment of a conservancy (Category 2 reserve) that incorporates the lower northern slopes of the Potberg (Potberg BHU) as well as remnant Overberg BHU (Coast Renosterveld), must be strongly encouraged. Not only does this area provide a northern buffer for the De Hoop site, it also encompasses the lower reaches of the Breede River migratory corridor. Ultimately, a formal (Category 1) conservation system should extend from the northern slopes of the Potberg, via the Breede River corridor, to the Southern Langeberg. The proposed De Hoop WHS should also be linked to the Agulhas National Park to the west, via a corridor of untransformed habitat along the coast. This corridor, encompassing the transition from winter to non-seasonal rainfall regimes, would be especially important for buffering the impacts of climate change. Efforts should be made to incorporate in the proposed site the limestone habitat and adjacent remnants of renosterveld to the west. However, given the relatively low vulnerability of limestone landscapes to processes threatening biodiversity, this is not regarded as a priority. Finally, mention must be made of the large areas of habitat within the proposed WHS that are transformed by dense stands of alien plants. The existence and further spread of these species will compromise the achievement of persistence goals for the site.

### *Boosmansbos*

The coastal forelands to the south of the Southern Langeberg, where the proposed Boosmansbos WHS is located, are severely transformed by agriculture (Figure 8). Therefore, there is no possibility of creating an effective southern buffer. The northern boundary abuts directly onto karroid habitat (Little Karoo BHU) that is not vulnerable to transformation. The extension of the conservation system into this habitat is ultimately desirable but not a priority at this stage. More important is the creation of mountain corridors that link the proposed site to the Outeniqua BHU in the east, and the Koo Langeberg BHU in the west. Such a “mega corridor reserve” is very important for the maintenance of evolutionary processes as well as buffering the impacts of climate change (Table 2). Given that much of the land required is either Category 1 or Category 2 reserve, the implementation of this corridor should not be too problematic. However, the integrity of the proposed corridor is vulnerable in certain places; priority actions should be aimed at securing the threatened areas.



**Figure 8 Planning detail of “design for processes” analysis (ex Figure 5): Proposed De Hoop and Boosmansbos World Heritage Sites. Also shown are areas transformed by agriculture, urbanization and dense stands of alien plants.**

### *Groot Swartberg*

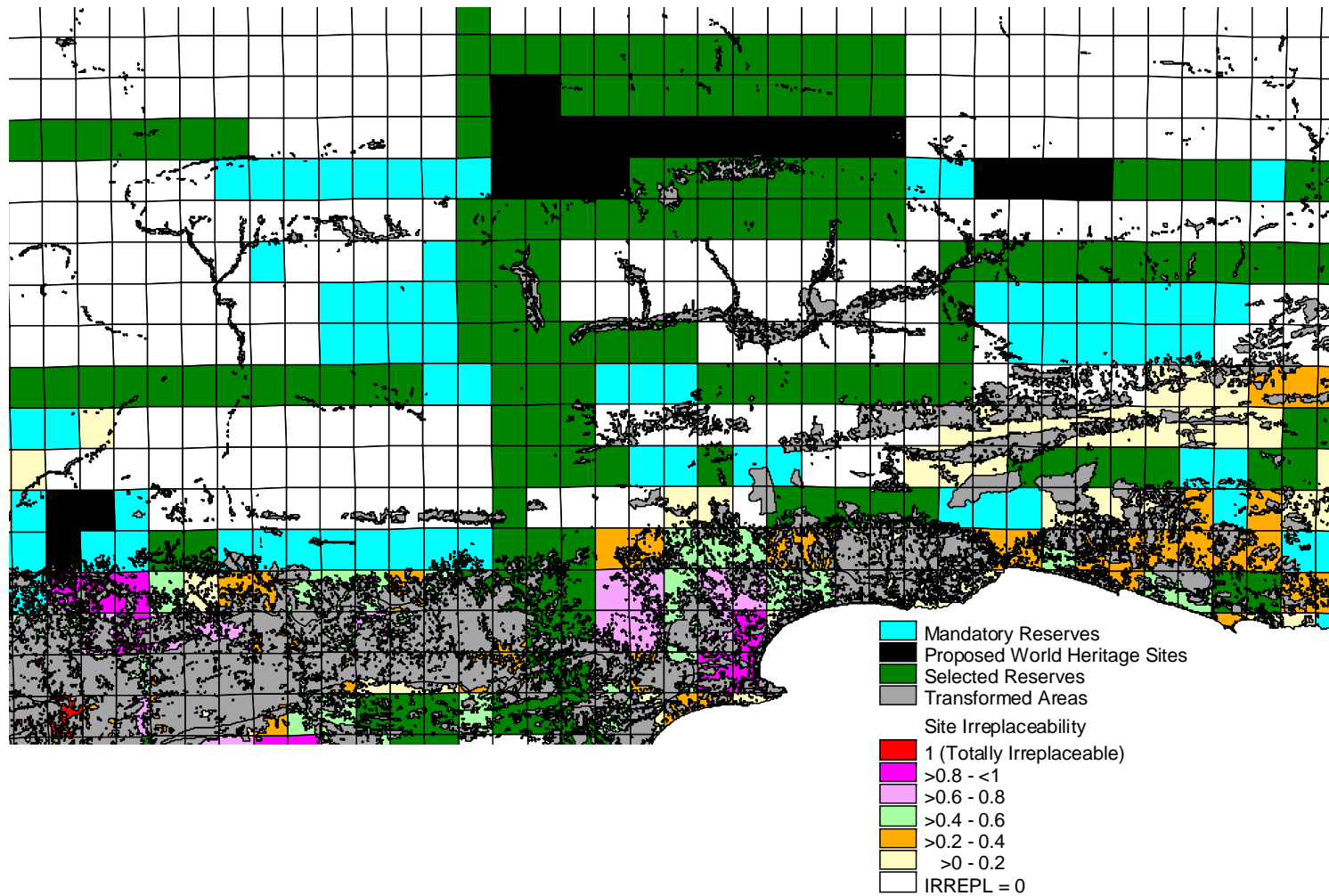
Like the Cederberg, the proposed Groot Swartberg WHS also forms part of a mega reserve (Little Karoo) identified by the CAPE Project (Cowling et al 1999a). If implemented, this reserve will extend from the plains of the Nama Karoo, across the Groot Swartberg to the Rooiberg-Gamkaberg complex, and thence, via the Gouritz River Valley, to the Riverdsale Coastal Plain (Figure 9). The project is ambitious since it requires the incorporation into the conservation system of much currently unreserved land. The northern sector of the Little Karoo mega reserve incorporates the proposed Groot Swartberg WHS and provided buffers on its northern and southern boundaries. These buffers encompass considerable biological heterogeneity (including transitions between four biomes) and will sustain a wide diversity of ecological and evolutionary processes. Mountain corridors should also be established to the west and east of the proposed WHS, thereby linking it to the winter-rainfall Waboomsberg and Witteberg BHUs and the equinoctial-Baviaanskloof BHU. The establishment of these corridors will require the incorporation of substantial areas of unreserved land. Fortunately, threats are not intense in these dry inland mountains. Priority actions should focus on the more vulnerable southern foothills (Kango BHU) of the Groot Swartberg.

### **Additional sites for consideration**

At least four other sites in the CFK have the potential for WHS listing, assessed in terms of their contribution to achieving reservation targets for biodiversity pattern and process. These are:

- West Coast National Park and adjacent Hopefield sandplain (Langebaan and Hopefield BHUs),
- Cape Peninsula National Park (Peninsula, Blackheath and Cape Flats BHUs) (Anon 1999b),
- Baviaanskloof Conservation Area (Kouga, Baviaanskloof, Gamtoos and Spekboom BHUs) (see Boshoff et al 2000),
- Anysberg Nature Reserve (Klein Swartberg, Little Karoo, Matjies, Witteberg BHUs).





**Figure 9 Planning detail of “design for processes” analysis (ex Figure 5): Proposed Groot Swartberg World Heritage Sites. Also shown are areas transformed by agriculture, urbanization and dense stands of alien plants.**

## **Conclusions**

### **Pattern**

Collectively, the six proposed WHS:

- comprise about 4% of the CFK;
- conserve habitat belonging to 29 out of the Kingdom's 88 BHUs (Appendix 1), including several where most to all remaining habitat is required to achieve reservation targets;
- and contribute significantly to fulfilling reservation targets for 13 BHUs.

### **Process**

While none of the WHS in their present configuration can accommodate the complete spectrum of process targets outlined in Table 2, each one has a size and configuration that will ensure persistence of many components of biodiversity in the medium term (next 50 yr.) and a measure of resilience to climate change.

### **Design for persistence**

All of the sites have potential for the creation of buffer zones and corridors that will greatly enhance their ability to achieve persistence goals. In particular, the establishment of the Cederberg and Little Karoo mega reserves will ensure the long-term persistence of the proposed Cederberg and Groot Swartberg WHS, respectively. It is strongly recommended that immediate steps are taken to implement priority actions arising from the buffer and corridor recommendations presented in this report.

## **Acknowledgements**

We acknowledge the input of CAPE Project participants, especially Bob Pressey and Mandy Lombard.

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## Appendices

**Appendix 1. Area (ha) and proportion (%) of Broad Habitat Units (BHU) in proposed World Heritage Sites (WHS) in the Cape Floral Kingdom (CFK). Also shown is the percentage of the included BHUs in each of the WHS. BHUs marked with an asterisk (\*) are not Mountain Complex BHUs.**

WHS	BHU (Code)	Area in WHS (ha)	% of BHU	% of WHS
Cederberg	Cederberg (47)	62809.67	27.56	95.70
	Gifberg (46)	821.67	0.41	1.25
	Leipoldtville (10)*	15.26	0.00	0.02
	Swartruggens (49)	1983.90	1.25	3.02
Total		65630.50		100.00
Groot Winterhoek	Groot Winterhoek (51)	27319.28	31.56	99.34
	Waveren-Bokkeveld* (37)	182.00	0.23	0.66
Total		27501.28		100.00
Kogelberg-Limietberg	Boland (32)	402.45	0.17	0.36
	Elgin* (25)	310.97	2.28	0.28
	Franschhoek (54)	31152.27	56.54	27.95
	Genadendal* (18)	339.79	6.94	0.30
	Hawequas (53)	48806.73	40.08	43.78
	Kogelberg (56)	29018.24	39.83	26.03
	Overberg* (33)	1436.37	0.33	1.29
Total		111473.61		100.00
De Hoop	Agulhas* (6)	4091.20	8.31	12.60
	De Hoop* (16)	19508.94	25.14	60.10
	Overberg* (33)	1824.84	0.42	5.62
	Potberg (65)	5774.18	48.37	17.78

	South Dune* (2)	1212.06	20.90	3.73
Total		33411.22		100.00
Boosmansbos	S. Langeberg (64)	14420.03	9.58	94.84
	Swellendam* (101)	656.24	36.28	4.32
	Little Karoo* (88)	127.42	0.03	0.84
Total		47666.76		100.00
Groot Swartberg	Gamka* (91)	212.40	0.07	0.21
	Groot Swartberg (68)	77179.86	66.78	74.99
	Kango* (43)	12548.96	7.44	12.19
	Klein Swartberg (66)	171.80	0.21	0.17
	Laingsberg* (79)	476.68	0.35	0.46
	Little Karoo* (88)	911.48	0.20	0.89
	Matjies* (39)	3964.49	3.47	3.85
	Prince Albert* (90)	2333.50	7.96	2.27
	Spekboom* (97)	3732.52	1.53	3.63
	Willowmore* (98)	1392.19	0.71	1.35
Total		102923.87		100.00
	Grand Total	355196.03		

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Appendix 2 Variables used to compute baseline ( $B$ ) and retention ( $R$ ) targets for BHUs. Primary BHUs are shown in bold. Pre-European area of BHU =  $e$ ; biodiversity weighting =  $b'$ ; threat weighting =  $h'$ ; transformation weighting =  $t'$ ; threat weighting ( $h' * t'$ ) =  $r'$ ; total target =  $T$ . Colour coding for  $T$  as a % extant (non-transformed) habitat = 100%, 75-99.9%, 50-74.9%, <50%. See Cowling et al (1999b) for details on the derivation of targets.

BHU	BHU code	$e$ (ha)	$b'$ (%)	$B$ (ha)	$h'$ (%)	$t'$	$r'$ (%)	$R$ (ha)	$T$ (ha)	$T$ (% extant)
<b>Dune Pioneer</b>										
South West	1	11964.95	15	1794.74	30	1.226	36.8	3406.31	5201.05	56.2
South	2	5797.55	10	579.76	30	1.138	34.1	1706.37	2286.13	45.7
South East	3	2781.18	10	278.12	30	1.400	42.0	700.55	978.67	58.7
<b>Fynbos / Thicket Mosaic</b>										
Langebaan	4	160339.3	15	24050.89	15	1.465	22.0	18840.72	42891.61	50.0
Cape Flats	5	26729.1	15	4009.37	30	1.761	52.8	3374.95	7384.32	100.0
Agulhas	6	49232.43	15	7384.86	30	1.205	36.2	14147.87	21532.73	55.0
Stilbaai	7	23009.19	10	2300.92	30	1.186	35.6	6664.50	8965.42	47.9
Goukamma	8	14223.71	10	1422.37	30	1.318	39.5	3836.95	5259.32	54.2
St Francis	9	25923.59	10	2592.36	30	1.638	49.1	4615.37	7207.73	76.7
<b>Sand Plain Fynbos</b>										
Leipoldtville	10	211084.6	15	31662.68	15	1.440	21.6	25532.34	57195.02	48.4
Hopefield	11	297628.8	15	44644.33	15	1.466	22.0	34946.72	79591.04	50.1
Blackheath	12	79600.53	15	11940.08	30	1.800	54.0	8613.32	20553.40	100.0
Springfield	13	44041.42	15	6606.21	30	1.209	36.3	12636.36	19242.58	55.2
Albertinia	14	44753.93	10	4475.39	15	1.480	22.2	5164.54	9639.94	41.4
<b>Limestone Fynbos</b>										
Hagelkraal	15	44003.06	15	6600.46	15	1.406	21.1	5513.37	12113.83	46.3
De Hoop	16	77588.88	15	11638.33	30	1.231	36.9	22029.90	33668.23	56.5
Canca	17	85232.67	10	8523.27	15	1.039	15.6	12765.36	21288.63	26.0
<b>Grassy Fynbos</b>										
Genadendal	18	48897.06	15	7334.56	30	1.423	42.7	12047.33	19381.89	68.7
Suurbraak	19	74191.48	10	7419.15	30	1.610	48.3	13973.37	21392.52	73.9
Keurbooms	20	14078.04	10	1407.80	30	1.171	35.1	4100.57	5508.37	47.2

Humansdorp	21	198725.5	10	19872.55	15	1.208	18.1	28513.44	48385.99	<b>30.8</b>
Algoa	22	29675.22	10	2967.52	30	1.422	42.7	7315.46	10282.98	<b>60.0</b>
Zuurberg	23	47709.74	10	4770.97	0	1.003	0.0	0.00	4770.97	<b>10.0</b>
<b>Fynbos / Renosterveld</b>										
<b>Mosaic</b>										
Perdeberg	24	4449.83	15	667.47	30	1.110	33.3	1318.81	1986.29	<b>50.2</b>
Elgin	25	13610.23	15	2041.53	30	1.880	56.4	920.71	2962.24	<b>100.0</b>
Breede	26	37817.54	15	5672.63	30	1.629	48.9	6860.66	12533.29	<b>89.3</b>
Elim	27	59407.45	15	8911.12	30	1.602	48.0	11371.63	20282.75	<b>85.7</b>
Blanco	28	74975.6	10	7497.56	30	1.370	41.1	19417.85	26915.41	<b>57.0</b>
Langkloof	29	78345.54	10	7834.55	30	1.326	39.8	21011.73	28846.28	<b>54.6</b>
Kromme	30	84570.77	10	8457.08	30	1.385	41.5	21615.15	30072.23	<b>57.8</b>
<b>Coast Renosterveld</b>										
Swartland	31	411302	15	61695.31	30	1.892	56.8	25219.14	86914.45	<b>100.0</b>
Boland	32	241692.1	15	36253.82	30	1.768	53.0	29727.86	65981.68	<b>100.0</b>
Overberg	33	429687.7	15	64453.15	30	1.892	56.7	26449.55	90902.70	<b>100.0</b>
Riversdale	34	316301.6	10	31630.16	30	1.694	50.8	49223.80	80853.96	<b>83.5</b>
<b>Inland Renosterveld</b>										
Niewoudtville	35	32204.24	25	8051.06	30	1.189	35.7	9317.84	17368.90	<b>66.5</b>
Kouebokkeveld	36	98544.82	25	24636.21	15	1.097	16.5	14641.66	39277.87	<b>44.2</b>
Waveren-Bokkeveld	37	80272.35	15	12040.85	15	1.530	23.0	8656.76	20697.61	<b>54.9</b>
Ashton	38	126740.2	25	31685.04	15	1.369	20.5	16428.82	48113.86	<b>60.1</b>
Matjies	39	114136.2	10	11413.62	0	1.006	0.0	0.00	11413.62	<b>10.1</b>
Roggeveld	40	149582.6	15	22437.39	15	1.000	15.0	22437.39	44874.78	<b>30.0</b>
Montagu	41	128045.1	10	12804.51	15	1.052	15.8	19154.87	31959.38	<b>26.3</b>
Cannaland	42	49468.95	10	4946.90	15	1.162	17.4	7225.35	12172.25	<b>29.4</b>
Kango	43	168756.2	10	16875.62	15	1.052	15.8	25245.83	42121.45	<b>26.3</b>
Uniondale	44	120306.1	10	12030.61	15	1.265	19.0	16783.24	28813.85	<b>32.6</b>
<b>Mountain Complex</b>										
Bokkeveld	45	98355.62	25	24588.91	0	1.060	0.0	0.00	24588.91	<b>26.6</b>
Gifberg	46	200285.5	25	50071.37	0	1.218	0.0	0.00	50071.37	<b>32.0</b>
Cederberg	47	227821.3	25	56955.33	0	1.078	0.0	0.00	56955.33	<b>27.1</b>
Olifants River	48	146071.3	25	36517.82	0	1.227	0.0	0.00	36517.82	<b>32.3</b>
Swartruggens	49	158200.9	25	39550.22	0	1.082	0.0	0.00	39550.22	<b>27.2</b>
Piketberg	50	51581.41	25	12895.35	15	1.169	17.5	7515.95	20411.31	<b>47.6</b>



Groot Winterhoek	51	86565.29	25	21641.32	0	1.037	0.0	0.00	21641.32	<b>25.9</b>
Matroosberg	52	71418.64	25	17854.66	0	1.007	0.0	0.00	17854.66	<b>25.2</b>
Hawequas	53	121769.2	25	30442.29	15	1.072	16.1	18170.70	48612.99	<b>43.0</b>
Franschhoek	54	55101.88	25	13775.47	15	1.179	17.7	8001.70	21777.17	<b>48.1</b>
Cape Peninsula	55	35936.35	25	8984.09	30	1.263	37.9	10034.66	19018.75	<b>71.8</b>
Kogelberg	56	72851.88	25	18212.97	15	1.195	17.9	10513.95	28726.92	<b>49.0</b>
Klein River	57	36822.8	25	9205.70	30	1.218	36.5	10523.12	19728.82	<b>68.5</b>
Caledon Swartberg	58	9826.63	25	2456.66	30	1.204	36.1	2825.10	5281.76	<b>67.5</b>
Riviersonderend	59	82005.59	25	20501.40	0	1.043	0.0	0.00	20501.40	<b>26.1</b>
Koo Langeberg	60	73666.42	10	7366.64	0	1.017	0.0	0.00	7366.64	<b>10.2</b>
Waboomsberg	61	27997.87	25	6999.47	0	1.208	0.0	0.00	6999.47	<b>31.6</b>
Witteberg	62	45020.71	25	11255.18	0	1.003	0.0	0.00	11255.18	<b>25.1</b>
Bredasdorp	63	33372.67	25	8343.17	30	1.214	36.4	9552.23	17895.39	<b>68.2</b>
Southern Langeberg	64	150597.7	10	15059.77	0	1.081	0.0	0.00	15059.77	<b>10.9</b>
Potberg	65	11937.35	25	2984.34	30	1.050	31.5	3572.07	6556.41	<b>57.8</b>
Klein Swartberg	66	81393.3	10	8139.33	0	1.003	0.0	0.00	8139.33	<b>10.0</b>
Rooiberg	67	77786.18	10	7778.62	0	1.002	0.0	0.00	7778.62	<b>10.0</b>
Groot Swartberg	68	115571.9	10	11557.19	0	1.002	0.0	0.00	11557.19	<b>10.0</b>
Outeniqua	69	168928.5	10	16892.85	15	1.163	17.4	24666.91	41559.75	<b>29.4</b>
Kamanassie	70	54974.75	10	5497.48	0	1.021	0.0	0.00	5497.48	<b>10.2</b>
Tsitsikamma	71	161941	10	16194.10	0	1.046	0.0	0.00	16194.10	<b>10.5</b>
Kouga	72	174911.4	10	17491.14	0	1.029	0.0	0.00	17491.14	<b>10.3</b>
Baviaanskloof	73	168340.1	10	16834.01	0	1.010	0.0	0.00	16834.01	<b>10.1</b>
Cockscomb	74	146476.2	10	14647.62	0	1.103	0.0	0.00	14647.62	<b>11.2</b>
<b>Vygieveld</b>										
Western Mountain	75	302457	15	45368.56	0	1.025	0.0	0.00	45368.56	<b>15.4</b>
Klawer	76	87819.79	15	13172.97	0	1.384	0.0	0.00	13172.97	<b>24.4</b>
Knervlakte	77	464960.6	15	69744.09	0	1.033	0.0	0.00	69744.09	<b>15.5</b>
Tanqua	78	619389.6	15	92908.44	0	1.007	0.0	0.00	92908.44	<b>15.1</b>
Laingsburg	79	133951.5	15	20092.72	0	1.003	0.0	0.00	20092.72	<b>15.0</b>
Moordenaars	80	95289.67	15	14293.45	0	1.000	0.0	0.00	14293.45	<b>15.0</b>
Touws	81	141908.3	15	21286.24	0	1.070	0.0	0.00	21286.24	<b>16.1</b>
<b>Strandveld</b>										
Namaqualand	82	43340.64	15	6501.10	0	1.007	0.0	0.00	6501.10	<b>15.1</b>

Lamberts Bay	83	96275.5	15	14441.33	0	1.225	0.0	0.00	14441.33	<b>19.4</b>
<b>Broken Veld</b>										
Garies	84	9767.54	15	1465.13	0	1.000	0.0	0.00	1465.13	<b>15.0</b>
Loeriesfontein	85	51659.98	15	7749.00	0	1.042	0.0	0.00	7749.00	<b>15.7</b>
Witrantjies	86	97126.98	10	9712.70	0	1.052	0.0	0.00	9712.70	<b>10.6</b>
Robertson	87	127658.9	15	19148.83	0	1.364	0.0	0.00	19148.83	<b>23.6</b>
Little Karoo	88	445654.7	10	44565.47	0	1.013	0.0	0.00	44565.47	<b>10.1</b>
Oudtshoorn	89	135197.2	10	13519.72	0	1.137	0.0	0.00	13519.72	<b>11.6</b>
Prince Albert	90	293142.3	10	29314.23	0	1.006	0.0	0.00	29314.23	<b>10.1</b>
Gamka	91	311818	10	31181.80	0	1.000	0.0	0.00	31181.80	<b>10.0</b>
Steytlerville	92	347465.7	10	34746.57	0	1.011	0.0	0.00	34746.57	<b>10.1</b>
<b>Mesic Succulent Thicket</b>										
Gouritz	93	18280.18	10	1828.02	30	1.293	38.8	5013.91	6841.93	<b>52.9</b>
Gamtoos	94	32222.83	10	3222.28	15	1.310	19.6	4368.96	7591.25	<b>34.1</b>
Sundays	95	151266.6	10	15126.66	15	1.177	17.6	21982.69	37109.34	<b>29.8</b>
Aloes	96	2611.01	10	261.10	30	1.608	48.2	493.80	754.90	<b>73.7</b>
<b>Xeric Succulent Thicket</b>										
Spekboom	97	244306.8	10	24430.68	0	1.037	0.0	0.00	24430.68	<b>10.4</b>
Willowmore	98	194937.9	10	19493.79	0	1.005	0.0	0.00	19493.79	<b>10.0</b>
Addo	99	179864.3	10	17986.43	0	1.067	0.0	0.00	17986.43	<b>10.7</b>
<b>Afromontane Forest</b>										
Knysna	100	207872.9	10	20787.29	30	1.411	42.3	51821.81	72609.10	<b>59.3</b>
Swellendam	101	1808.88	10	180.89	30	1.242	37.2	510.97	691.86	<b>50.4</b>
<b>Indian Ocean Forest</b>										
Alexandria	102	35738.44	10	3573.84	30	1.267	38.0	9956.74	13530.58	<b>51.7</b>

**Appendix 3. Spatial components of processes targeted for conservation action in the Cape Floral Kingdom. The components are identified geographically and given quantitative targets.**

Spatial component	Method of identification	Target
Juxtaposed edaphically different habitats	Identify planning units with particular combinations of BHUs encompassing strong edaphic contrasts that are known to be associated with plant diversification processes. Filter out “unsuitable” planning units based on: (1) fragmentation; and (2) lack of sufficient contact.	At least one combination of each type
Entire sand movement corridors	Identify planning units of the three specific (Dune Pioneer) BHUs. One of these (South East) is probably best protected to the east of the CFK boundary. Filter out any corridors (sediment-source) with limited conservation potential of surrounding land (particularly the sediment-sink or downwind zone). Assume dense aliens make corridors irrecoverable.	At least one entire corridor of each type
Whole riverine corridors	Identify major rivers that link inland basins with coastal plains: Olifants-Doring, Berg, Breede, Gouritz- Gamka-Olifants, Gamtoos-Baviaanskloof-Groot. Identify untransformed corridors or parts of corridors (note that dams represent a serious, unmapped threat).	All or part of each of the major corridors (five river systems; ten river corridors)
Gradients from uplands to coastal lowlands and interior basins	Identify planning units on the following interfaces of upland and lowland: <ul style="list-style-type: none"> <li>* coastal range/coastal plain;</li> <li>* coastal range/interior basins;</li> <li>* inland range/interior basins;</li> <li>* inland range/Karoo basin;</li> </ul> which would allow the construction of corridors between the environment combinations.	At least one example of each interface (gradient) within each of the major climate zones

Macro-scale climatic gradients	Complement gradients between lowlands and uplands (meso scale) with macro scale connectivity in two main directions: 1. north-south in the western CFK (coastal forelands and mountains); 2. east-west in the southern and eastern CFK (coastal forelands, coastal mountains, interior basins, interior mountains).	Unbroken transects along all of the geographical gradients
Megawilderness areas	Identify adjacent planning units that encompass ca 500 000 ha of untransformed habitat, transcend biome boundaries, and include all or part of a riverine corridor.	One in the north-western, one in the southern, and one in the south-eastern CFK
Transitions between primary BHU and biome boundaries	Where possible, expand conservation areas to encompass these transitions	As many transitions as possible

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**Appendix 4. Stages in planning for process. Shown is the rationale for choice of planning units and number of units selected. See Appendix 2 for method of identification and targets for the spatial components dealt with at each planning stage (from Cowling et al 1999a).**

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*When options were available for achieving process targets, planning units with the highest site irreplaceability values were chosen.*

**Stage 1: Juxtaposed Edaphically Different Habitats**

1. West Coast

Planning units that are not heavily fragmented (agriculture, urbanisation and dense aliens) and comprise substantive contact between Langebaan BHU (limestone alkaline) and Hopefield and Blackheath BHUs (acidic).  
Note: 11 planning units are mandatory (Category 1 and Category 2) reserves; 13 additional planning units were selected.

2. Agulhas Plain

Planning units that are not heavily fragmented (agriculture, urbanisation and dense aliens) and comprise substantive contact between Hagelkraal BHU (limestone alkaline), and Springfield and Elim BHUs (acidic).  
Note: 1 planning unit is a mandatory reserve; 14 additional planning units were selected.

3. De Hoop

Planning units that are not heavily fragmented (agriculture, urbanisation and dense aliens) and comprise substantive contact between De Hoop BHU (limestone alkaline) and Potberg BHUs (acidic).  
Note: 51 planning units are mandatory reserves; 0 additional planning units were selected.

4. Riversdale Plain

Planning units that are not heavily fragmented (agriculture, urbanisation and dense aliens) and comprise contact between Canca BHU (alkaline) and Albertinia BHU (acidic).  
Note: No planning units are mandatory reserves; 3 planning units were selected.

**Stage 2: Entire Sand Movement Corridors**

Only those dune fields were chosen where sediment – source and – sink dynamics could be maintained. Dune fields covered in dense alien plants and where the sediment sink (or downwind) zone was not available for conservation management, were rejected.

1. South West Coast

Walker Bay dune field selected.

Note: 2 planning units are mandatory reserves; 2 additional planning units were selected.

2. South Coast

De Hoop dune field and a second dune field chosen on Stilbaai coast were selected.

Note: 3 planning units are mandatory reserves; 6 additional planning units were selected.

3. South East Coast

Gamtoos dune field selected.

Note: No mandatory reserves; 5 planning units were selected.

**Stage 3: Whole Riverine Corridors**

1. Olifants - Doring System

Olifants rejected owing to agricultural transformation; Doring selected.

Note: 1 planning unit is a mandatory reserve; 40 additional planning units were selected.

2. Berg System

Unavailable owing to transformation by agriculture and urbanisation.

3. Breede River

*Only lower reaches (below the junction with the Rivieronderend River) available owing to agricultural transformation.*

Note: 11 planning units are mandatory reserves; 7 additional planning units were selected.

#### 4. Gouritz - Gamka - Olifants System

Olifants unavailable owing to agricultural transformation. Entire Gouritz - Gamka System available.

Note: 4 planning units are mandatory reserves; 34 additional planning units were selected.

This System also links coastal plain to Great Karoo (see Upland-Lowland Gradients below).

#### 5. Gamtoos - Baviaanskloof - Groot System

Lower reaches of Gamtoos unavailable owing to agricultural transformation. Baviaanskloof and Groot Rivers available.

Note: 11 planning units are mandatory reserves; 29 additional planning units were selected.

### **Stage 4: Upland Lowland Gradients**

#### 1. Strong Winter Climate Zone

Transformation by agriculture is a constraint on the coastal plain; uplands largely conserved already; potential to extend eastwards to the Tanqua Karoo National Park. Geographical considerations enabled combining all gradients in one transect.

Note: 8 planning units are mandatory reserves; 15 additional planning units were selected.

#### 2. Moderate Winter Climate Zone

Owing to geographic considerations (i.e. absence of suitable gradients within this climatic zone) and extensive transformation of the coastal lowlands, this transect is not feasible.

#### 3. Non-Seasonal Climate Zone

The Gouritz - Gamka System (see Whole Riverine Corridors above) provides the necessary units for all environment combinations.

#### 4. Non-Seasonal - Equinoctial Climate Zone

All environment combinations included in one transect; shortest route via Storm's River and Langkloof to Baviaanskloof and Springbokvlakte.

Note: 4 planning units are mandatory reserves; 7 additional planning units were selected.

### **Stage 5: Macroclimatic Gradients**

#### 1. Western CFK (North - South)

##### *Lowlands*

Only feasible in extreme north and south (see Juxtaposed Edaphically Different Habitats above) and along the coastal margin; remaining area extensively transformed.

Note: no planning units are mandatory reserves; 18 additional planning units were selected.

##### *Mountains*

Well covered by existing reserves (see note below); crucial linkages in Doring River Valley, Gouda and Sir Lowry's Pass areas have been added.

Note: 41 planning units are mandatory reserves; 17 additional planning units were selected.

#### 2. Southern and Eastern CFK

##### *Lowlands*

Suitable habitat is confined to the area between Stanford and Gouritzmond on the coastal margin; other areas have been transformed by agriculture and urbanisation.

Note: 16 planning units are mandatory reserves; 42 additional planning units were selected.

##### *Coastal Mountains*

Selected minimum number of units in montane habitats to link existing reserves and create an unbroken conservation system; includes the

Hawequas - Riviersonderend gradient and the Matroosberg - Tsitsikamma gradient.

Note: 44 planning units are mandatory reserves; 45 additional planning units were selected.

#### *Inland Mountains*

Selected minimum number of units in montane habitats to link existing reserves and create an unbroken conservation system; comprises the Matroosberg - Cockscomb gradient.

Note: 40 planning units are mandatory reserves; 64 additional planning units were selected.

#### *Interior Basin*

Planning units selected to maximise representation of and transitions between Little Karoo BHU's, as well as to link up with existing reserves.

Note: 7 planning units are mandatory reserves; 65 additional planning units were selected.

### **Stage 6: Megawilderness Areas**

#### 1. Northwest (Cederberg)

Area larger than 500 000ha and encompassing a biome transition (Fynbos-Succulent Karoo) as well as riverine corridor (Doring).

Note: 85 planning units are mandatory reserves; 59 additional planning units were selected

#### 2. Southeast (Baviaanskloof)

Area larger than ca 400 000ha and encompassing biome transitions (Fynbos-Nama Karoo-Thicket) as well as riverine corridor (Baviaanskloof).

Note: 42 planning units are mandatory reserves; 61 additional planning units were selected.

#### 3. South (Little Karoo)

Area larger than 500 000ha and encompassing biome transitions (Fynbos-Nama Karoo-Thicket-Succulent Karoo) as well as riverine corridor (Gouritz).

Note: 52 planning units are mandatory reserves; 71 additional planning units were selected.

### **Stage 7: Transitions between primary BHU's and biomes**

A "mopping up" exercise to select planning units of high irreplaceability that are adjacent to existing mandatory reserves and/or units selected for process targets, and that also encompass sufficient untransformed habitat of transitions between primary BHU's and/or biomes.

Note: by definition planning units are mandatory reserves; 56 planning units were selected.

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**Appendix 5. Achievement of BHU targets (% of total target, see Appendix 2) by proposed WHS (Stage 1 analysis), all Category 1 reserves, including WHS (Stage 2 analysis), and achievement of all process targets (Appendix 3) when all Category 1 and 2 reserves are regarded as mandatory (Stage 3).**

BHU Code	BHU Name	Analysis		
		Stage1	Stage2	Stage3
1	South West Dune Pioneer	0	6.11	139.41
2	South Dune Pioneer	48.83	54.15	165.43
3	South East Dune Pioneer	0	0	130.87
4	Langebaan Fynbos / Thicket Mosaic	0	47.65	102.64
5	Cape Flats Fynbos / Thicket Mosaic	0	0	0
6	Agulhas Fynbos / Thicket Mosaic	17.66	29.24	148.04
7	Stilbaai Fynbos / Thicket Mosaic	0	0	157.43
8	Goukamma Fynbos / Thicket Mosaic	0	0.9	50.61
9	St Francis Fynbos / Thicket Mosaic	0	0	0.53
10	Leipoldtville Sand Plain Fynbos	0.53	0.53	63.09
11	Hopefield Sand Plain Fynbos	0	1.43	90.53
12	Blackheath Sand Plain Fynbos	0	1.62	12.33
13	Springfield Sand Plain Fynbos	0	0	72.32
14	Albertinia Sand Plain Fynbos	0	0	131.2
15	Hagelkraal Limestone Fynbos	0	0	134.47
16	De Hoop Limestone Fynbos	35.38	35.38	67.51
17	Canca Limestone Fynbos	0	0	238.92
18	Genadendal Grassy Fynbos	0	3.82	91.99
19	Suurbrak Grassy Fynbos	0	1.16	47
20	Keurbooms Grassy Fynbos	0	0.12	96.08
21	Humansdorp Grassy Fynbos	0	17.73	22.62
22	Algoa Grassy Fynbos	0	0	0.01
24	Perdeberg Fynbos / Renosterveld Mosaic	0	0	95.56
25	Elgin Fynbos / Renosterveld Mosaic	3.9	3.9	87.95
26	Brede Fynbos / Renosterveld Mosaic	0	0	6.3
27	Elim Fynbos / Renosterveld Mosaic	0	0	30.99
28	Blanco Fynbos / Renosterveld Mosaic	0	0.26	16.84
29	Langkloof Fynbos / Renosterveld Mosaic	0	8.35	56.57
30	Kromme Fynbos / Renosterveld Mosaic	0	4.43	16.83
31	Swartland Coast Renosterveld	0	0	15.91
32	Boland Coast Renosterveld	1.05	6.69	46.58
33	Overberg Coast Renosterveld	5.75	6.29	26.59
34	Riversdale Coast Renosterveld	0.37	0.44	45.13
35	Niewoudtville Inland Renosterveld	0	0	0
36	Kouebokkeveld Inland Renosterveld	0	6.94	130.06
37	Waveren-Bokkeveld Inland Renosterveld	5.54	5.54	87.93
38	Ashton Inland Renosterveld	0	0.65	74.36
39	Matjies Inland Renosterveld	12.5	90.89	381.75
41	Montagu Inland Renosterveld	0	0.39	57.31



42	Cannaland Inland Renosterveld	0	2.76	120.87
43	Kango Inland Renosterveld	38.78	46.27	222.19
44	Uniondale Inland Renosterveld	0	21.36	131.89
45	Bokkeveld Mountain Fynbos Complex	0	0	62.21
46	Gifberg Mountain Fynbos Complex	3.31	3.31	183.48
47	Cederberg Mountain Fynbos Complex	114.44	114.44	339.80
48	Olifants River Mountain Fynbos Complex	0	0	100.34
49	Swartruggens Mountain Fynbos Complex	2.89	16.51	304.00
50	Piketberg Mountain Fynbos Complex	0	0	0
51	Groot Winterhoek Mountain Fynbos Complex	104.81	104.81	332.55
52	Matroosberg Mountain Fynbos Complex	0	19.85	328.54
53	Hawequas Mountain Fynbos Complex	75.53	108.44	207.61
54	Franschhoek Mountain Fynbos Complex	135.71	135.71	165.05
55	Cape Peninsula Mountain Fynbos Complex	0	65.06	131.04
56	Kogelberg Mountain Fynbos Complex	71.51	71.51	146.46
57	Klein River Mountain Fynbos Complex	0	0	13.91
58	Caledon Swartberg Mountain Fynbos Complex	0	0	0
59	Riviersonderend Mountain Fynbos Complex	0	79.77	256.56
60	Koo Langeberg Mountain Fynbos Complex	0	0	789.4
61	Waboomsberg Mountain Fynbos Complex	0	0	22.16
62	Witteberg Mountain Fynbos Complex	0	37.98	220.31
63	Bredasdorp Mountain Fynbos Complex	0	0	5.93
64	Southern Langeberg Mountain Fynbos Complex	69.08	162.16	719.3
65	Potberg Mountain Fynbos Complex	88.98	88.98	163.43
66	Klein Swartberg Mountain Fynbos Complex	0.13	258.31	500.25
67	Rooiberg Mountain Fynbos Complex	0	252.91	909.75
68	Groot Swartberg Mountain Fynbos Complex	535.59	535.59	882.94
69	Outeniqua Mountain Fynbos Complex	0	57.48	159.83
70	Kamanassie Mountain Fynbos Complex	0	389.75	873.97
71	Tsitsikamma Mountain Fynbos Complex	0	150.73	466.79
72	Kouga Mountain Fynbos Complex	0	307.03	698.16
73	Baviaanskloof Mountain Fynbos Complex	0	500.54	956.16
74	Cockscomb Mountain Fynbos Complex	0	257.66	493.26
76	Klawer Vygieveld	0	0	28.03
78	Tanqua Vygieveld	0.02	4.27	255
81	Touws Vygieveld	0	1.86	56.43
83	Lamberts Bay Strandveld	0	0	279.07
86	Witrantjies Broken Veld	0	0	197.51
87	Robertson Broken Veld	0	0.09	48.79
88	Little Karoo Broken Veld	1.01	43.3	286.42
89	Oudtshoorn Broken Veld	0	0	293.45
93	Gouritz Mesic Succulent Thicket	0	0	168.17
94	Gamtoos Mesic Succulent Thicket	0	101.11	119.6
96	Aloes Mesic Succulent Thicket	0	2.4	104.47
97	Spekboom Xeric Succulent Thicket	18.22	25.26	572.41
100	Knysna Afromontane Forest	0	12.42	66.17

101	Swellendam Afromontane Forest	98.93	98.93	192.25
102	Alexandria Indian Ocean Forest	0	9.72	54.39

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PROVINCE OF WESTERN CAPE

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**WESTERN CAPE NATURE  
CONSERVATION BOARD ACT,  
1998**

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PROVINSIE WES-KAAP

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**WET OP DIE WES-KAAPSE  
NATUURBEWARINGSRAAD, 1998**

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**No 15, 1998**

# ACT

To provide for the establishment, powers, functions and funding of a Western Cape Nature Conservation Board and the establishment, funding and control of a Western Cape Nature Conservation Fund, and to provide for matters incidental thereto.

**B**E IT ENACTED by the Provincial Parliament of the Province of Western Cape, as follows:—

## CHAPTER 1: DEFINITIONS

### Definitions

1. (1) In this Act, unless the context otherwise indicates— 5
  - (i) “**Board**” means the Western Cape Nature Conservation Board referred to in section 2;
  - (ii) “**budget**” means an estimate of expected revenue and expenditure which contains particulars of the purposes for which money is to be used;
  - (iii) “**chairperson**” means the chairperson of the *Board* appointed in terms of section 7(1); 10
  - (iv) “**chief executive officer**” means the chief executive officer of the *Board* appointed in terms of section 10;
  - (v) “**Constitution**” means the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996); 15
  - (vi) “**Department**” means the department in the *provincial administration* responsible for *nature conservation*;
  - (vii) “**effective date**” means the date, after the date fixed by the *Premier* for the commencement of this Act, *prescribed* by the *responsible Minister* for the commencement of operations by the *Board*; 20
  - (viii) “**financial year**” means the period from 1 April in any year to 31 March in the next succeeding year;
  - (ix) “**Fund**” means the Western Cape Nature Conservation Fund established by section 18;
  - (x) “**nature conservation**” means the conservation of naturally-occurring 25 ecological systems and the sustainable utilisation of indigenous plants and animals and the promotion and maintenance of biological diversity within those systems, with due regard to the need to preserve objects of geological, archeological, historical, ethnological, educational, oceanographic or scientific interest; 30
  - (xi) “**nature conservation area**” means an area proclaimed as such by the *responsible Minister* in terms of section 9(2) for the purpose of conserving indigenous wildlife and plants in the *Province*;
  - (xii) “**prescribe**” means prescribe by regulation in terms of section 22;
  - (xiii) “**Province**” means the Province of Western Cape; 35
  - (xiv) “**provincial administration**” means the Provincial Administration: Western Cape referred to in the first column of Schedule 1 to the Public Service Act, 1994 (Proclamation 103 of 1994);
  - (xv) “**Provincial Cabinet**” means the Provincial Cabinet as contemplated in section 42 of the *Provincial Constitution*; 40
  - (xvi) “**Provincial Constitution**” means the Constitution of the Western Cape, 1997;
  - (xvii) “**Provincial Minister of Finance**” means the member of the *Provincial Cabinet* responsible for financial matters or, if that person is the same person as the *responsible Minister*, the Premier of the *Province*; 45

- (xviii) “**Provincial Parliament**” means the Provincial Parliament as contemplated in section 9(1) of the *Provincial Constitution*;
- (xix) “**Republic**” means the Republic of South Africa;
- (xx) “**responsible Minister**” means the member of the *Provincial Cabinet* responsible for *nature conservation*; 5
- (xxi) “**staff transfer date**” means the date, after the *effective date, prescribed* by the *responsible Minister* for the transfer of employees and personnel records from the *provincial administration* to the *Board*;
- (xxii) “**vice-chairperson**” means the vice-chairperson of the *Board* appointed in terms of section 7(1). 10
- (2) References to any statutory provision shall include a reference to that provision, as amended or re-enacted from time to time.
- (3) Where in this Act any functionary is required to take a decision in consultation with another functionary, such decision shall require the concurrence of such other functionary; provided that, if such other functionary is a body of persons, it shall express its concurrence in accordance with its own decision-making procedures. 15
- (4) Where in this Act any functionary is required to take a decision after consultation with another functionary, such decision shall be taken in good faith after consulting with, and giving serious consideration to the views of, such other functionary.

## CHAPTER 2: WESTERN CAPE NATURE CONSERVATION BOARD 20

### Establishment and composition of Western Cape Nature Conservation Board

2. There is hereby established a board to be known as the Western Cape Nature Conservation Board, which shall consist of nine members, it shall be a body corporate capable of suing and being sued and, subject to the provisions of this Act and in so far as may be necessary for the better performance of its functions and duties, of performing all such acts as a body corporate may by law perform. 25

### Objects of Board

3. The objects of the *Board* shall be—

(a) to promote and ensure *nature conservation* and related matters in the *Province*; 30

(b) to render services and provide facilities for research and training in connection with *nature conservation* and related matters in the *Province*, and

(c) in pursuing the objects set out in paragraphs (a) and (b), to generate income, within the framework of any applicable policy determined by the *responsible Minister* or the *Provincial Cabinet*. 35

### Appointment of members of Board

4. (1) Subject to subsection (2), the *responsible Minister* shall appoint as members of the *Board*, after consultation with a Standing Committee of the *Provincial Parliament*—

(a) four persons with expertise in *nature conservation*, and

(b) five other persons; 40

provided that no employee of the *Board*, no member of the *Provincial Parliament*, no person who is appointed to a full-time post by, or is in the service of, the State and receives remuneration for that appointment or service, and no person who has been declared insolvent or of unsound mind by a competent court, or who has been convicted of an offence and sentenced to imprisonment without the option of a fine, shall be appointed to the *Board*. 45

(2) The *responsible Minister* shall, before appointing a member of the *Board*, by notice in the *Provincial Gazette* and in other media which the Minister may consider appropriate, invite all interested parties to submit to the Minister, within the period mentioned and in the manner prescribed in the notice, the names of persons who in the opinion of those interested parties are fit and proper persons to be so appointed, stating the grounds upon which their opinion is based. 50

(3) The name of every person appointed a member of the *Board* shall be tabled in the *Provincial Parliament* within 14 days after appointment or, if the *Provincial Parliament* is not then in session, within 14 days after the commencement of its next ensuing session.

(4) If, within 30 days after the name of any person has been tabled in terms of subsection (3), the *Provincial Parliament* adopts a resolution whereby the appointment of that person as a member of the *Board* is not approved, that person's appointment shall be cancelled.

(5) The cancellation of any appointment in terms of subsection (4) shall not affect the validity of anything done by the *Board* while the person whose appointment is so cancelled was a member of the *Board*.

#### **Period of office of members of Board**

5. (1) A member of the *Board* shall hold office for such period, not exceeding five years, as the *responsible Minister* may determine at the time of that member's appointment; provided that the *responsible Minister* shall ensure that the expiry dates of the periods of office of members of the *Board* do not coincide.

(2) A member of the *Board* shall be eligible for reappointment for one other period, not exceeding five years, as the *responsible Minister* may determine at the time of that member's reappointment; provided that a person may be appointed to the *Board* in terms of subsection (1) if a period of at least 12 months has passed since having last served as a member of the *Board*.

#### **Vacation of office of members of Board**

6. (1) The office of a member of the *Board* becomes vacant if that member—

- (a) is declared insolvent or of unsound mind by a competent court;
- (b) has his or her appointment cancelled in terms of section 4(4);
- (c) is removed from office in terms of subsection (2);
- (d) is convicted of an offence and sentenced to imprisonment without the option of a fine; provided that no one shall be regarded as having been sentenced until an appeal against the conviction or sentence has been determined;
- (e) is absent from three consecutive meetings of the *Board* without the consent of the *chairperson*, which consent shall not be unreasonably withheld;
- (f) submits his or her resignation in writing to the *chairperson*;
- (g) becomes a member of a Provincial Parliament or an employee of the *Board* or is appointed by, or enters the service of, the State, and receives remuneration for that appointment or service;
- (h) dies.

(2) The *responsible Minister* may remove a member of the *Board* from office on the ground of misconduct, incapacity or incompetence; provided that—

- (a) the *responsible Minister* shall table in the *Provincial Parliament* forthwith or, if the *Provincial Parliament* is not then in session, within seven days after the commencement of its next ensuing session, a notice of intention to remove a member of the *Board* from office, including a full statement of reasons, and
- (b) if, within 30 days after a notice has been tabled in terms of paragraph (a), the *Provincial Parliament* adopts a resolution calling for that person's retention in office, the *responsible Minister* shall not remove that person from office.

(3) The *responsible Minister* may suspend a member of the *Board* from office pending the expiry of the 30-day period described in paragraph (b) of the proviso to subsection (2).

(4) Subject to section 4, the *responsible Minister* shall forthwith fill any vacancies on the *Board*.

#### **Chairperson and vice-chairperson of Board**

7. (1) The *responsible Minister* shall, after consultation with the *Board*, appoint or reappoint one member of the *Board* as *chairperson* and one as *vice-chairperson* for such period, not exceeding three years, as the *responsible Minister* may determine at the time of their appointment or reappointment.



(2) The *responsible Minister* shall fill any vacancy in the office of *chairperson* or *vice-chairperson* forthwith in accordance with subsection (1).

(3) If the *chairperson* is for any reason unable to act as *chairperson*, the *vice-chairperson* shall perform the functions of the *chairperson*.

(4) Subject to section 8, the *Board* shall meet for the dispatch of business and adjourn and otherwise regulate its meetings as the *chairperson* deems fit; provided that the provisions of section 28(1) and (2) of the *Provincial Constitution* shall apply *mutatis mutandis* to meetings of the *Board*. 5

### Meetings and decisions of Board

8. (1) The first meeting of the *Board* shall be held at a time and place determined by the *responsible Minister*, and thereafter the *Board* shall meet at such times and places as may be determined by the *chairperson* from time to time, but the *Board* shall meet at least once every three months. 10

(2) The *chairperson* or *responsible Minister* may at any time, either of his or her own volition or at the written request of not fewer than five members of the *Board*, by notice convene an extraordinary meeting of the *Board*, which shall be held at the time and place determined by the *chairperson* or *responsible Minister*, as the case may be. 15

(3) A notice whereby an extraordinary meeting of the *Board* is convened shall state the purpose of that meeting.

(4) The quorum for a meeting of the *Board* shall be five members, provided always that at least two members, as contemplated in section 4(1)(a), shall be present. 20

(5) If both the *chairperson* and the *vice-chairperson* are absent from a meeting of the *Board*, the members present shall elect one of their number to preside at that meeting.

(6) The decision of a majority of the members present at a meeting of the *Board* shall constitute a decision of the *Board*, and in the event of an equality of votes on any matter the person presiding at the meeting shall, in addition to a deliberative vote, have a casting vote. 25

(7) A decision taken by the *Board* at a time when there was a vacancy on the *Board*, or when any person who was not entitled to sit as a member of the *Board* sat as a member, or when any member of the *Board* contravened the provisions of subsection (9), shall not be invalid if— 30

(a) the decision was taken by a majority of the members of the *Board*, and

(b) at least five of the members comprising that majority were entitled to sit as members and complied with the provisions of subsection (9).

(8) The *Board* may allow a person who is not a member of the *Board* to attend any meeting of the *Board* and may allow such person to take part in the proceedings at such meeting, without having the right to vote. 35

(9) When the *Board* is in session, a member thereof may not take part in the discussion of, or participate in the making of a decision on, any matter in which that member or that member's spouse, partner or employer has any personal and direct or indirect pecuniary interest, unless he or she first declares the nature, extent and particulars of that interest; provided that the *Board* may require that any member who has declared such an interest shall recuse himself or herself from its proceedings regarding such matter. 40

(10) Any member of the *Board* who contravenes the provisions of subsection (9) shall be guilty of an offence and on conviction liable to a fine or imprisonment for a period not exceeding 12 months. 45

(11) The minutes of meetings of the *Board* and any subcommittees and working groups appointed in terms of section 9(1)(v) shall be signed by the person who chairs the next meeting.

### Powers, functions and duties of Board

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9. (1) Subject to the provisions of this Act, from the *effective date* the *Board* shall administer the laws specified in the first column of Schedule 1 to the extent *prescribed*, and in order to achieve its objects referred to in section 3 the *Board* may—

- (a) exercise any other power or perform any other function conferred upon, or delegated to, the *Board* by or with the approval of the *responsible Minister* by or in terms of any legislation, in a manner consistent with that legislation or delegation;
- (b) make recommendations in accordance with subsection (3) to the *responsible Minister* regarding the proclamation and de-proclamation of *nature conservation areas*, and may, in or in respect of proclaimed *nature conservation areas*— 5
- (i) in consultation with the owners of the land concerned—
- (aa) maintain, construct or erect in such areas or any part thereof roads, bridges, buildings, dams, fences and other structures, works or amenities; 10
- (bb) take steps aimed at the safety of visitors and the preservation in a natural state of the environment in such areas;
- (ii) in consultation with the owners of the land concerned and the *responsible Minister*— 15
- (aa) regulate and control or prohibit public access to such areas or any part thereof;
- (bb) determine the fees which are to be paid for permission to enter or utilise such areas or any part thereof; 20
- (c) on any immovable property leased, purchased or otherwise acquired by or made available to the *Board* in terms of paragraph (d)(i)—
- (i) reserve sites as breeding places for animals or as nurseries for trees, shrubs, plants and flowers;
- (ii) maintain, construct or erect roads, bridges, buildings, dams, fences and other structures, works or amenities; 25
- (iii) carry on any business or trade for the convenience of the public and visitors;
- (d) with the approval of the *responsible Minister* and the *Provincial Minister of Finance*— 30
- (i) lease, purchase or otherwise acquire immovable property or any real right or mineral right in immovable property;
- (ii) let, sell, exchange or otherwise alienate its immovable property;
- (iii) mortgage, burden with a servitude, or confer any other real right in, its immovable property; 35
- (e) subject to section 13(8) and (9), hire, purchase or acquire, hire out, sell, exchange or alienate, pledge or confer any other real right in, movable property;
- (f) negotiate or co-operate with any national, provincial or local government or any board, body or person in the *Republic* or elsewhere with regard to any matter which is directly or indirectly aimed at the achievement of the objects of the *Board*; 40
- (g) enter into agreements—
- (i) with any similar body, within the *Republic* or elsewhere, which are necessary or advisable for the effective and proper exercise of its powers, the performance of its functions and the carrying out of its duties; 45
- (ii) in consultation with the *responsible Minister*, with any person to undertake, on any immovable property leased, purchased or otherwise acquired by or made available to the *Board*, a business or trade for the convenience of visitors or such other purposes as the *Board* may deem necessary or appropriate; 50
- (h) open and administer offices in the *Province* or elsewhere;
- (i) acquire insurance cover—
- (i) for itself against any loss, damage, risk or liability which it may suffer or incur, and 55
- (ii) for its members, *chief executive officer* and other employees against death, bodily injury or disablement resulting from an accident which occurs in the course of the performance of their duties as such, in accordance with guidelines as *prescribed*;
- (j) subject to section 230 of the *Constitution*, with the approval of the *responsible Minister* and the *Provincial Minister of Finance* borrow money in the *Republic* or elsewhere; 60

- (k) subject to paragraph (j) and section 13(6), open and conduct banking accounts at a bank as defined in the Banks Act, 1990 (Act 94 of 1990);
  - (l) make investments in the area of the *Republic* with financial institutions as defined in section 1 of the Financial Institutions (Investment of Funds) Act, 1984 (Act 39 of 1984); 5
  - (m) subject to the proviso to section 13(1)(b), take over investments forming the subject-matter of donations or bequests to the *Board* and retain them in the form in which they are received or realise them and re-invest the proceeds in accordance with paragraphs (k) and (l);
  - (n) in consultation with the *responsible Minister* and the *Provincial Minister of Finance*, donate or lend money to the *Fund* or any board, body or person, on condition that the donation or loan is used to further the objects of the *Board* and in the manner stipulated by the *Board*; 10
  - (o) otherwise expend the funds of the *Board*;
  - (p) administer the *Fund* created by section 18; 15
  - (q) gather, evaluate, process and disseminate information relating to *nature conservation* in the *Province*;
  - (r) with a view to the effective marketing of, and the provision of information relating to, any service, facility or product offered in connection with *nature conservation* in the *Province*, publish, draw up, make, and sell or make available free of charge, in the *Republic* or elsewhere, books, guides, maps, photographs, films, videos and similar matter; 20
  - (s) give advice and guidance to persons who are engaged in *nature conservation* in the *Province* or elsewhere;
  - (t) negotiate and co-operate with any educational institution regarding the institution, continuation or expansion of courses for the training of persons for careers in *nature conservation*; 25
  - (u) employ persons;
  - (v) establish and appoint persons to the subcommittees and working groups it deems necessary for the exercise of its powers, the performance of its functions and the carrying out of its duties; provided that— 30
    - (i) the majority of the members of subcommittees shall be members of the *Board*;
    - (ii) subcommittees and working groups shall act in accordance with terms of reference determined by the *Board*; 35
  - (w) procure the registration of a coat of arms, badges, other emblems and names in terms of the Heraldry Act, 1962 (Act 18 of 1962), and the registration of trade marks in terms of the Trade Marks Act, 1993 (Act 194 of 1993);
  - (x) generate income, inter alia by means of donations and bequests, fundraising, fees for services and user charges, and 40
  - (y) perform any other acts required by this Act or which may contribute towards the achievement of the objects of the *Board*.
- (2) Subject to subsection (3), the *responsible Minister* may, on receipt of a written recommendation from the *Board*, and if the Minister is satisfied that it is in the interest of *nature conservation* in the *Province* to do so, by notice in the *Provincial Gazette*— 45
- (a) proclaim land to be a *nature conservation area* or to form part of a *nature conservation area*, or
  - (b) de-proclaim a *nature conservation area* or land forming part of a *nature conservation area*.
- (3) Before the *responsible Minister* issues any notice under subsection (2) the *Board* shall, in any case in which in its opinion the rights of any person may, without the person's consent be adversely affected by such notice— 50
- (a) serve a notice by registered post on the municipality in whose area the land is situate giving particulars of the land and the proposed proclamation or de-proclamation and the reasons for it and calling for its comments and recommendation to be lodged with the *Board* within a period of 21 days after the date of the notice; 55

- (b) publish a notice in Afrikaans, English and isiXhosa, once in the *Provincial Gazette* and twice with an interval of one week in a newspaper circulating in the area in which the land is situate, giving particulars of the land and the proposed proclamation or de-proclamation and the reasons for it and calling for written objections against the proposed proclamation or de-proclamation to be lodged with the *Board* within a period of 21 days after the date of the last publication of the notice; 5
- (c) where reasonably practicable, by registered post serve on every owner of land who in the *Board's* opinion may be adversely affected by the proposed proclamation or de-proclamation, a copy of the notice described in paragraph (b) at that owner's last known address; 10
- (d) on the expiry of the period within which objections may be lodged in terms of the notice referred to in paragraph (a) or (b), whichever is the later, consider the objections and decide whether or not to recommend to the *responsible Minister* that a notice in terms of subsection (2) in relation to the land or any part of the land be issued, and 15
- (e) in writing formulate its recommendation to the *responsible Minister* and its reasons therefor and transmit to the Minister the recommendation and reasons, together with copies of the notices referred to in paragraphs (a) to (c) and the objections, if any, referred to in paragraph (d). 20

### Chief executive officer of Board

10. (1) The *Board*, in consultation with the *responsible Minister*, shall appoint a fit and proper person with knowledge of, or experience in management as *chief executive officer*; provided that no member of the *Board* or the *Provincial Parliament*, no person who is appointed to a full-time post by, or is in the service of, the State and receives remuneration for that appointment or service, and no person who has been declared insolvent or of unsound mind by a competent court or has been convicted of an offence and sentenced to imprisonment without the option of a fine shall be appointed *chief executive officer*. 25

(2) The *chief executive officer* shall be appointed for such period, not exceeding five years, as the *Board* may determine in consultation with the *responsible Minister*. 30

(3) The *chief executive officer* shall be eligible for reappointment.

(4) In addition to the powers, functions and duties conferred upon the *chief executive officer* by the other provisions of this Act, the *chief executive officer* shall—

- (a) be in charge of the other employees of the *Board* and of such employees as may be seconded to the *Board* from the *provincial administration*; 35
- (b) be accountable to the *Board*;
- (c) ensure that proper minutes are kept of meetings of the *Board* and any subcommittees and working groups appointed in terms of section 9(1)(v);
- (d) attend meetings of the *Board*, and 40
- (e) submit to the *responsible Minister*, within 14 days after the conclusion of any meeting of the *Board*, a copy of the minutes thereof.

(5) If the *chief executive officer* is absent or for any reason unable to perform his or her functions, or whenever there is a vacancy in the office of *chief executive officer*, the *Board* shall appoint another person to act as *chief executive officer* during such absence or inability or until a *chief executive officer* has been appointed in terms of subsection (1). 45

(6) An acting *chief executive officer* shall, for the duration of his or her appointment, perform the functions of the *chief executive officer*.

### Financial control

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11. (1) The *chief executive officer* shall be the accounting officer of the *Board* and shall account for all money received, and all payments made, by the *Board*, and the acquisition, receipt, custody and disposal of all property of the *Board*.

- (2) The accounting officer shall—
- (a) keep full and correct records of all money received or spent by the *Board*, and of the assets, liabilities and financial transactions of the *Board*, and
  - (b) as soon as possible, but not more than three months after the end of the *financial year*, draw up annual financial statements which shall consist of— 5
    - (i) a balance sheet;
    - (ii) an income and expenditure statement;
    - (iii) a cash-flow statement, and
    - (iv) notes to the annual financial statements.
- (3) The records and annual financial statements referred to in subsection (2) shall be 10 audited by the Auditor-General.
- (4) The financial statements referred to in subsection (2)(b) shall—
- (a) be in conformity with generally accepted accounting practice;
  - (b) fairly reflect the state of affairs and functions of the *Board* and the results thereof, and 15
  - (c) refer to any relevant matter not specifically prescribed by this Act, which affects or is likely to affect the affairs of the *Board*, by means of both figures and a descriptive report, which amplify and explain that matter, where necessary.
- (5) All cheques, promissory notes and other documents requiring signature on behalf 20 of the *Board* shall be signed by the *chief executive officer* and a senior employee of the *Board*, or in such manner as the *Board* may decide; provided always that at least two signatories shall be required.
- (6) The *chief executive officer* and every member and employee of the *Board* shall be 25 indemnified, out of the funds of the *Board* for all costs, losses and expenses incurred by them by reason of any contract entered into or any act performed in good faith in their capacity as such.
- (7) The accounting officer is personally liable for any unauthorised expenditure 30 incurred by the *Board*, unless the unauthorised expenditure is approved or confirmed by the *Board*.
- (8) The *Board* shall appoint at least three of its members to an audit committee, comprising those members, the accounting officer, a member of the *provincial administration* nominated by the *responsible Minister*, in consultation with the *Provincial Minister of Finance*, at least two senior employees of the *Board* engaged in 35 its financial administration and, should the Auditor-General decide to participate in the audit committee or to nominate a person to do so, the Auditor-General or that person.
- (9) The audit committee shall—
- (a) assist the members of the *Board* in their evaluation of the adequacy and efficiency of the internal control systems, accounting practices, information systems and auditing processes applied in the day-to-day management of the 40 affairs of the *Board*;
  - (b) facilitate and ensure communication about the matters referred to in paragraph (a) or any other related matter between the members of the *Board* and the accounting officer, the Auditor-General and the *responsible Minister*; and
  - (c) propose to the *Board* such measures as in the committee's opinion may serve 45 to enhance the credibility and objectivity of financial statements and reports prepared with reference to the affairs of the *Board*.

### **Submission of reports and financial statements by Board**

- 12.** (1) The *Board* shall annually, after completion of the annual audit but not more 50 than three months after the end of the *financial year*, submit to the *responsible Minister* and the Director-General of the *provincial administration*—
- (a) a report on its affairs and activities during that *financial year*, and
  - (b) the annual financial statements referred to in section 11(2)(b).
- (2) The *responsible Minister* shall table copies of the report and annual financial 55 statements submitted in terms of subsection (1) in the *Provincial Parliament* within 14 days after receipt thereof or, if the *Provincial Parliament* is not then in session, within 14 days after the commencement of its next ensuing session.

(3) The *responsible Minister* may require the *Board* to submit to him or her an interim report on any matter or interim financial statements, and the provisions of subsection (2) are *mutatis mutandis* applicable to any such interim report or interim financial statements.

### Funds and assets of Board

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13. (1) The funds and assets of the *Board* shall consist of—

- (a) appropriations from the *Provincial Parliament* pursuant to an annual *budget* submitted by the *Board* in terms of subsection (2) or a supplementary *budget* submitted by the *Board* in terms of subsection (3);
- (b) donations or bequests received by the *Board*; provided that no donation or bequest which is subject to any condition shall be accepted for the benefit of the *Board* except in consultation with the *responsible Minister* and the *Provincial Minister of Finance*, and
- (c) income generated by the *Board* in accordance with the provisions of this Act, including fees for services and user charges determined by the *Board* in terms of section 9(1)(x).

(2) The *Board* shall annually, before or on the date determined by the *responsible Minister* after consultation with the *Provincial Minister of Finance*, submit a *budget* for the ensuing *financial year* to the *responsible Minister*, who shall forthwith include any request in that *budget* for an appropriation contemplated by subsection (1)(a) in the *budget* of the relevant department of the *provincial administration* for the next ensuing *financial year*; provided that any request for an appropriation contemplated by subsection (1)(a) shall be approved by the *responsible Minister* and the *Provincial Minister of Finance* prior to a *budget* being submitted by the *Board* to the *responsible Minister*.

(3) The *Board* may, in the course of a *financial year*, submit a supplementary *budget* for that *financial year* to the *responsible Minister*, who shall cause any request in such *budget* for an additional appropriation in terms of subsection (1)(a) to be included in the next ensuing Adjustments Appropriation Bill; provided that any request for an additional appropriation contemplated by subsection (1)(a) shall be approved by the *responsible Minister* and the *Provincial Minister of Finance* prior to a supplementary *budget* being submitted by the *Board* to the *responsible Minister*.

(4) The *Board* shall not incur any expenditure which may cause a *budget* or supplementary *budget* in terms of subsection (2) or (3) to be exceeded.

(5) If the *Board's* expenditure in a *financial year* is less than the appropriation in terms of subsection (1)(a) for that *financial year*, the *Board* shall pay into the Provincial Revenue Fund an amount equal to the difference between its expenditure and that appropriation; provided that, should the *Provincial Parliament* during the budgeting process so decide, that amount or any part thereof shall be repaid to the *Board*, in addition to any appropriation in terms of subsection (1)(a) for the next ensuing *financial year*.

(6) Subject to subsection (5), any unexpended portion of the *Board's* revenue in terms of subsection (1) at the end of a *financial year* shall be transferred to the *Fund*.

(7) The *Board* shall open a banking account at a bank as defined in the Banks Act, 1990 (Act 94 of 1990), and shall deposit all money received by it into that account.

(8) All funds and assets of the *Board* which accrued to it by virtue of any donation or bequest shall be used in accordance with the conditions, if any, of the donation or bequest.

(9) Any condition of a donation referred to in subsection (8) may be altered by agreement between the donor, the *Board*, the *responsible Minister* and the *Provincial Minister of Finance*.

(10) The *responsible Minister* may, in consultation with the *Provincial Minister of Finance*, transfer to the *Board*, conditionally or otherwise, movable property belonging to the *Province* to enable the *Board* to perform its functions and achieve its objects; provided that the *responsible Minister* shall within 30 days table in the *Provincial Parliament* a register of property so transferred to the *Board*; provided further that, if within 30 days after a register has been tabled, the *Provincial Parliament* adopts a resolution calling for the restitution of that property, the *Board* shall forthwith transfer

to the *Province* the property specified in that resolution and the *Province* shall forthwith transfer to the *Board* any consideration received in respect thereof.

(11) No duties or taxes, including stamp duty, office fees or other fees, shall be payable in respect of a transfer contemplated in subsection (10).

#### **Remuneration and allowances of members of Board**

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14. The members of the *Board* shall be paid the *prescribed* remuneration and allowances out of the funds of the *Board*; provided that a member whose appointment is cancelled in terms of section 4(4) or who is removed from office in terms of section 6(2) shall not be entitled to any remuneration in respect of the period during which he or she would have been a member were it not for the cancellation or removal from office.

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#### **Employees of Board**

15. (1) Subject to the Labour Relations Act, 1995 (Act 66 of 1995), and any other applicable laws and collective agreements, the *Board* may—

- (a) within the framework of any applicable policy determined by the *Provincial Cabinet*, determine and pay to, or in respect of, its *chief executive officer* and, after the *staff transfer date*, other employees, remuneration, allowances, bonuses, subsidies and pensions and other service benefits, and 15
- (b) in the event of the death or injury of its *chief executive officer* and, after the *staff transfer date*, other employees, which occurred in the course of their employment, determine and pay gratuities to its *chief executive officer* and those employees or to their dependants. 20

(2) Until the *effective date*, the *Board* shall not employ anyone other than the *chief executive officer*.

(3) Between the *effective date* and the *staff transfer date* the *provincial administration* shall second to the *Board*— 25

- (a) all employees on the staff establishment of the component of the *Department* responsible for *nature conservation*, and
- (b) such employees on the staff establishment of the *provincial administration* as the *Board*, in consultation with the *responsible Minister*, may require in order to exercise its powers, perform its functions and discharge its duties in terms of this Act. 30

(4) Items 1 to 3 of Schedule 2 apply to all employees referred to in subsection (3)(a).

#### **Delegation of powers, functions and duties**

16. (1) The *Board* may delegate to the *chief executive officer* or any of its employees any power, function or duty assigned or delegated to the *Board* by or in terms of this Act. 35

(2) The delegation of a power, function or duty under subsection (1) shall not preclude the exercise of that power, the performance of that function or the carrying out of that duty by the *Board*.

(3) Any delegation under subsection (1) may at any time be amended or revoked by the *Board*. 40

#### **Performance audit**

17. (1) In this section, “performance” means all or any of the following matters:

- (a) the extent to which the *Board* may or may not be complying or have complied with this Act or the policy referred to in section 3; 45
- (b) the extent to which the *Board* may or may not be using or have used its funds and assets efficiently and economically, and
- (c) the extent to which the uses to which the *Board* is putting and has put its funds and assets may or may not benefit, or may or may not have benefited, *nature conservation* in the *Province*. 50

(2) If the *responsible Minister* is not satisfied that the performance of the *Board* is adequate, the Minister may appoint any person to conduct an assessment of, and report to the Minister on, that performance.

(3) For the purpose of conducting an assessment, a person appointed under subsection

(2) has, and may exercise and perform, all the powers of a Commissioner appointed under the Western Cape Commissions Act, 1998 (Act 10 of 1998).

(4) The *responsible Minister* shall table a copy of a report submitted under subsection (2) in the *Provincial Parliament* within 14 days after receipt thereof or, if the *Provincial Parliament* is not then in session, within 14 days after the commencement of its next ensuing session. 5

(5) The *responsible Minister* may take appropriate steps to address any deficiency in performance identified in a report submitted under subsection (2), including—

- (a) issuing a directive to the *Board*, in which the deficiency is described and any steps required to rectify the situation are stated, and 10
- (b) assuming responsibility for any obligation of the *Board* to the extent that it may be necessary to do so.

(6) If the *responsible Minister* takes any steps in terms of subsection (5)—

- (a) the *responsible Minister* shall table a notice in which the steps are fully described in the *Provincial Parliament* within 14 days after having been so taken or, if the *Provincial Parliament* is not then in session, within 14 days after the commencement of its next ensuing session; 15
- (b) the steps shall be discontinued unless they are approved by the *Provincial Parliament* within 30 days of the tabling of the notice;
- (c) the *Provincial Parliament* shall review the steps regularly and make any appropriate recommendations to the *responsible Minister*, and 20
- (d) the *Provincial Parliament* may at any time adopt a resolution whereby the steps are not approved, in which event the *responsible Minister* shall forthwith cancel the steps.

### CHAPTER 3: WESTERN CAPE NATURE CONSERVATION FUND 25

#### Western Cape Nature Conservation Fund

18. There is hereby established a fund called the Western Cape Nature Conservation Fund which shall be separate from the funds of the *Board* and shall be credited with—

- (a) money appropriated by the *Provincial Parliament* for the *Fund*;
- (b) loans from money appropriated by the *Provincial Parliament* for the purpose of loans to the *Fund*; provided that, for the purposes of any *budget* or supplementary *budget* of the *Fund* a request for such a loan shall be subject to the same requirements and procedures as a request for an appropriation in terms of paragraph (a); 30
- (c) loans from the *Board* in terms of section 9(1)(n); 35
- (d) money transferred to the *Fund* in terms of section 13(6);
- (e) money, assets and investments accruing to the *Fund* from any other source, including donations and bequests by any person for the benefit of the *Fund*; provided that—
  - (i) no donation or bequest shall be accepted for the benefit of the *Fund* if the donation or bequest is subject to any condition, except under the authority of the *Board* acting in consultation with the *responsible Minister* and the *Provincial Minister of Finance*; 40
  - (ii) the *Fund* may take over money, assets or investments forming the subject-matter of donations or bequests to the *Board* and retain them in the form in which they are received or, in consultation with the *responsible Minister* and the *Provincial Minister of Finance*, realise them and re-invest the proceeds in accordance with section 19(1) and (2), and 45
- (f) income derived from money, assets and investments in the *Fund*. 50

#### Money, assets and investments in Fund

19. (1) The *Board* shall open a banking account at a bank as defined in the Banks Act, 1990 (Act 94 of 1990), in the name of the *Fund*, and shall deposit all money received by the *Fund* into that account.



(2) The *Board* shall invest any money standing to the credit of the *Fund*, which is not required for immediate use or as a reasonable working balance, in the area of the *Republic* with financial institutions as defined in section 1 of the Financial Institutions (Investment of Funds) Act, 1984 (Act 39 of 1984).

(3) Any money, assets or investments in the *Fund* at the end of a *financial year* shall be carried forward in the *Fund* to the next succeeding *financial year*. 5

#### Utilisation of money, assets and investments in Fund

20. (1) The money, assets and investments in the *Fund* shall be administered by the *Board* in consultation with the *responsible Minister* and the *Provincial Minister of Finance*, and used— 10

- (a) to undertake or promote any research on *nature conservation* in the *Province* or on any related matter which is of material importance to *nature conservation* in the *Province*;
- (b) to make grants of money to any person or body engaged, in the *Province* or elsewhere, in any such research; 15
- (c) to foster the education and training of—
  - (i) persons required to undertake such research, and
  - (ii) employees of the *Board*,

whether by grants, study loans or bursaries;

- (d) to establish facilities for the collection and dissemination of information relating to *nature conservation*; 20

- (e) to foster among persons in the *Province* an awareness of the importance of *nature conservation*, and
- (f) generally, to exercise any power set out in section 9 to further the objects of the *Board* referred to in section 3. 25

(2) All money, assets or investments in the *Fund* which accrued to it by virtue of any donation or bequest shall be used in accordance with the conditions, if any, of the donation or bequest.

(3) Any condition of a donation referred to in subsection (2) may be altered by agreement between the donor and the *responsible Minister*, acting in consultation with the *Provincial Minister of Finance*. 30

#### Financial matters and reports

21. The provisions of sections 11, 12 and 13(2), (3) and (4) shall apply *mutatis mutandis* to the *Fund*.

### CHAPTER 4: GENERAL PROVISIONS 35

#### Regulations

22. The *responsible Minister* may, after consultation with the *Board*, make regulations relating to any matter which may be dealt with by the *responsible Minister* in terms of this Act, and any matter deemed necessary by the *responsible Minister* for the better achievement of the objects of this Act; provided that— 40

- (a) regulations with financial implications shall be made in consultation with the *Provincial Minister of Finance*;
- (b) regulations specifying the extent to which the laws in the first column of Schedule 1 shall be administered by the *Board* in terms of section 9(1) shall be made in consultation with a Standing Committee of the *Provincial Parliament* with due regard to the objects and capabilities of the *Board*, the extent to which such laws are applicable to the *Province* and the extent to which the administration of such laws has been assigned to the *Province*, as set out in the second column of Schedule 1. 45

#### Diligent performance of obligations 50

23. All obligations imposed by or pursuant to this Act shall be performed diligently and without delay.

**Transitional provision: records**

**24.** All records and information of the component of the *Department* responsible for *nature conservation*, other than the personnel records and information set out in item 4 of Schedule 2, shall be delivered to the *Board* without delay after the *effective date*.

**Short title and commencement**

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**25.** This Act shall be called the Western Cape Nature Conservation Board Act, 1998, and shall come into operation on a date fixed by the Premier by proclamation in the *Provincial Gazette*.

**SCHEDULE 1**

<b>Title, No. and year of law</b>	<b>Extent of assignment to Province</b>
Problem Animal Control Ordinance, 1957 (Ordinance 26 of 1957)	The whole
Nature and Environmental Conservation Ordinance, 1974 (Ordinance 19 of 1974)	The whole
The Sea-Shore Act, 1935 (Act 21 of 1935)	The whole, in so far as it does not relate to the sea-shore and the sea within any port or harbour which in terms of any law falls under the control and management of the Company referred to in section 1 of the Legal Succession to the South African Transport Services Act, 1989 (Act 9 of 1989), excluding sections 2, 6, 7(1)(b) and (2)(b), 8, 9, 11(2), 12 and 13(b) and (e).
The Mountain Catchment Areas Act, 1970 (Act 63 of 1970)	The whole, excluding the proviso to section 8(2).

## SCHEDULE 2

### Persons employed in Department immediately prior to staff transfer date

1. A person who has been seconded to the *Board* in terms of section 15(3)(a) becomes an employee on the staff establishment of the *Board* on the *staff transfer date*, unless the person chooses to remain a member of the *provincial administration* in terms of item 2.

### Persons who remain members of provincial administration

2. (1) A person who elects to remain a member of the *provincial administration* must inform the *Department* thereof in writing before the *staff transfer date*.

(2) A person who has submitted a written notice in terms of subitem (1) remains a member of the *provincial administration* on the *staff transfer date* with retention of rank, remuneration, uninterrupted period of service and other service benefits and obligations, but—

- (a) becomes supernumerary to the staff establishment of the provincial administration, and
  - (b) subject to subitem (3), is seconded to the *Board* for a period of one year from the staff transfer date in accordance with any applicable collective agreement.
- (3) The secondment of a person to the *Board* in terms of subitem (2)—
- (a) may be terminated pursuant to any collective agreement applicable to supernumerary staff in the *provincial administration*; and
  - (b) must be terminated—
    - (i) if during the period of that secondment the person informs the *Department* in writing that he or she elects to become an employee of the *Board*, whereupon that person becomes an employee on the staff establishment of the *Board* with immediate effect;
    - (ii) on the expiry of the period of one year referred to in subitem (2)(b), unless the secondment is extended in exceptional circumstances by agreement between the person, the *Board* and the *provincial administration*.

### Persons transferred to Board

3. The transfer of persons to the *Board* takes place in terms of section 197(1)(a) of the Labour Relations Act, 1995 (Act 66 of 1995), and with retention of rights and obligations in accordance with—

- (a) section 197 of that Act, and
- (b) any applicable collective agreement concluded between the *provincial administration* and the recognised employee organisations before the *staff transfer date*.

### Personnel records and information of Board

4. All personnel records and information of the component of the *Department* responsible for *nature conservation*, including all financial and administrative information relating to such employees in the possession of other provincial departments, must be delivered to the *Board* without delay after the *staff transfer date*.

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PROVINCE OF WESTERN CAPE

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**WESTERN CAPE NATURE  
CONSERVATION LAWS  
AMENDMENT ACT, 2000**

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PROVINSIE WES-KAAP

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**WES-KAAPSE WYSIGINGSWET OP  
NATUURBEWARINGSWETTE, 2000**

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**No 3, 2000**

**GENERAL EXPLANATORY NOTE:**

- [                    ]    Words in bold type in square brackets indicate omissions from existing enactments.
- \_\_\_\_\_            Words underlined with a solid line indicate insertions in existing enactments.
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## AMENDMENT ACT

To provide for the amendment of various laws on nature conservation in order to transfer the administration of the provisions of those laws to the Western Cape Nature Conservation Board; to amend the Western Cape Nature Conservation Board Act, 1998 to provide for a new definition of Department and the deletion of a definition; to provide for an increase in the number of members of the Board; to provide for additional powers of the Board; to amend the provisions regarding the appointment and secondment of persons to the Board; and to provide for matters incidental thereto.

**B**E IT ENACTED by the Provincial Parliament of the Province of Western Cape, as follows:—

### **Amendment of Ordinance 19 of 1974**

1. The Nature and Environmental Conservation Ordinance, 1974 (Ordinance 19 of 1974), is hereby amended as indicated on a copy of the existing text thereof as set out in Schedule 1. 5

### **Amendment of certain laws**

2. The laws referred to in the first column of Schedules 2, 3 and 4 are amended to the extent indicated in the second column of those Schedules.

### **Amendment of section 1 of Act 15 of 1998** 10

3. Section 1(1) of the Western Cape Nature Conservation Board Act, 1998 (“the principal Act”), is hereby amended—

(a) by the substitution in paragraph (vi) of the following definition for the definition of “Department”:

“**Department**” means the Department of Environmental and Cultural Affairs and Sport referred to in Column 1 of Schedule 2 of the Public Service Act, 1994;”, and 15

(b) by the deletion in paragraph (xiv) of the definition of “provincial administration”.

### **Amendment of section 2 of Act 15 of 1998** 20

4. Section 2 of the principal Act is hereby amended by the substitution for the words “nine members” of the words “twelve members”.

**Amendment of section 4 of Act 15 of 1998**

5. Section 4(1) of the principal Act is hereby amended in paragraph (b), by the substitution for the words “five other persons” of the words “eight other persons”.

**Amendment of section 8 of Act 15 of 1998**

6. Section 8 of the principal Act is hereby amended in subsections (2), (4) and (7)(b) 5 by the substitution for the word “five” of the word “seven”.

**Amendment of section 9 of Act 15 of 1998**

7. Section 9 of the principal Act is hereby amended—

- (a) in subsection (1)—
- (i) by the deletion in the introduction of the following words: 10  
 “the *Board* shall administer the laws specified in the first column of Schedule 1 to the extent prescribed”, and
- (ii) by the insertion after paragraph (o) of the following paragraph:  
 “(oA) subject to section 51(1)(g) of the Public Finance Management Act, 1999 (Act 1 of 1999), establish trusts, and companies not 15  
 for gain contemplated by section 21 of the Companies Act, 1973 (Act 61 of 1973);”, and
- (b) by the insertion after subsection (1), of the following subsection:  
 “(1A) The *Board* shall by agreement with the *Department* provide 20  
 services required by the *Department*.”

**Amendment of section 10 of Act 15 of 1998**

8. Section 10(4)(a) of the principal Act is hereby amended by the substitution for the words “from the *provincial administration*” of the words “in terms of this Act”.

**Amendment of section 11 of Act 15 of 1998**

9. Section 11(8) of the principal Act is hereby amended by the substitution for the 25 words “the *provincial administration*” of the words “a *provincial department*”.

**Amendment of section 12 of Act 15 of 1998**

10. Section 12(1) of the principal Act is hereby amended by the substitution for the words “Director-General of the *provincial administration*” of the words “*Provincial Minister of Finance*”. 30

**Amendment of section 13 of Act 15 of 1998**

11. Section 13(2) of the principal Act is hereby amended by the substitution for the words “relevant department of the *provincial administration*” of the word “*Department*”.

**Amendment of section 15 of Act 15 of 1998** 35

12. Section 15 of the principal Act is hereby amended—

- (a) by the substitution for subsection (2) of the following subsection:  
 “(2) Before the *effective date* the *Board* may employ and pay as 40  
 contemplated by subsection (1)(a), the *chief executive officer* and other persons approved by the *responsible Minister*.”;
- (b) by the substitution for subsection (3) of the following subsection:  
 “(3) Between the *effective date* and the *staff transfer date* the 45  
*responsible Minister* shall—  
 (a) after consultation with the *Board*;  
 (b) in accordance with the provisions of Schedule 2, and  
 (c) subject to section 15(3)(a) of the Public Service Act, 1994,

decide which officers in the Department responsible for *nature conservation* and *nature conservation administration* will be seconded to the Board.”;

(c) by the substitution for subsection (4) of the following subsection:

“(4) The *Board* may at any time after the commencement of this Act enter into an agreement with any member of the *Provincial Cabinet* concerning the secondment of officers appointed by the member concerned acting as an executing authority referred to in the Public Service Act, 1994.”, and

(d) by the addition of the following subsection:

“(5) Items 1 to 3 of Schedule 2 apply to employees seconded to the *Board* in terms of subsection (3).”.

#### **Amendment to section 22 of Act 15 of 1998**

13. Section 22 of the principal Act is hereby amended by the substitution for the proviso thereto of the following proviso:

“provided that regulations with financial implications shall be made in consultation with the *Provincial Minister of Finance*.”.

#### **Amendment of section 24 of Act 15 of 1998**

14. The following section is hereby substituted for section 24 of the principal Act:

“24. Subject to item 4 of Schedule 2, all records and information of the *Department* which the *responsible Minister*, after consultation with the *Board*, considers necessary for the proper performance of the *Board's* functions, shall without delay be delivered to the *Board* after the *effective date*.”

#### **Repeal of Schedule 1**

15. Schedule 1 of the principal Act is hereby repealed.

#### **Amendment of Schedule 2 of Act 15 of 1998**

16. Schedule 2 of the principal Act is hereby amended as follows:

##### **“SCHEDULE 2**

##### **Persons employed in Department immediately prior to staff transfer date**

1. A person who has been seconded to the *Board* in terms of section 15(3)(a) becomes an employee on the staff establishment of the *Board* on the *staff transfer date*, unless the person chooses to remain a member of the [*provincial administration*] *Department* in terms of item 2.

##### **Persons who remain members of Department**

2. (1) A person who elects to remain a member of the [*provincial administration*] *Department* must inform the *Department* thereof in writing before the *staff transfer date*.

(2) A person who has submitted a written notice in terms of subitem (1) remains a member of the [*provincial administration*] *Department* on the *staff transfer date* with retention of rank, remuneration, uninterrupted period of service and other service benefits and obligations, but—

(a) becomes supernumerary to the staff establishment of the [*provincial administration*] *Department*, and

(b) subject to subitem (3), is seconded to the *Board* for a period of one year from the *staff transfer date* in accordance with any applicable collective agreement.

(3) The secondment of a person to the *Board* in terms of subitem (2)—



- (a) may be terminated pursuant to any collective agreement applicable to supernumerary staff in the [*provincial administration*] Department, and
- (b) must be terminated—
  - (i) if during the period of that secondment the person informs the *Department* in writing that he or she elects to become an employee of the *Board*, whereupon that person becomes an employee on the staff establishment of the *Board* with immediate effect; 5
  - (ii) on the expiry of the period of one year referred to in subitem (2)(b), unless the secondment is extended in exceptional circumstances by agreement between the person, the *Board* and the [*provincial administration*] responsible Minister. 10

#### **Persons transferred to Board**

3. The transfer of persons to the *Board* takes place in terms of section 197(1)(a) of the Labour Relations Act, 1995 (Act 66 of 1995), and with retention of rights and obligations in accordance with— 15
- (a) section 197 of that Act, and
  - (b) any applicable collective agreement concluded between the [*provincial administration*] responsible Minister and the recognised employee organisations before the *staff transfer date*. 20

#### **Personnel records and information of [Board] Department**

4. All personnel records and information relating to personnel in the *Department* transferred to the *Board*, including all financial and administrative information in the possession of other provincial departments, must, without delay, be delivered to the *Board* after the *staff transfer date*.”. 25

#### **Short title and commencement**

17. (1) This Act is called the Western Cape Nature Conservation Laws Amendment Act, 2000 and, subject to subsection (2), comes into operation on a date determined by the Premier by proclamation in the *Provincial Gazette*. 30
- (2) Different dates may be determined for the commencement of the amendment or repeal of the various provisions referred to in Schedules 1, 2, 3 and 4.

*SCHEDULE I***GENERAL EXPLANATORY NOTE:**

- [                    ]      Words in bold type in square brackets indicate omissions from the existing ordinance.
- Words underlined with a solid line indicate insertions in the existing ordinance.      5

**ORDINANCE**

**Ordinance to consolidate and amend the laws relating to nature [and environmental] conservation and to provide for matters incidental thereto.      10**

**B**E IT ORDAINED by the Provincial Council of the Province of the Cape of Good Hope as follows:—

**Division of Ordinance**

1. This ordinance is divided as follows:—

Chapter I	Definitions [ <b>and Establishment of Department of Nature and Environmental Conservation and Advisory Committee</b> ] (section[s] 2[-5]).	5
Chapter II	Nature Reserves (sections 6-15).	10
Chapter III	Miscellaneous Conservation Measures (sections 16-25).	
Chapter IV	Protection of Wild Animals other than Fish (sections 25A-47).	15
Chapter IVA	Protection of Rhinoceroses (section 47A).	20
Chapter V	Protection of Fish in Inland Waters (sections 48-61A).	
Chapter VI	Protection of Flora (sections 62-72).	25
Chapter VIA	Professional Hunters, Hunting Outfitters and Directors of Professional Hunting Schools (sections 72A-72H).	30
Chapter VII	General and Supplementary (sections 73-90).	
Schedule 1	Endangered Wild Animals.	35
Schedule 2	Protected Wild Animals.	
Schedule 3	Endangered Flora.	
Schedule 4	Protected Flora.	40
Schedule 5	Noxious Aquatic Growths.	
Schedule 6	Ordinances Repealed.	45

## CHAPTER I

DEFINITIONS [AND ESTABLISHMENT OF DEPARTMENT OF NATURE  
AND ENVIRONMENTAL CONSERVATION AND ADVISORY COMMITTEE]  
(sec[s] 2[-5])

## Definitions

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2. In this ordinance, unless inconsistent with the context—

“**adequately enclosed**” in relation to land means enclosed by—

- (a) any fence, wall or obstruction of any kind whatsoever forming all enclosure from which any wild animal of a species specified in a certificate of adequate enclosure issued in terms of section 35(4)(b) is unable to escape without breaking it; 10
- (b) any natural boundary through or over which any wild animal of a species so specified will under normal circumstances not pass, or
- (c) any combination of fences, walls, obstructions or boundaries referred to in paragraphs (a) and (b) so that any wild animal of a species so specified cannot escape from such land; 15

[“**Administration**” means the Provincial Administration of the Province of the Cape of Good Hope;]

“**angling**” means the catching of fish in inland waters by means of a line and hook, whether or not any rod, bait or lure is used, or by means of a set line, and “angle” has a corresponding meaning; 20

“**angling season**” means the period in any year determined by [proclamation] notice issued in terms of section 78(b);

“**aquatic growth**” means any vegetation which grows or is able to grow in inland waters; 25

“**artificial lure or spoon**” means a device which by its simulation of life or by its appearance or colour is designed or likely to delude, entice or attract a fish into seizing such device;

“**biltong**” means the meat of any wild animal which has been or is being dried, smoked, salted, cured or treated in any other manner for the purpose of preservation; 30

“**biltong sausage**” means sausage, whether dried or not, made wholly or partly of the meat of any wild animal;

“**black bass**” means any fish of the genus *Micropterus*;

“**bluegill sun-fish**” means any fish of the species *Lepomis macrochirus*; 35

“**Board**” means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998);

“**buy**” includes barter or exchange;

“**captivity**” in relation to any wild animal means the keeping within an enclosure by means of any fence, wall or obstruction of any kind whatsoever in such a way that such wild animal is unable to maintain itself by natural means; 40

“**capture**” in relation to any wild animal means by any means whatsoever to capture, catch or take or to attempt or to pursue with intent to capture, catch or take;

“**carcase**” in relation to any wild animal means the whole or any part of the meat (whether dried, smoked, salted, cured or treated in any manner), the head, tooth, horns, shell, scale, tusks, bones, feathers, tail, claw, paw, hoof, skin, hide, hair, viscera or any part whatsoever of the carcase, and includes the egg; 45

“**carp**” means any fish of the carp family not indigenous to the Republic and includes carp (*Cyprinus carpio*), the atavistic or wild form of the goldfish (*Carassius auratus*) and the crucian carp (*Carassius carassius*) but does not include domestic gold-fish; 50

“**cast-net**” means a net (also known as an umbrella-net or throw-net) with or without weights on the perimeter thereof which is cast on water so that it opens and sinks in the water; 55

“**catch**” in relation to fish includes any means or method of taking (whether alive or dead), injuring, immobilizing or killing or attempting to take, injure, immobilize or kill, or to pursue or wilfully disturb;

“**certificate**” means a certificate issued under this ordinance;

- “**crab-net**” means a net (also known as a ring-net) made of wire or any other material of which the opening is attached to a frame, whether or not any bait or lure is placed in such net, but does not include a landing-net;
- “**cultivate**” means the artificial reproduction of flora in any manner whatsoever;
- “**daily bag limit**” means the number of any species of protected wild animal or of fish determined by **[proclamation] notice** issued in terms of section 79(a);
- “**Department**” means the **Department of Nature and Environmental Conservation established by section 3;**
- “**Director**” means the **Director of Nature and Environmental Conservation referred to in section 3;**
- “**division**” means the area under the jurisdiction of a divisional council;
- “**endangered flora**” means flora of any species which is in danger of extinction and is specified in Schedule 3 or Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include flora of any species specified in such Appendix and Schedule 4;
- “**endangered wild animal**” means a wild animal of any species which is in danger of extinction and is specified in Schedule I or Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include a wild animal of any species specified in such Appendix and Schedule 2;
- “**fauna**” means wild animal;
- “**fire-arm**” includes an air-gun having a barrel of a calibre of not less than five comma six millimetres;
- “**flora**” means endangered flora, protected flora or indigenous unprotected flora and includes the whole or any part of the plant, whether dead or dried;
- “**full-time employee**” means an employee who is employed full-time on a monthly basis and is in receipt of a salary or wage which is in accordance with local tariffs for the kind of work done by him or her;
- “**fyke-net**” means a device made of rings or hoops over which a net, wire or any other material has been spread or which is made of wire only and which has one or more funnel-shaped openings and includes anything which, whether attached to such device or not, is used to guide fish to any funnel-shaped opening in such device;
- “**honorary nature [and environmental] conservation officer**” means an honorary nature [and environmental] conservation officer appointed in terms of section 22;
- “**hunt**” in relation to any wild animal means by any means whatsoever to hunt or search for, to kill, capture or attempt to kill or capture, or to pursue, follow or drive with intent to kill or capture, or to shoot at, poison, be in wait for or wilfully disturb;
- “**hunting season**” means the period in any year determined by **[proclamation] notice** issued in terms of section 78(a);
- “**indigenous flora**” means any flower, plant, shrub or tree or part thereof indigenous to the Republic **[or the territory of South West Africa]**, whether or not it is or has been cultivated and whether or not it is no longer growing in a free state of nature but does not include any plant, shrub or tree which is a noxious weed in terms of any law;
- “**indigenous unprotected flora**” means any species of indigenous flora not specified in Schedule 3 or 4;
- “**inland waters**” means all waters which do not permanently or at any time during the year form part of the sea and includes any tidal river other than a tidal river in respect of which a notice issued under section 23(1)(b) of the Sea Fisheries Act, 1973 (Act 58 of 1973), is in force;
- “**landing net**” means a net attached to a frame in such manner as to leave an opening not exceeding six hundred and ten millimetres measured in a straight line between any two points on the perimeter of the frame and which is used only for lifting fish caught by angling out of the water;
- “**licence**” means a licence issued under this ordinance;

- “**local authority**” means any institution or body contemplated by section 84(1)(f) of the Republic of South Africa Constitution Act, 1961 (Act 32 of 1961);
- “**local nature reserve**” means a local nature reserve established under section 7;
- “**nature [and environmental] conservation**” means the preservation of fauna and flora; 5
- “**nature [and environmental] conservation officer**” means a nature [and environmental] conservation officer appointed in terms of section 20;
- “**nature [and environmental] conservation ranger**” means a nature [and environmental] conservation ranger appointed in terms of section 23; 10
- “**net**” means a fyke-net, cast-net, crab-net, landing-net, staked net or trek-net;
- “**non-spinning artificial fly**” means a hook with one point and one barb to which matter not edible by fish is attached and which is constructed so as not to rotate or spin round when attached to a line and drawn through the water and to which no appliance is affixed which is capable of rotating or spinning round; 15
- “**noxious aquatic growth**” means any species of aquatic growth specified in Schedule 5;
- “**owner**” means—
- (a) in relation to land—
- (i) the person in whom is vested the legal title thereto; 20
- (ii) where the legal title thereto is vested in an association of persons, whether corporate or unincorporate, the person designated in writing as the owner thereof by such association;
- (iii) in the case of land under the control or management of a local authority, the local authority concerned; 25
- (iv) in the case of State land not under the control or management of a local authority, the Minister of the Department of State or the [Administrator] Provincial Government having control or management thereof or any officer designated by such Minister or [Administrator] Provincial Government for the purpose; 30
- (v) in the case of land not occupied by the owner as contemplated by subparagraph (i), the person who is in actual occupation of the land, who exercises general control over such land and who has been authorised in writing by the owner as contemplated by the said subparagraph to exercise the rights conferred on an owner of land by this ordinance; 35
- (vi) where the owner as contemplated by subparagraph (i), (ii) or (v) is dead or insolvent or has assigned his estate for the benefit of his creditors or has been placed under curatorship by order of court or is a company being wound up or under judicial management, the person in whom the administration of such land is vested as executor, administrator, trustee, assignee, curator, liquidator or judicial manager, as the case may be, and 40
- (b) in relation to inland waters, the owner as contemplated by paragraph (a) of the land on which the waters concerned are situated or which abuts on such waters;
- “**permit**” means a permit issued under this ordinance; 45
- “**pick**” includes cut, chop off, take, gather, pluck, uproot, break, damage or destroy;
- “**poison**” means any poison, preparation or chemical substance used to catch, immobilize, sterilize, kill or physically harm a wild animal;
- “**prescribed**” means prescribed by regulation; 50
- “**privately owned inland waters**” means any dam, reservoir, vlei or other inland waters completely surrounded by land owned by one owner;
- “**private nature reserve**” means a private nature reserve established in terms of section 12;
- “**problem wild animal**” means any animal declared to be a problem wild animal in terms of section 79(d); 55

“**protected flora**” means any species of flora specified in Schedule 4 or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include any species of flora specified in such Appendix and Schedule 3;

“**protected wild animal**” means any species of wild animal specified in Schedule 2 or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include any species of wild animal specified in such Appendix and Schedule 1;

“**Province**” means the Province of Western Cape;

“**provincial nature reserve**” means a provincial nature reserve established in terms of section 6(i);

“**public road**” means a public road as defined in section 1 of the Road Traffic [Ordinance, 1966 (Ordinance 21 of 1966)] Act, 1989 (Act 29 of 1989);

“**registered flora grower**” means a person who has been registered as a flora grower and holds a licence issued to him or her in terms of section 65;

“**registered flora seller**” means a person who has been registered as a flora seller and holds a licence issued to him or her in terms of section 65;

“**relative**” in relation to the owner of any land means the spouse, parent, step-parent, adoptive parent, son-in-law, child, step-child, adopted child, brother, sister or grandchild of such owner; provided that in relation to an owner of land which is an unincorporate association of persons, “relative” means the relative as hereinbefore defined of every member of such association;

“**responsible Minister**” means the member of the Provincial Cabinet responsible for nature conservation;

“**sell**” includes hawk, peddle, barter or exchange or offer, advertise, expose or have in possession for the purpose of sale, hawking, peddling, bartering or exchanging;

“**set line**” means a line and hook with or without any bait or lure which, when used for catching fish, is not manipulated directly or indirectly by any person but does not include a line and hook attached to a reel and rod lying loose on or fixed into the ground;

“**snatching**” means the catching of fish by the jerking of a hook in water with the intention of impaling fish thereon;

“**staked net**” means a net (also known as a set net, gill-net or drift-net), with or without weights or floats, which is set upright in water with the intention of causing fish to become caught or entangled therein, whether or not such net drifts or is attached to anything;

“**this ordinance**” includes any regulation, proclamation or notice made or issued thereunder;

“**tidal waters**” means that part of any inland waters which, owing to the influence of the sea, becomes saline at any time or the level of which rises at any time owing to the influence of the sea;

“**trap**” means any trap, springtrap, snare, gin, cage, net, pitfall or birdlime and any other device or method whatsoever which can be used or adapted for the capture of wild animals;

“**trek-net**” means a net (also known as a seine, bait seine, drag-net or bait trek-net), with or without weights or floats, which is moved through water in an upright position with the intention of catching fish;

“**trout**” means any fish of the genus *Salmo* or the genus *Salvelinus*;

“**waters**” includes any river, stream, creek, lake, vlei, pan, lagoon, dam, reservoir, furrow or pond, whether the water therein is fresh or saline, and includes the foreshore and bank thereof and any part of such waters;

“**weapon**” means—

(a) a fire-arm having a barrel exceeding one hundred millimetres in length and includes ammunition for any such fire-arm, or

(b) any other instrument which is capable of propelling a projectile or which can itself be propelled or used in such a way that a wild animal may be killed, injured or immobilized thereby,

and includes a spear, assegai, bow-and-arrow, axe, bush-knife, knife or similar object and any narcotic whatsoever, and

“wild animal” means any live vertebrate or invertebrate animal (including the egg or spawn of any such animal but excluding any ostrich used for farming purposes and the egg thereof) belonging to a non-domestic species and includes any such animal which is kept or has been born in captivity.

**[Establishment of Department of Nature and Environmental Conservation 5**

3. (1) There shall be a department of the Administration to be known as the Department of Nature and Environmental Conservation which shall be under the control of an officer styled the Director of Nature and Environmental Conservation and who shall, subject to the laws governing the Public Service of the Republic, be appointed by the Administrator. 10

(2) The Director shall as soon as possible after the end of each year prepare and submit to the Administrator a report on the activities of the Department during the previous year and may in such report make such comments or recommendations relating to the Department or the administration thereof or to nature and environmental conservation as he may consider necessary or desirable. 15

(3) The Administrator shall lay every report submitted to him under subsection (2) on the table of the Provincial Council within fourteen days after the receipt thereof if the Council is then in session or, if the Council is not then in session, after the commencement of the next ensuing session.

**Exercise and delegation of powers 20**

4. (1) Whenever a power or a duty is conferred or imposed on the Department by this ordinance, the Director may exercise such power or perform such duty.

(2) The Director may delegate any power or duty conferred or imposed on him by this ordinance to any officer under his control.

**Establishment of Nature and Environmental Conservation Advisory Committee 25**

5. (1) The Administrator may establish a Nature and Environmental Conservation Advisory Committee (hereinafter in this section referred to as “the committee”) consisting of so many members as he may from time to time determine.

(2) The functions of the committee shall be to advise the Director or the Administrator, as the case may be, on such matters relating to nature and environmental conservation or the application of any provision of this ordinance as it considers necessary or desirable or as may be referred to it by the Director or the Administrator. 30

(3) The chairman and other members of the committee shall be appointed and the terms and conditions of office of such chairman and members shall be determined by the Administrator. 35

(4) Every member of the committee who is not an officer, official or employee in the public service or in the service of a provincial administration may, if the Administrator so decides, be paid such remuneration and allowances as the Administrator may determine out of moneys appropriated by the Provincial Council for the purpose. 40

(5) The members of the committee shall hold office during the Administrator’s pleasure.]

## CHAPTER II

## NATURE RESERVES (secs 6-15)

## Part I: Provincial Nature Reserves (secs 6-6A)

## Establishment of provincial nature reserves

6. (1) The **[Administrator]** responsible Minister may by proclamation— 5
- (a) establish a provincial nature reserve on any land under his or her control or management;
  - (b) define the boundaries of any such reserve, either by description or by reference to the boundaries indicated on a map or plan filed in a specified office, and from time to time alter and in the aforementioned manner redefine 10 such boundaries;
  - (c) assign a name to any such reserve and alter such name at any time, and
  - (d) after compliance *mutatis mutandis* with the provisions of section 7(2) and due consideration of any objections lodged with him or her, abolish any such reserve. 15
- (1A) (a) The **[Administrator]** responsible Minister may, after consultation and the conclusion of an agreement with any State Department and in accordance with the terms and conditions of such agreement, by proclamation—
- (i) establish a provincial nature reserve on land which is under the control or management of such State Department; 20
  - (ii) define the boundaries of any such reserve, either by description or by reference to a map or plan filed in a specified office, and from time to time alter and in the aforementioned manner redefine such boundaries;
  - (iii) assign a name to any such reserve and alter such name at any time, and
  - (iv) abolish any such reserve. 25
- (b) An agreement contemplated by paragraph (a) shall provide for—
- (i) the currency of the agreement, the terms and conditions on which any of the parties thereto may withdraw and the terms and conditions on which the agreement may, during its currency, be terminated;
  - (ii) a definition, in the manner provided in paragraph (a)(ii), of the boundaries of the land involved in such agreement and the terms and conditions on which such boundaries may be altered;
  - (iii) the manner in which a name shall be assigned to such provincial nature reserve and the manner in which such name may be altered;
  - (iv) the terms and conditions on which such nature reserve may be abolished, 35 subject to any provisions under subparagraph (i) in such agreement;
  - (v) the terms and conditions which are applicable to the establishment of such nature reserve on such land;
  - (vi) the manner in which such nature reserve shall be managed, controlled and developed; 40
  - (vii) the delegation by the contracting parties of any or all of their powers and duties to one of their number or to a joint committee appointed by them;
  - (viii) the apportionment between the contracting parties of any revenue, profits, assets, losses and liabilities arising as a result of such agreement;
  - (ix) the enforcement on such nature reserve of any regulations which are 45 applicable to provincial nature reserves;
  - (x) the preparation and submission to the **[Administrator]** responsible Minister of reports on the management, control and development of such nature reserve, and
  - (xi) any other matter in general which the contracting parties deem necessary to 50 include in such agreement.
- (2) The **[Administrator]** responsible Minister may [-
- (a)] by agreement or expropriation acquire any land which he or she considers necessary and suitable for the purpose of establishing a provincial nature reserve thereon [, and 55



- (b) **subject to the law governing the Public Service or the Provincial Service appoint officers, officials or employees for carrying out the provisions of this section and for the enforcement of any regulations made under subsection (6) and in force in any provincial nature reserve].**

(3) The [Director] Board shall, subject to the directions of the [Administrator] responsible Minister, manage, control and develop every provincial nature reserve with a view to the propagation, protection and preservation of fauna and flora and may in or in connection with any reserve provide amenities, facilities and services for the recreation and enjoyment of the public.

(3A) The Board may appoint as many of its employees as are necessary for the carrying out of the provisions of this section and for the enforcement of any regulations made under subsection (6) and in force in any provincial nature reserve.

(4) In the exercise of the powers and functions conferred or imposed on [him] it by subsection (3), the [Director] Board may in or in connection with a provincial nature reserve—

- (a) build, construct and maintain roads, bridges, ferries, buildings, fences and such other works as [he] it may deem necessary;
- (b) take such steps as [he] it may deem necessary or desirable for the propagation, protection or preservation of fauna and flora;
- (c) set aside places or inland waters for the propagation and cultivation of fauna and flora;
- (d) provide and maintain accommodation, camping areas, garages, entertainments, transport services or other undertakings for the amusement, recreation, enjoyment and general convenience of visitors;
- (e) conduct businesses for the sale of necessities and the supply of services for the convenience of visitors;
- (f) call for public tenders for the provision and maintenance of anything mentioned in paragraph (d) or the conducting of any business referred to in paragraph (e) and with the approval of and subject to such conditions as may be determined by the [Administrator] responsible Minister, grant permission to any person from whom a tender has been received, to provide such service or conduct such business and may for that purpose let land or buildings thereon;
- (g) levy charges for entry into and remaining in any such reserve or any part thereof or for the use or enjoyment of anything provided therein, or
- (h) perform any act or acquire any thing which [he] it considers necessary for the better achievement of the objects and purposes of this section.

(5) **[The provisions of the Shop Hours Ordinance, 1930 (Ordinance 14 of 1930), and the Licences Ordinance, 1981 (Ordinance 17 of 1981), shall not apply in respect of any business conducted in a provincial nature reserve in terms of subsection (4)].**

(6) The [Administrator] responsible Minister may in respect of any provincial nature reserve make regulations as to—

- (a) the regulation, restriction or prohibition of the entry of persons into such reserve or any part thereof, the conduct of persons in such reserve, the exclusion or ejection of persons **[of certain races, classes or groups of persons]** from such reserve or any part thereof, and the periods and times during which such reserve shall be open to visitors;
- (b) the regulation, restriction or prohibition of the introduction into or the possession within such reserve of any fauna, flora, poison, explosive material or any weapon, trap, net or other thing which could be used for the killing or catching of wild animals or fish;
- (c) the regulation, restriction or prohibition of the removal of fauna or flora from such reserve;
- (d) the protection and preservation of such reserve and the fauna, flora and any property therein;
- (e) the regulation, restriction or prohibition of the making of fires or the commission or omission of any act which may cause a fire;
- (f) the prohibition of the entry into or use in such reserve of certain classes of vehicles, the regulation and control of traffic in such reserve and the conveyance of passengers and the routes to be followed therein;

- (g) the regulation, restriction or prohibition of the introduction into such reserve or the use on any waters in such reserve of boats or other craft or certain classes of boats or craft, the conveyance of passengers on boats or craft and the routes to be followed by such boats or craft;
  - (h) the seizure or destruction of any animal found in such reserve in contravention of the provisions of any regulation in force therein; 5
  - (i) the handing over or seizure of anything brought into or removed from such reserve in contravention of any regulation in force therein or in possession of any person in such reserve in contravention of any such regulation;
  - (j) the powers and duties of **[officers, officials or]** employees appointed under subsection **[2(b)] (3A)**, and 10
  - (k) any other matter in respect of which the **[Administrator]** responsible Minister deems it necessary or expedient to make regulations in order to achieve the objects of this section.
- (7) Regulations made under subsection (6) may be made to apply generally to all provincial nature reserves or to any specified provincial nature reserve and may prescribe in respect of any contravention thereof or failure to comply therewith a fine not exceeding one thousand five hundred rand or imprisonment for a period not exceeding six months. 15

#### **[Establishment of Provincial Nature Reserves Land Acquisition Fund 20**

**6A. (1) A fund to be known as the Provincial Nature Reserves Land Acquisition Fund (hereinafter referred to as the Fund) is hereby established.**

**(2) The Fund shall consist of—**

- (a) all moneys received by the Department by way of contributions, donations and bequests for the purchase of land for the purposes of a provincial nature reserve or part of a provincial nature reserve, and 25**
- (b) moneys appropriated by the Provincial Council—**
  - (i) for the purposes of the Fund, and**
  - (ii) in respect of the amount of interest received on the investment of money of the Fund which is not immediately required for the purposes of the Fund. 30**

**(3) The Fund shall be managed and controlled by the Administrator and for this purpose the Administrator may delegate all or any of his powers in writing to a senior officer in the full-time employment of the Administration.**

**(4) Money in the Fund shall be applied by the Administrator for the purchase of land for the purposes of provincial nature reserves. 35**

**(5) (a) The Administrator shall cause to be kept a full and correct account of all moneys received by the Fund and expended out of the Fund.**

**(b) The account contemplated by paragraph (a) shall be audited by the Provincial Auditor. 40**

**(6) The Administrator shall annually as soon as possible after 31 March lay upon the Table of the Provincial Council a statement of the income and expenditure of the Fund.]**

#### **Part II: Local Nature Reserves (secs 7-11)**

#### **Establishment of local nature reserves by local authority 45**

**7. (1) Any local authority may with the approval of the [Administrator] responsible Minister and subject to such conditions as he or she may specify, establish a local nature reserve on land vested in it or under its control or management and may for that purpose acquire land by agreement or expropriation.**

**(2) A local authority desiring to establish a local nature reserve in terms of subsection (1) shall once a week for two consecutive weeks with an interval of not less than seven days cause a notice in both official languages to be published in a newspaper circulating in its area of jurisdiction— 50**

- (a) stating its intention to establish such reserve on land of which the boundaries**

are defined in such notice, either by description thereof or by reference to the boundaries indicated on a map or plan filed in a specific office;

- (b) stating the name which it desires to assign to such reserve, and
- (c) calling on persons wishing to object to such establishment to lodge their objections in writing together with the reasons therefor with such local authority on or before a date specified in such notice, being not less than thirty days after the last publication of such notice. 5

(3) When applying for the **[Administrator's]** responsible Minister's approval in terms of subsection (1), the local authority concerned shall furnish **[the Administrator]** that Minister with a copy of the notice referred to in subsection (2) and the objections, if any, lodged with it in accordance with such subsection together with its comments thereon. 10

(4) The **[Administrator]** responsible Minister may, in considering any application under this section, require the local authority to furnish him or her with such further information as he or she may deem necessary and shall thereupon, in his or her discretion, refuse the application or grant the application subject to such conditions as he or she may deem necessary or desirable. 15

(5) Every decision by the **[Administrator]** responsible Minister under subsection (4) shall be notified in the *Provincial Gazette* and where an application has been granted the name assigned to the reserve concerned, the boundaries thereof, defined in accordance with subsection (2), and the conditions, if any, subject to which approval has been granted shall be stated in the relevant notice. 20

(6) Subject to any conditions imposed by the **[Administrator]** responsible Minister under subsection (4), the provisions of section **[6(2)(b) and]** 6(3) to and including 6(7) shall apply *mutatis mutandis* in respect of a local nature reserve and any reference in any such section to— 25

- (a) **[the law governing the Public Service or the Provincial Service;]**
  - (b) the **[Administrator]** responsible Minister (except in section 6(3)) or the **[Director]** Board;
  - (c) a provincial nature reserve, or 30
  - (d) regulations made by the **[Administrator]** responsible Minister;
- shall be construed as a reference to, respectively—
- (i) **[the law governing the appointment of employees of the local authority concerned;]**
  - (ii) the local authority concerned; 35
  - (iii) a local nature reserve, or
  - (iv) by-laws or regulations made by the local authority concerned.

(7) A local authority which has established a local nature reserve may with the approval of the **[Administrator]** responsible Minister and, in the case of paragraph (b), after compliance *mutatis mutandis* with the provisions of subsections (2) and (3)— 40

- (a) at any time alter the boundaries or the name or the boundaries and the name thereof, or
- (b) abolish such reserve,

and any such alteration or abolition shall be notified in the *Provincial Gazette*.

#### **Advisory boards for local nature reserves** 45

**8.** (1) As soon as a local nature reserve has been established the local authority concerned shall appoint an advisory board for the purpose of advising and making recommendations to it in connection with the management, control and development of such reserve.

(2) (a) Such advisory board shall be constituted in accordance with by-laws or regulations made under section 9 and provision shall be made therein that the **[Administrator]** responsible Minister shall appoint at least one person to be a member but may in addition appoint up to five more persons to be members of such board. 50

(b) Any by-laws or regulations made before the coming into operation of the Nature and Environmental Conservation Amendment Ordinance, 1986, by a local authority under section 9 in connection with the appointment of members of an advisory board of a local nature reserve by the **[Administrator]** responsible Minister shall be deemed to have been amended in accordance with the provisions of paragraph (a). 55

(3) No member of an advisory board shall be remunerated for his or her services as a member of such board but such member may be paid the reasonable expenses incurred by him or her in connection with his or her duties as such.

**By-laws and regulations relating to advisory boards for local nature reserves**

**9.** (1) A local authority shall, in the manner provided by law for the making of by-laws or regulations by such local authority, make by-laws or regulations relating to— 5  
 (a) the constitution of an advisory board referred to in section 8(1);  
 (b) the period of office and vacation of office of members of such board, and  
 (c) the holding of meetings at intervals of not more than twelve months by and the 10  
 proceedings at meetings of such board.

(2) Any by-laws or regulations made before the coming into operation of the Nature and Environmental Conservation Amendment Ordinance, 1986, under subsection (1)(c) in connection with the intervals between meetings of an advisory board shall be deemed to have been amended in accordance with the provisions of subsection (1)(c).

**[Administrator's] Responsible Minister's powers in respect of acts done by local authority in relation to local nature reserves** 15

**10.** (1) If the [Administrator] responsible Minister is of opinion that any action taken or anything done or proposed to be taken or done by a local authority in the course of or in connection with the management, control or development of a local nature reserve established by it is or will be detrimental to such reserve or to the purposes for which it was established, he or she may, after consultation with such local authority, by order in writing— 20

- (a) prohibit such action or the doing of such thing or the continuance thereof, or
- (b) permit such action to be taken or thing to be done or the continuance thereof subject to such conditions as he or she may determine. 25

(2) The [Administrator] responsible Minister may, if, after the expiration of a reasonable period of time, he or she is of the opinion that a local authority has not taken adequate steps to comply with an order issued in terms of subsection (1), by notice in the *Provincial Gazette* abolish the local nature reserve concerned; provided that, at least six weeks prior to such notice, he or she had given notice in writing by registered mail to such local authority of his or her intention to abolish such nature reserve after a date specified therein. 30

**[Payment of subsidy in respect of local nature reserve**

**11.** (1) There shall be paid from moneys appropriated by the Provincial Council for the purpose to every local authority which has established a local nature reserve, an annual subsidy equal to one-half, or such greater or smaller fraction as the Administrator may generally or specially determine, of the subsidisable expenditure incurred by such local authority in connection with such reserve as determined in terms of subsections (2) and (3). 35

(2) For the purpose of determining the subsidisable expenditure contemplated by subsection (1), a local authority shall, on or before such date in each year and in such manner as the Administrator may direct, submit to the Director an estimate of the expenditure it proposes to incur and of the revenue it expects to accrue to it during the following year in respect of the local nature reserve concerned. 40

(3) On receipt of such estimate the Director shall approve the whole or part of the proposed expenditure and the difference between the proposed expenditure so approved and the estimated revenue contemplated by subsection (2) shall for the purposes of subsection (1) be the subsidisable expenditure contemplated by subsection (1). 45

(4) Nothing in this section contained shall be construed so as to preclude a local authority from spending more than its subsidisable expenditure in connection with 50

the reserve concerned but any expenditure in excess of the subsidisable expenditure shall not, except with the approval of the Administrator, rank for subsidy.

(5) The Director may, at such intervals as he deems fit, make advances against the subsidy payable in terms of this section, subject to such adjustments as may be necessary when audited statements of actual expenditure and revenue become available.] 5

### Part III: Private Nature Reserves (secs 12-13)

#### Establishment of private nature reserves

12. (1) Any owner of land may with the approval of the [Administrator] responsible Minister and subject to such conditions as he or she may specify, establish a private nature reserve on land of which he or she is the owner and assign a name to such reserve. 10

(2) Any person desiring to establish a private nature reserve in terms of subsection (1), shall apply to the [Administrator] responsible Minister for his or her approval and furnish him or her with—

- (a) a definition, either by description thereof or by reference to the boundaries indicated on a map or plan filed in a specific office, of the boundaries of the land on which he or she desires to establish such reserve; 15
- (b) proof of his or her ownership in such land;
- (c) the name which he or she proposes to assign to such reserve, and
- (d) such further information as the [Administrator] responsible Minister may require. 20

(3) The [Administrator] responsible Minister may, in his or her discretion, refuse any application under subsection (2) or grant such application subject to such conditions as he or she may deem necessary or desirable.

(4) If any application under subsection (2) is granted, the [Administrator's] responsible Minister's approval shall be notified in the *Provincial Gazette* and the name assigned to the reserve concerned, the boundaries thereof, defined in accordance with subsection (2)(a), and the conditions, if any, subject to which approval has been granted shall be specified in the relevant notice. 25

(5) (a) Any person who has established a private nature reserve may at any time with the approval of the [Administrator] responsible Minister— 30

- (i) alter the boundaries or the name or the boundaries and the name of such reserve, or
- (ii) abolish such reserve.

(b) Any such reserve may at any time be abolished by the [Administrator] responsible Minister on good cause shown and after consultation with the person who established it. 35

(c) Any alteration or abolition as contemplated by this subsection shall be notified in the *Provincial Gazette*.

#### Rights and duties of owner of private nature reserve 40

13. Subject to any conditions imposed by the [Administrator] responsible Minister under section 12(3), any person who has established a private nature reserve shall manage, control and develop such reserve with a view to the propagation, protection and preservation of fauna and flora and such person or any other person authorised by him or her in writing may, notwithstanding anything to the contrary in this ordinance— 45

- (a) subject to the provisions of sections 26, 27, 35 and 62, at any time and by any means other than by the use of fire or poison, hunt any wild animal or pick any flora found in such reserve; 45
- (b) subject to the provisions of section 31(2) and any regulations made under section 82(1)(d) keep any such animal which has been captured in such reserve in captivity, or 50
- (c) sell any such animal which has been so captured or the carcase of any such animal.

**Part IV: General (secs 14-15)****Prohibition on hunting of wild animals and picking of flora in provincial or local nature reserve**

- 14.** No person shall—
- (a) hunt any wild animal, or 5
  - (b) pick any flora,
- in a provincial or local nature reserve unless he or she is in possession of a permit authorising him or her to do so issued in any case contemplated—
- (i) by paragraph (a), by the **[Director] Board**, or
  - (ii) by paragraph (b), by the **[Director] Board** or the local authority concerned, 10  
respectively.

**15. Assent to section 15 withheld by the State President.****CHAPTER III****MISCELLANEOUS NATURE [AND ENVIRONMENTAL] CONSERVATION MEASURES (secs 16-25) 15****Powers of [Department] Board**

- 16.** (1) The **[Department] Board** shall in the interests of nature **[and environmental]** conservation—
- (a) conduct experiments, undertake research, make surveys, and conduct investigations in connection with any fauna, flora, inland waters, fish in such waters or aquatic growths and may for any such purpose acquire such property, whether movable or immovable, as may be necessary or desirable for the purpose; 20
  - (b) publish or in any other manner disseminate information relating to nature **[and environmental]** conservation which it acquires in the course of its activities and which may serve to further the achievement of the objects and purposes of this ordinance; 25
  - (c) take such measures as may be necessary or desirable for—
    - (i) the acclimatization and quarantining of fish imported into the Province;
    - (ii) the control of fish and aquatic growths in inland waters, or 30
    - (iii) the protection, propagation or cultivation of fauna or flora;
  - (d) erect, re-erect, maintain and repair on any land or in any inland waters such beacons, buoys, notices, notice boards, signs or other marks as may be necessary or desirable for the enforcement of any provision of this ordinance, and 35
  - (e) generally take such steps as may be necessary or desirable for the achievement of the objects and purposes of this ordinance.
- (2) Any person generally or specially authorised thereto in writing by the **[Director] Board** may, for any purpose mentioned in subsection (1)(c)(ii) or (d)—
- (a) enter upon the land or waters in question with such employees, assistants, animals, vehicles, appliances and instruments as may be required; 40
  - (b) make use of any natural material, including water, found on such land or in such waters, and
  - (c) cut any vegetation growing wild in the vicinity of any such beacon, buoy, notice, notice board, sign or other mark. 45
- (3) Any person referred to in subsection (2) shall, prior to the exercise by him or her of any power mentioned in such subsection, give reasonable notice to the owner or occupier of the land or waters concerned of his or her intention to exercise such powers.
- (4) The powers specified in subsection (1), except paragraph (c)(i) thereof, may also be exercised in or in respect of any local or private nature reserve. 50

**Measures to ensure survival of endangered wild animals or endangered flora**

- 17.** (1) If the **[Director] Board** at any time considers it necessary or desirable that

special measures should be taken to ensure the survival of any species of endangered wild animal or endangered flora, [he] it may, [with the approval of the Administrator and] after consultation with the owner of any land on which any animal of such species or such flora is found—

- (a) cause such number of either or both sexes of such animal or such number or quantity of the plants, seeds or other parts of such flora as [he] it may deem necessary to be captured, picked or gathered on such land and removed to a provincial nature reserve or such other place as [he] it deems fit for the purpose of preserving or propagating such species or such flora, or
- (b) take such measures as [he] it may consider necessary for the preservation, cultivation and propagation on such land of such species or flora.

(2) The [Director] Board shall give reasonable notice to the owner of the land referred to in subsection (1) of the time when, the place where and the manner in which it is proposed to capture, pick, gather, preserve, cultivate or propagate the animals or flora referred to in such subsection; provided that the provisions of this subsection shall not apply in respect of the owner of any land to which any such animal may flee while being pursued for the purpose of being captured in terms of this section.

(3) The [Director] Board may, in the exercise of the powers conferred on [him] it by subsection (1), in writing authorise such persons as [he] it may deem necessary to enter upon the land in question and to capture, pick or gather the animals or flora or to take the required measures for the preservation, cultivation and propagation thereof as contemplated by that subsection and any such person may thereupon enter upon such land and capture, pick or gather such animals or flora or take such measures thereon or on any other land to which any such animals may flee while being pursued.

(4) Any person who resists, hinders or wilfully obstructs any person in possession of the written authority of the [Director] Board issued under subsection (3) in the exercise of his or her powers or functions under that subsection shall be guilty of an offence.

(5) The [Administrator] Board shall on the application of the owner of any land referred to in subsection (1) pay to such owner such compensation in respect of the wild animals or flora removed from his or her land in terms of the said subsection or any other damage suffered by him or her in consequence of the exercise of the powers contemplated by this section as the [Administrator] Board may deem reasonable in the circumstances.

#### **[Director] Board may cause certain wild animals to be hunted**

18. (1) If the [Director] Board is of opinion that any wild animal or any species of wild animal found on any land—

- (a) is detrimental to the preservation of fauna or flora;
- (b) is likely to be dangerous to human life;
- (c) is wounded, diseased or injured;
- (d) is causing damage to crops or other property, whether movable or immovable, of any person, or
- (e) should be hunted in the interests of nature conservation,

[he] it may [with the approval of the Administrator], cause such animal, or such number of such species as [he] it may determine, to be hunted on such land or on any land to which such animal or, in the case of a species of wild animal, the number of such species determined by [him] it may flee while being pursued for the purpose of being hunted in terms of this section.

(2) The provisions of subsections (3) and (4) of section 17 shall apply *mutatis mutandis* in respect of the exercise of the powers conferred on the [Director] Board by subsection (1) of this section.

(3) The ownership in the carcase of any wild animal killed during a hunt in terms of subsection (1) shall vest in the [Administration] Board.

#### **[Director] Board may cause certain fish or aquatic growths to be destroyed**

19. (1) If the [Director] Board is of opinion that any fish or aquatic growth found in

any inland waters is injurious to any other fish or aquatic growth or to the water in such inland waters, **[he]** it may—

- (a) in writing order the owner of such inland waters to take such measures, including measures inconsistent with the provisions of this ordinance, as **[he]** it may specify in such order, to catch or kill such fish or to destroy such growth, and 5
- (b) if requested thereto by such owner, render such assistance to such owner as the **[Director]** Board may deem necessary for the purpose of enabling such owner to comply with such order. 10

(2) If an owner contemplated by subsection (1) refuses or, within a period of twelve months from the date of an order in terms of subsection (1), fails to comply with such order the **[Director]** Board may cause the fish or growth concerned to be caught, killed or destroyed, as the case may be, and recover the costs incurred in that regard from such owner. 10

#### **Appointment of nature [and environmental] conservation officers** 15

##### **20. [The Administrator may appoint—**

- (a) **subject to the law governing the Public Service or the Provincial Service, so many officers, officials or employees, and**
- (b) **so many other persons**

**as he may deem expedient as nature and environmental conservation officers for the carrying out of the provisions of this ordinance.]** 20

The Board may appoint as many of its employees as it deems expedient as nature conservation officers for the carrying out of the provisions of this ordinance.

#### **Powers of nature [and environmental] conservation officers**

**21. (1) A nature [and environmental] conservation officer may, subject to any limitation imposed in terms of section 25(2)—** 25

- (a) demand from any person performing or whom he or she reasonably suspects of having performed any act for the performance of which a licence, permit, exemption, order or the written permission of the owner of land or of any other person is necessary under any provision of this ordinance the production of such licence, permit, exemption, order or permission; 30
- (b) where any person has performed or he or she reasonably suspects any person of having performed on any land any act which may only be performed on land in respect of which a certificate of adequate enclosure has been issued under section 35(4)(b), demand from the owner of such land the production of such certificate; 35
- (c) demand from any person whom he or she reasonably suspects—
  - (i) of having committed an offence under this ordinance, or
  - (ii) will be able to furnish evidence in connection with an offence committed or alleged to have been committed under this ordinance, the name and address and any other information necessary for the identification of such person; 40
- (d) question any person who in his or her opinion may be able to furnish any information required by him or her in connection with the enforcement of any provision of this ordinance and for that purpose demand that any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance be brought to a standstill; 45
- (e) demand from any person who is required under this ordinance to keep any book, statement or invoice the production of such book, statement or invoice; 50
- (f) conduct any investigation he or she considers necessary in order to ascertain whether any provision of this ordinance is being complied with by any person and may for such purpose without warrant and without permission enter upon any land, premises, vehicle, place, building, tent, vessel, boat, craft, float, aircraft or other means of conveyance and there carry out such inspection and investigation as may be necessary, including an inspection or investigation of any container or other thing found thereon or therein; 55
- (g) in the course of any inspection or investigation in the exercise of his or her powers and the performance of his or her functions under this ordinance,



- without warrant and without permission, demand that any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance be brought to a standstill and be kept stationary until he or she has searched it;
- (h) without warrant and without permission, enter upon any land, premises, vehicle, vessel, boat, craft, float, aircraft or other means of conveyance and there conduct a search if he or she reasonably suspects that there is thereon or therein anything which— 5
- (i) is used or has been used in;
- (ii) forms or has formed an element in, or 10
- (iii) will afford evidence of, the commission of any offence under this ordinance;
- (i) without warrant seize anything which—
- (i) may, in his or her opinion, afford evidence of the commission of an offence under this ordinance, or
- (ii) he or she reasonably suspects is being or has been used for the conveyance of any fauna or flora in respect of which an offence has been committed under this ordinance, or 15
- (j) without warrant seize and confiscate any wild animal which is found in the possession of or being kept in captivity by any person, if— 20
- (i) such person fails on demand by such officer to produce a permit authorising such possession or keeping,
- (ii) such animal is in the possession of or being kept in captivity by such person contrary to any condition specified in a permit produced by such person authorising such possession or keeping.
- (2) A nature **[and environmental]** conservation officer may in the exercise of his or her powers or the performance of his or her functions under this ordinance take with him or her an interpreter and one or more assistants who shall, while acting under the directions of such nature **[and environmental]** conservation officer, be deemed to be nature **[and environmental]** conservation officers. 25
- (3) Anything seized under subsection (1)(i) shall, if no prosecution for an offence under this ordinance is instituted in connection therewith, be returned to the person from whose possession it was taken. 30

#### **Appointment and powers of honorary nature [and environmental] conservation officers**

22. (1) The **[Director]** Board may appoint any person **[he]** it considers suitable as an honorary nature **[and environmental]** conservation officer for the carrying out of the provisions of this ordinance. 35
- (2) (a) Every honorary nature **[and environmental]** conservation officer shall have all the powers conferred on a nature **[and environmental]** conservation officer by subsections (1)(a) to and including (e) and subsection (2) of section 21. 40
- (b) When an honorary nature **[and environmental]** conservation officer takes with him or her an interpreter or assistant as contemplated by section 21(2), such interpreter or assistant shall be deemed to be an honorary nature **[and environmental]** conservation officer.

#### **Appointment and powers of nature [and environmental] conservation rangers** 45

23. (1) Any local authority may, subject to the law governing the appointment of employees of such local authority, appoint so many persons as it may deem expedient as nature **[and environmental]** conservation rangers for the carrying out of the provisions of this ordinance within the area of jurisdiction of such local authority.
- (2) (a) Every nature **[and environmental]** conservation ranger shall have all the powers conferred by section 21 on a nature **[and environmental]** conservation officer and may exercise such powers within the area of jurisdiction of the local authority which appointed him or her. 50
- (b) When a nature **[and environmental]** conservation ranger takes with him or her an interpreter or assistant as contemplated by section 21(2), such interpreter or assistant shall be deemed to be a nature **[and environmental]** conservation ranger. 55

**[Payment of subsidy in respect of remuneration of nature and environmental conservation rangers]**

24. The Administrator may, subject to such conditions as he may deem necessary or desirable, pay from moneys appropriated by the Provincial Council for the purpose, to every local authority which has appointed nature and environmental conservation rangers an annual subsidy equal to one-half, or such greater fraction as he may generally or specially determine, of the expenditure incurred by such local authority in remunerating such rangers.] 5

**Certificate of appointment**

25. (1) Every nature [and environmental] conservation officer, honorary nature [and environmental] conservation officer and nature [and environmental] conservation ranger shall be furnished by the [Director] Board with a certificate of appointment in the prescribed form and shall when exercising any power or performing any function under this ordinance and if so required, produce such certificate for inspection. 10

(2) When furnishing a certificate of appointment contemplated by subsection (1), the [Director] Board may limit the exercise of the powers referred to in section 21 by the officer or ranger concerned to or in respect of— 15

- (a) such areas;
- (b) such offences under this ordinance;
- (c) [persons of such race or class], or 20
- (d) such fauna and flora,

as [he] it may generally or specially determine and specify in such certificate.

(3) A certificate of appointment issued under subsection (1) shall remain valid, in the case of—

- (a) a nature [and environmental] conservation officer or nature [and environmental] conservation ranger, until he or she leaves the service of the [Administration] Board or the local authority concerned, as the case may be, or until withdrawn by the [Director] Board whichever is the shorter period, and 25
- (b) an honorary nature [and environmental] conservation officer, for the period specified in the certificate. 30

**Transitional provision**

25A. Any person appointed as a nature and environmental conservation officer, honorary nature and environmental conservation officer or a nature and environmental conservation ranger in terms of sections 20, 22 and 23 immediately before the amendment of those sections in terms of the Nature Conservation Laws Amendment Act, 2000, is, from the date of commencement of that Act, regarded as having been appointed as a nature conservation officer, honorary nature conservation officer or a nature conservation ranger, respectively, in terms of those sections as amended by that Act. 35 40

**CHAPTER IV**

**PROTECTION OF WILD ANIMALS OTHER THAN FISH (secs 25A-47)**

**Application of Chapter IV**

25[A]B. For the purposes of this Chapter the term “wild animal” shall not include fish. 45

**Prohibition on hunting or possession of endangered wild animals**

26. No person shall without a permit hunt or be in possession of any endangered wild animal or the carcase of any such animal.

### Hunting of protected wild animals

27. (1) Subject to the provisions of subsections (2) and (3) no person shall hunt any protected wild animal—
- (a) during any hunting season, unless he or she is the holder of a permit or of a licence in the prescribed form issued to him or her by the **[Director] Board**, a receiver of revenue or any person authorised to do so by the **[Director] Board** on payment of the prescribed fee, or 5
  - (b) at any other time unless he or she is the holder of a permit to do so.
- (2) The provisions of subsection (1)(a) shall not apply to any owner of land, any relative of such owner or any full-time employee of such owner acting on the authority of such owner, in respect of any protected wild animal found on the land of such owner. 10
- (3) Subject to the provisions of any regulation made under section 82(1)(c) the provisions of subsection (1) shall not apply to any person not in possession of a weapon, who—
- (a) in the presence of the owner of any land on which any protected wild animal is being hunted by any other person as contemplated by such subsection, or 15
  - (b) in the absence but with the written permission of such owner, assists such other person during such hunt by acting as a beater.

### Prohibition on killing or capturing of protected wild animals in excess of daily bag limit 20

28. No person authorised by any provision of this ordinance to hunt any wild animal shall at any time kill or capture a greater number of any species of protected wild animal than the daily bag limit determined in respect of such species by **[proclamation] notice** under section 79(a).

### Prohibited ways of hunting 25

29. No person shall unless he or she is the holder of a permit authorising him or her to do so, hunt any wild animal—
- (a) by means of fire or poison;
  - (b) with the aid of artificial light;
  - (c) on or from a public road; 30
  - (d) by means of any trap;
  - (e) during the period one hour after sunset on any day and one hour before sunrise on the following day;
  - (f) by means of any weapon in a public place within the area of jurisdiction of a local authority; 35
  - (g) by means of a fire-arm which discharges a rim-fire cartridge of a calibre less than five comma six millimetres;
  - (h) by means of a fire-arm which discharges more than two shots without being manually reloaded;
  - (i) by means of a bow-and-arrow; 40
  - (j) by means of a set gun or any similar contrivance;
  - (k) by means of any device which injects an intoxicating or a narcotic agent or poison into such animal;
  - (l) by the use of a dog, except for the hunting of birds or for the purpose of following or searching for any such animal which has been wounded; 45
  - (m) in the case of birds in or upon inland waters, by the use of a boat for the purpose of chasing or killing such birds;
- provided that in respect of the hunting of—
- (i) rodents, the provisions of paragraphs (a), (b), (d), (e), and (l), or
  - (ii) any bird or any other wild animal which is not an endangered or a protected wild animal, the provisions of paragraph (g), or 50
  - (iii) any such wild animal by a registered veterinary surgeon in **[the practise of] practising his or her profession**, the provisions of paragraph (k), shall not apply.

**Prohibition on use of certain fire-arms to hunt certain wild animals**

**30.** No person shall use a fire-arm having a barrel of a calibre of six comma five millimetres or less to hunt any Buffalo, Eland, Kudu, Wildebeest, Oryx or Red Hartebeest.

**Prohibition on keeping of wild animals in captivity**

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**31.** (1) No person shall without a permit authorising him or her to do so, keep any wild animal in captivity; provided that in the case of a wild animal which is a bird, the provisions of this section shall only apply in respect of a bird which is an endangered or protected wild animal.

(2) No person shall at any time, whether authorised by a permit issued under subsection (1) or not, restrain any wild animal by means of a rope, cord, chain or any similar contrivance.

**Prohibition on release of exotic wild animals**

**31A.** No person shall without a permit authorising him or her to do so, release any exotic wild animal in the Province.

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**Prohibition on manipulation of boundary fences, etc.**

**31B.** No person shall—

- (a) alter, remove or partly remove or cause to be altered, removed or partly removed any fence, whether on a common boundary or on his or her own property, in such a manner that any wild animal which as a result thereof gains access or may gain access to his or her property or a camp on his or her property cannot escape or is likely not to be able to escape therefrom, and
- (b) heap up or cause to be heaped up soil or any other material on one side of any fence, whether on a common boundary or on his or her own property, or remove or cause to be removed soil on one side of such fence in such manner that such heaping up or such removal has the effect of reducing or increasing the height, as the case may be, of such fence on one side, unless any wild animal which gains or may gain access to such property or a camp on such property over such lower section of such fence can escape or is likely to be able to escape therefrom.

30

**Prohibition on laying of poison**

**32.** (1) Subject to the provisions of subsection (2), no person shall lay or cause or allow to be laid any poison at any place where it is likely to or in such manner that it may be assimilated or ingested by a wild animal.

(2) The provisions of subsection (1) shall not preclude any person from laying any poison with due observance of such provisions, for the purpose of exterminating rodents, Redwinged Starlings, European Starlings, English Sparrows or Colies.

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**Prohibition on use of motor vehicles or aircraft for [the] purpose of hunting wild animals or of filming or photographing [a] hunt, etc., of such animals**

**33.** (1) Subject to the provisions of subsection (2), no person shall without a permit use any motor vehicle or aircraft to hunt any wild animal or to hunt, disturb, drive or stampede any wild animal or animals for the purpose of filming or photographing such hunt, disturbance, drive or stampede or for any other purpose whatsoever.

40

(2) The provisions of subsection (1) shall not preclude the use of a motor vehicle for the hunting in accordance with the provisions of this ordinance of any wild animal by the owner of any land on such land.

45

**34.**

### Certificate of adequate enclosure

35. (1) Any owner of land on which any species of protected wild animal is found may in the prescribed manner and form and in relation to any such species, apply to the **[Director] Board** for a certificate of adequate enclosure as contemplated by subsection (4) in respect of the whole or any portion of such land. 5

(2) Any application under subsection (1) shall—

- (a) include a full description of the land in respect of which application is made, its boundaries and size and the vegetation thereon;
- (b) state the species of protected wild animal to which the application relates, the estimated number of such species in a free state of nature and the number of such species in captivity, on the land referred to in paragraph (a); 10
- (c) set forth the grounds on which the land in question is considered to be adequately enclosed, and
- (d) reflect such further information as may be prescribed.

(3) For the purpose of deciding upon any such application the **[Director] Board** may require the applicant to furnish **[him]** it with such further information as **[he]** it may consider necessary or desirable. 15

(4) If the **[Director] Board**—

- (a) having regard to the size of the land in respect of which application has been made under subsection (1), the number of the species of protected wild animal to which such application relates which is normally found on such land and such other circumstances as **[he]** it may consider relevant, is of opinion that the animals in question are in effect being kept in captivity, **[he]** it shall refuse the application, or 20
- (b) is satisfied that such land is adequately enclosed in relation to such species, **[he]** it may in **[his]** its discretion grant the application subject to such conditions as **[he]** it may consider necessary or desirable and issue to the applicant a certificate of adequate enclosure in respect of such land and shall in such certificate specify the conditions, if any, subject to which it is issued, define the boundaries of the land concerned and specify the species of protected wild animal to which it relates. 25 30

(5) (a) A certificate of adequate enclosure issued in terms of subsection (4) shall, subject to the provisions of paragraph (b), be valid for the period specified therein.

(b) A certificate of adequate enclosure may at any time during the period of validity thereof be withdrawn by the **[Director] Board** summarily and without prior notice to or consultation with the holder thereof; provided that such withdrawal may be set aside by the **[Director] Board** if, after consultation with such holder, **[he]** it is of the opinion that such setting aside is necessary or desirable. 35

(6) Any certificate issued under section 22 of the Nature Conservation Ordinance, 1965 (Ordinance 26 of 1965) prior to the repeal of that ordinance by section 89 of this ordinance shall be deemed to be a certificate of adequate enclosure issued in terms of subsection (4) of this section, and any such certificate shall remain valid for the period stated therein unless it is withdrawn in terms of subsection (5) prior to the expiration of such period. 40

### Rights of holder of certificate of adequate enclosure and certain other persons 45

36. Any owner of land to whom a certificate of adequate enclosure has been issued in terms of section 35(4)(b), any relative of such owner, any full-time employee of such owner acting under the authority of such owner and any other person in possession of a permit or of a licence referred to in section 27(1)(a) and acting with the permission of such owner may, notwithstanding anything to the contrary contained in this ordinance but subject to any conditions specified in such certificate— 50

- (a) at any time by any means other than by the use of fire or poison and on the land in respect of which such certificate was issued hunt any number of the species of protected wild animal specified in such certificate;

- (b) subject to the provisions of section 31(2) and any regulations made under section 82(1)(d) keep any animal of such species which has been captured on such land in captivity on such land, and
- (c) sell or donate any animal of such species which has been so captured or the carcase of any such animal. 5

#### **Certificate of adequate enclosure lapses on transfer or lease of land**

37. Any certificate of adequate enclosure issued in terms of section 35(4)(b) shall lapse upon the transfer or lease of the land in respect of which it was issued or of any portion of such land.

#### **Transfer of hunting and other rights 10**

38. (1) The **[Director] Board** may in writing authorise—
- (a) any owner of land to whom a certificate of adequate enclosure has been issued in terms of section 35(4)(b), or
  - (b) any other owner of land,
- to transfer, whether temporarily or permanently, to a person approved by **[him] it** and subject to such conditions as **[he] it** may impose—
- (i) in the case of an owner referred to in paragraph (a), the rights conferred on such owner by section 36, and
  - (ii) in the case of an owner referred to in paragraph (b), the rights of any such owner under this ordinance. 15 20
- (2) In the application of the provisions of this ordinance, any person to whom any rights have been transferred as contemplated by subsection (1), shall as from the date of such transfer and, in the case of a temporary transfer, for the duration of the period concerned, be deemed to be the owner of the land in question.

#### **Owner of land may permit other persons to hunt wild animals on his or her land 25**

39. (1) Subject to the provisions of this ordinance, any owner of land may permit any other person to hunt in accordance with such provisions any wild animal on the land of such owner and to remove any such animal or the carcase of any such animal from such land.
- (2) Subject to the provisions of subsection (3) no permission granted in terms of subsection (1) shall be valid unless it is reduced to writing and reflects—
- (a) the full names and address of the owner concerned and of the person to whom it is granted, and
  - (b) the number and the species of wild animal, the date or dates and the land in respect of which it is granted, 30 35
- and is signed and dated by such owner.
- (3) The provisions of subsection (2) shall not apply in respect of permission granted in terms of subsection (1) to any relative or full-time employee of any owner of land.

#### **Hunting of wild animals on land belonging to another person**

40. No person shall on land of which he or she is not the owner hunt any wild animal or remove any such animal or the carcase of such animal from such land without the permission of the owner of such land granted in terms of section 39. 40

#### **Donation or sale of wild animal or carcase thereof**

41. No person shall donate or sell any wild animal or the carcase of any such animal to any other person unless, when he or she delivers such animal or carcase to such other person, he or she furnishes such other person with a written document signed by him or her reflecting—
- (a) the full names and address of such firstmentioned person;
  - (b) the full names and address of such other person;
  - (c) the number and species of wild animals or carcasses so donated or sold; 45 50

- (d) the date on which such animal or carcase was so donated or sold, and
- (e) a statement by him or her that he or she has donated or sold such animal or carcase to such other person.

#### **Possession of wild animal or carcase thereof**

42. (1) Any person found in possession of any wild animal or the carcase of any such animal shall be guilty of an offence unless, in the event of— 5
- (a) the animal having been hunted by him or her on the land of any other person, he or she is in possession of the written permission contemplated by section 39, or
  - (b) his or her having acquired such animal or carcase from any other person, he or she is in possession of a written document contemplated by section 41. 10
- (2) The provisions of subsection (1) shall not apply in any case where a relative or full-time employee of any owner of land is found in possession of a wild animal or the carcase of any such animal which such relative or employee has hunted on the land of such owner with his or her permission or which such owner has sold or donated to such relative or employee. 15

#### **Documents relating to permission to hunt or to [the] donation of wild animals or [the] carcasses thereof to be retained for certain period**

43. Every document referred to in sections 39 and 41 shall be retained by the person to whom it was furnished for a period of at least two months from the date on which it was so furnished or while such person is in possession of the wild animal or carcase to which it relates, whichever is the longer period. 20

#### **Miscellaneous offences in relation to certain wild animals**

44. (1) Subject to the provisions of this ordinance, no person shall without a permit authorising him or her to do so— 25
- (a) import into, export from or transport in or through the Province any wild animal;
  - (b) (i) import into the Province from any place outside the Republic the carcase of any wild animal, or
  - (ii) export from the Province the carcase of any endangered wild animal or any protected wild animal specified in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; 30
  - (c) sell, buy, donate or receive as a donation the carcase or anything manufactured from the carcase of any endangered wild animal; 35
  - (d) process, prepare, cure, tan or in any manner whatsoever treat the carcase of any endangered wild animal for the purpose of—
    - (i) manufacturing any article therefrom;
    - (ii) exhibiting such carcase or any article manufactured therefrom, or
    - (iii) mounting such carcase, or 40
  - (e) sell, buy, donate, receive as a donation or be in possession of any live endangered or protected wild animal.
- (2) The provisions of subsection (1)(a) shall not be construed so as to preclude the export from or the transport in or through the Province without a permit, of any bird which is not an endangered or protected wild animal. 45

#### **Sale and purchase of biltong and biltong sausage**

45. (1) No person shall sell biltong or biltong sausage unless—
- (a) the meat of which it was made is the meat of a wild animal hunted in accordance with the provisions of this ordinance or any other law;
  - (b) it has been packed by the producer thereof in a securely sealed and unbroken container and such seal and container is intact, and 50
  - (c) the names and address of the producer appear in clearly legible letters and figures on such container.
- (2) No person shall buy any biltong or biltong sausage which does not comply with the provisions of subsection (1)(b) and (c). 55

### Sale of carcasses of wild animals

46. No carcass of any wild animal shall be sold by any person other than—
- (a) the owner of any land on which the animal concerned was hunted in accordance with the provisions of this ordinance;
  - (b) a market master at a public or municipal market, or 5
  - (c) a person authorised by a permit issued under this ordinance [**or a licence issued under the Licences Ordinance, 1981 (Ordinance 17 of 1981),**] to sell such carcass.

### Local authority may permit owner of land to hunt certain wild animals

47. (1) If, on application in the prescribed form by an owner of land within its area of jurisdiction a local authority is satisfied that damage is being done to crops or other property of such owner, by—
- (a) any species of protected wild animal other than African Elephant, African Lion, Bontebok, Red Hartbeest, Eland, Oryx, Black Wildebeest, Oribi, Blue Duiker, Klipspringer or Ant-bear, or 15
  - (b) birds which are not endangered or protected wild animals,
- it may, notwithstanding anything to the contrary in this ordinance contained, issue a permit in the prescribed form authorising such owner or a person nominated by him or her to hunt such species or birds on the land of such owner at the place where such damage is being done and may in a case referred to in paragraph (b), notwithstanding the provisions of section 29(a), (d) or (e), specify in any such permit that any birds referred to in such paragraph may be hunted by means of poison or a trap and at any time of the day or night. 20
- (2) A permit issued in terms of subsection (1) shall be valid for a period specified therein not exceeding one month from the date of issue thereof. 25

## CHAPTER IVA

### PROTECTION OF RHINOCEROSES (sec 47A)

#### Protection of and penalties for offences with regard to rhinoceroses, etc.

- 47A. (1) Notwithstanding anything to the contrary contained in this ordinance, no person shall, without a permit authorising him or her to do so— 30
- (a) hunt, capture, possess, import into, export from or transport through the Province, buy, sell, receive as a donation or donate any rhinoceros, or
  - (b) possess, import into, export from or transport through the Province, buy, sell, receive as a donation or donate the carcass (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of any rhinoceros. 35
- (2) Any person who contravenes a provision of subsection (1) shall be guilty of an offence and shall, upon conviction, be liable to a fine not exceeding one hundred thousand rands or to imprisonment for a period not exceeding ten years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any rhinoceros or the carcass (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of any rhinoceros in respect of which the offence was committed. 40
- (3) (a) The court convicting any person of an offence contemplated by subsection (2), read with subsection (1)— 45
- (i) shall, without notice to any person and in addition to the penalty which it may impose in terms of subsection (2), declare any rhinoceros or the carcass (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of any rhinoceros in respect of which the offence was committed to be forfeited to the [**Administration**] Board, and 50
  - (ii) may, without notice to any person and in addition to the penalty and forfeiture contemplated by subparagraph (i), declare any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance and any weapon, instrument, receptacle or other thing which was used for or in connection with the



commission of the offence and which was produced to the court to be forfeited to the [Administration] Board.

(b) The [Administration] Board or any person authorised thereto by [him] it, may cause to be destroyed or sold or may direct what may otherwise be done with anything declared to be forfeited in terms of paragraph (a). 5

(c) Any rights which any person other than the convicted person may have in any rhinoceros or any carcase (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of a rhinoceros or any other thing forfeited in terms of paragraph (a) shall not be affected by such forfeiture if such person proves that he or she was not aware of the commission of the offence or that he or she took all reasonable steps to prevent the commission of the offence or that he or she could not prevent the commission of the offence and that he or she may lawfully possess whatever has been forfeited. 10

(d) The provisions of section 35(4) of the Criminal Procedure Act, 1977 (Act 51 of 1977), shall, subject to the provisions of paragraph (c), apply *mutatis mutandis* in respect of any forfeiture in terms of this subsection. 15

(4) [Where in any prosecution under subsection (1) read with subsection (2) any person is shown to have performed any act contemplated by subsection (1), it shall, until the contrary is proved, be presumed that the performance of such act was unlawful]. 20

(5) [The Director-General: Provincial Administration of the Cape of Good Hope may, from money appropriated by Parliament for that purpose and with the concurrence of the Minister of Finance, pay a cash amount, which in his opinion] The Board may from money appropriated by the Provincial Parliament of the Western Cape for that purpose and with the concurrence of the provincial Minister responsible for financial affairs, pay a cash amount, which in its opinion is fair and reasonable in the circumstances, to any person, except a person in the employ of the State who provided [him] it with any information or evidence with regard to an offence contemplated by subsection (2), irrespective of whether such information or such evidence leads to a prosecution and conviction in a competent court. 25 30

## CHAPTER V

### PROTECTION OF FISH IN INLAND WATERS (secs 48-61A)

#### Pollution of inland waters

48. No person shall deposit or cause or allow to be deposited—

- (a) in any inland waters, or 35
- (b) in any place from where it is likely to percolate into or in any other manner enter any inland waters,

anything, whether solid, liquid or gaseous, which is or is likely to be injurious to any fish or fish food or which, if it were so deposited in large quantities or numbers, would be so injurious. 40

#### Obstruction of fish in inland waters

49. No person shall place or cause or allow to be placed in any inland waters any article or thing, other than a net of which the use in inland waters is authorised by any provision of this ordinance, which will or is likely to prevent the free passage of fish in such waters. 45

#### Placing of fish etc. in inland waters

50. No person shall without a permit place in or in any manner introduce into or cause or allow to be placed or introduced into any inland waters any live fish or any aquatic growth; provided that the provisions of this section shall not apply in respect of live fish which is replaced into any inland waters immediately after it has been caught in such waters. 50

### **Killing of fish**

51. Subject to the provisions of section 61, no person shall by any means whatsoever kill or injure any fish or wilfully disturb or destroy the spawn of any fish in any inland waters; provided that the provisions of this section shall not apply in respect of any fish which is killed or injured while being caught in and taken from such waters in accordance with the provisions of this ordinance. 5

### **Prohibition on catching of certain species of fish and catching of fish outside angling season**

52. Subject to the provisions of section 61 no person shall without a permit—  
 (a) catch any fish which is an endangered wild animal or have in his or her possession any such fish or the carcase or spawn thereof, or 10  
 (b) at any time outside the angling season for any species of fish catch any fish of such species in any inland waters.

### **Angling licence**

53. Subject to the provisions of sections 52 and 61, no person shall angle in any inland waters without a licence issued by the **[Director] Board**, a receiver of revenue or any person authorised to do so by the **[Director] Board** in the prescribed form on payment of the prescribed fee. 15

### **Netting licence**

54. (1) Subject to the provisions of section 61, no person shall for any purpose whatsoever use any fyke-net, crab-net, staked net or trek-net in any inland waters without a licence in the prescribed form issued to him or her by the **[Director] Board** on payment of the prescribed fee. 20

(2) Subject to the provisions of sections 52 and 61, no person shall for any purpose whatsoever use any cast-net in any inland waters without a licence in the prescribed form issued to him or her by the **[Director] Board**, a receiver of revenue or any person authorised to do so by the **[Director] Board** on payment of the prescribed fee. 25

### **Prohibition on catching of more fish than number determined as bag limit and of undersized fish**

55. (1) Subject to the provisions of section 61, no person shall without a permit at any time in any inland waters— 30

- (a) catch a greater number of any species of fish than the daily bag limit determined in respect of such species by **[proclamation] notice** under section 79(a), or
- (b) catch any fish which is of a size or mass less than the size or mass determined by regulation made under section 82(1)(h) in respect of the species of such fish. 35

(2) Notwithstanding anything to the contrary in this ordinance, the **[Director] Board** may for the purposes of this section authorise any person to whom a permit has been issued for the purposes of subsection (1) to use any net in any inland waters. 40

### **Prohibited ways of catching fish**

56. Subject to the provisions of section 61, no person shall in any inland waters catch fish—

- (a) by snatching or spearing;
- (b) by means of a staked net, trek-net or fyke-net which, in each case, extends over a distance of more than half the width of such inland waters at the place where such net is so used; 45
- (c) by means of a fyke-net if any device used to guide fish to an opening in such net is more than six metres in length;
- (d) by placing a staked net or fyke-net or by using a trek-net within a distance of thirty metres from the extremities of any other such net being used in such 50

waters and for the purposes of this paragraph the extremities of a fyke-net shall be deemed to be the extremities of the devices, if any, used to guide fish to an opening in such net;

- (e) by angling by means of—
  - (i) more than two lines; 5
  - (ii) more than two single hooks attached to any line, or
  - (iii) a set line with more than two hooks attached thereto.

#### **Sale etc. of certain species of fish**

- 57.** No person shall without a permit—
- (a) sell or buy any fish which is an endangered wild animal or the carcase or spawn of such fish; 10
  - (b) sell, buy or transport any live carp, bluegill sunfish, trout, black bass, banded tilapia or exotic invertebrate freshwater fauna;
  - (c) sell or buy any fish the catching of which is prohibited by section 55(1)(b).

#### **Importation and export of fish** 15

- 58.** No person shall without a permit—
- (a) import any live fish or the spawn of any fish into the Province;
  - (b) import into or export from or transport in or through the Province any fish which is an endangered wild animal or the carcase or spawn of any such fish, or 20
  - (c) import into or export from the Province any fish which is a protected wild animal and is specified in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973, or the carcase or spawn of any such fish.

#### **Removal etc. of bait caught in inland waters** 25

- 59.** No crab, prawn, pencil bait, shell bait or worm, whether alive or not, which has been caught in any inland waters shall, except under the authority of a permit—
- (a) be sold to any person, or
  - (b) be bought by any person except from a person authorised by any provision of this ordinance to sell it. 30

#### **Noxious aquatic growths**

**60.** No person shall cultivate, possess, transport, sell, donate, buy or otherwise acquire or import into the Province any noxious aquatic growth.

#### **Privately owned inland waters**

- 61.** The provisions of sections 51, 52, 53, 54, 55 and 56 shall, in respect of any privately owned inland waters, not apply to— 35
- (a) the owner of such waters;
  - (b) any relative of such owner, or
  - (c) any full-time employee of such owner or any other person, acting with the permission of such owner. 40

#### **Exemption from provisions for scientific purposes**

**61A.** The [Director] Board may in [his] its discretion and subject to such conditions as [he] it may deem necessary or desirable grant exemption in writing from any provision of this Chapter to any person doing research on fish or fish food.

## CHAPTER VI

## PROTECTION OF FLORA (secs 62-72)

**Possession etc. of endangered flora**

**62.** (1) Subject to the provisions of this ordinance, no person shall without a permit, be in possession of, sell, buy, donate, receive as a donation, pick, or import into, export from or transport in or through the Province, any endangered flora. 5

(2) The provisions of subsection (1) shall not be construed so as to preclude the possession without a permit by an owner of land, of any endangered flora growing in a natural state on such land.

(3) Any person desiring to sell endangered flora which he or she has cultivated on any fixed premises shall apply to the **[Director] Board** in the prescribed form for registration as a grower of endangered flora and a permit to sell endangered flora which has been cultivated and furnish **[him] it** with the prescribed information and such further information as **[he] it** may require. 10

(4) Upon receipt of any such application, the **[Director] Board** may cause such inspection of the premises concerned as **[he] it** may deem necessary to be made and if **[he] the Board** is satisfied that the granting of such application will further the objectives of this Chapter **[he] it** may, subject to the conditions which **[he] the Board** deems fit, in the prescribed form issue to the applicant a certificate of registration as a grower of endangered flora and a permit to sell endangered flora which has been cultivated. 15 20

**(5) [The holder of a permit issued under subsection (4) shall not be exempt from compliance with any provision of the Licences Ordinance, 1981 (Ordinance 17 of 1981), in connection with the sale of any flora.]**

(6) A certificate and a permit issued under subsection (4) shall be valid—

- (a) in the firstmentioned case, until it is cancelled by the **[Director] Board**, and 25
- (b) in the lastmentioned case, for a period of twelve months from the date of issue thereof.

(7) The holder of a permit issued under subsection (4) shall not sell or donate any endangered flora to any person unless, when he or she sells or donates such flora to such person, he or she furnishes such person with a written and dated document signed by him or her and reflecting— 30

- (a) his or her full name and address;
- (b) the full name and address of such person;
- (c) the number and date of such permit, and
- (d) the name of each species and the number of each species of such flora which has been sold or donated. 35

(8) Notwithstanding any provision to the contrary contained in this section, no permit shall be required for the purchase, receipt as a donation, transport or possession of any endangered flora which has been sold or donated by the holder of a permit issued under subsection (4) and in which such flora is specified; provided that any person who has bought or received as a donation or is in possession of such flora, is in possession of a document contemplated by subsection (7). 40

**Prohibition on picking of certain flora**

**63.** (1) No person shall—

- (a) uproot the plant in the process of picking the flower of any flora; 45
- (b) without a permit—
  - (i) pick any endangered or protected flora, or
  - (ii) pick any flora on a public road or on the land on either side of such road within a distance of ninety metres from the centre of such road, or
- (c) pick any protected or indigenous unprotected flora on land of which he or she is not the owner, without the permission of the owner of such land or of any person authorised by such owner to grant such permission. 50

(2) No permission granted in terms of subsection (1)(c) shall be valid unless it is reduced to writing and reflects—

- (a) the full names and address of the owner of the land concerned or of the person authorised to grant such permission;
- (b) the full names and address of the person to whom permission is granted, and 5
- (c) the number and species of flora, the date or dates on which such flora may be picked and the land in respect of which permission is granted,

and is signed and dated by such owner or the person authorised by him or her.

(3) The provisions of subsection (1)(b) shall not apply to the owner of any land, any relative of such owner and any full-time employee of such owner acting on the instructions or with the consent of such owner, in respect of any protected or indigenous unprotected flora on such land. 10

(4) The provisions of subsection (1)(b)(i) shall not apply to any person authorised in writing by the owner of any land to pick any protected flora on such land for the purpose of gathering and propagating the seed of such flora. 15

### Sale and purchase of protected flora

64. No person shall—

- (a) sell or buy any protected flora at any place other than on the premises of a registered flora grower or registered flora seller, and
- (b) sell any protected flora without a licence issued under section 65(2). 20

### Registration and licensing of flora growers and flora sellers

65. (1) Any person desiring to be registered and licensed in respect of any fixed premises as a flora grower or flora seller, as the case may be, shall apply to the [Director] Board in the prescribed manner and form for registration in terms of this section and furnish [him] it with the prescribed information and such further 25 information as [he] it may require.

(2) Upon receipt of any such application, the [Director] Board may cause such inspection of the premises concerned as [he] it may deem necessary to be made and if, after consultation with the local authority in whose area of jurisdiction such premises are situated and regard being had to any other information at [his] its disposal, [he] it is 30 satisfied that the granting of such application will not be contrary to the objectives of this Chapter, [he] the Board may, in [his] its discretion and subject to the conditions which [he] it deems fit, in the prescribed form issue to any such applicant—

- (a) in respect of the premises concerned, a certificate of registration as a flora grower or flora seller, as the case may be, and 35
- (b) on payment of the prescribed fee, a licence to sell on the premises concerned the protected flora specified by [him] it in such licence;

provided that no fee shall be payable in respect of a licence to sell protected flora which has been cultivated.

(3) [The holder of a licence issued under subsection (2) shall not be exempt from compliance with any provision of the Licences Ordinance, 1981 (Ordinance 17 of 1981), in connection with the sale of any flora.] 40

(4) (a) A licence issued to—

- (i) a flora grower shall be valid for a period of twelve months from the date of issue thereof, and 45
- (ii) a flora seller shall be valid for a period of three years from the date of issue thereof.

(b) A certificate of registration as a flora grower or flora seller shall be valid until it is cancelled by the [Director] Board or, in the case where the [Director] Board does not receive an application for a new licence from a flora grower or flora seller, as the case may be, within thirty days of the expiry of the periods contemplated by paragraph (a), 50 for the periods contemplated by paragraph (a) and for thirty days thereafter.

### Sale of protected flora on [the] premises of registered flora growers and sellers

66. No person shall sell any protected flora on the premises of—
- (a) a registered flora grower unless such flora was propagated or cultivated or occurred in a natural state on such premises;
  - (b) a registered flora seller unless such flora has been obtained from any other registered flora seller or registered flora grower, or
  - (c) a registered flora seller if such flora was propagated or cultivated or occurred in a natural state on any premises of any registered flora seller who is not registered as a flora grower in respect of such premises.

### Sale of protected flora for charitable and other approved purposes 10

67. Notwithstanding anything to the contrary contained in this ordinance, the [Director] Board may subject to such conditions and restrictions as [he] it may deem necessary issue a permit to any person authorising such person to sell protected flora for charitable or such other purposes as the [Director] Board may approve, at a time and place specified in such permit. 15

### Places for sale of indigenous unprotected flora

68. (1) A local authority may in respect of the sale of indigenous unprotected flora within its area of jurisdiction set aside such places as it may deem suitable for the sale of such flora and erect such shelters or other structures as it may deem necessary thereon [and notwithstanding anything to the contrary contained in the Licences Ordinance, 1981 (Ordinance 17 of 1981), when issuing a licence contemplated by Item 32 of the First Schedule to such ordinance authorising the holder of such licence to carry on the business of selling, bartering or exchanging flowers or offering or exposing flowers for sale, barter or exchange, restrict the carrying on of such business in respect of indigenous unprotected flora to any place so set aside]. 20
- (2) No person shall sell any indigenous unprotected flora at any place other than a place set aside in terms of subsection (1) or on the premises of a registered flora seller or registered flora grower. 25

### Sale of indigenous unprotected flora by owner of land

69. Notwithstanding the provisions of section 68(2), an owner of land on which indigenous unprotected flora is being propagated or cultivated or on which such flora occurs in a natural state may sell such flora which has been so propagated or cultivated or which so occurs to any person— 30
- (a) on such land;
  - (b) at a place set aside in terms of section 68(1), or
  - (c) carrying on business under a licence issued to him or her under section 65(2). 35

### Export and importation of flora

70. No person shall without a permit—
- (a) export any flora from the Province; provided that the provisions of this paragraph shall not apply to the export by any person of any flora, except endangered flora and protected flora referred to in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973, which he or she legally obtained from any registered flora grower or registered flora seller who is the holder of a permit to export such flora contemplated by this paragraph; provided further that such person, while he or she is exporting such flora, shall be in possession, in addition to any document contemplated by sections 71 and 72, of a document in which 40 45

the number and date of such export permit of such flora grower or flora seller are reflected, or

- (b) import into the Province any protected flora specified in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973.

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#### **Donation of flora**

71. The provisions of sections 41 and 43 shall apply *mutatis mutandis* in respect of the donation of any flora by any person to any other person.

#### **Possession of flora**

72. The provisions of sections 42 and 43 shall apply *mutatis mutandis* in respect of any person found in possession of any flora.

### **CHAPTER VIA**

#### **PROFESSIONAL HUNTERS, HUNTING OUTFITTERS AND DIRECTORS OF PROFESSIONAL HUNTING SCHOOLS**

##### **Definitions**

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72A. For the purposes of this Chapter—

- (a) “**client**” means a person who is not a South African citizen who, in any form or manner, rewards another person for, or in connection with, the hunting of wild animals or feral animals;
- (b) “**Director of a Professional Hunting School**” means a person who presents and conducts a prescribed course to instruct prospective professional hunters or hunting outfitters or assesses the proficiency of professional hunters or hunting outfitters;
- (c) “**feral animal**” means an animal of a domesticated fauna species, which has gone wild;
- (d) “**hunting outfitter**” means a person who, for any form or manner of reward, presents for hunting or organises or conducts the hunting of, wild animals or feral animals for clients, and
- (e) “**professional hunter**” means a person who, for any form or manner of reward, offers or agrees to escort a client to enable the client to hunt wild animals or feral animals.

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##### **Operating as professional hunters, hunting outfitters and Directors of Professional Hunting Schools**

72B. (1) Subject to the provisions of this Ordinance and any regulation made under section 72G, a person shall not act as a—

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- (a) professional hunter, or
- (b) hunting outfitter, or
- (c) Director of a Professional Hunting School,

unless in possession of a permit which permits that person to do so.

(2) The requirements to be complied with by a professional hunter, a hunting outfitter or a Director of a Professional Hunting School shall be as the [Director] Board may determine from time to time.

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(3) The [Director] Board may exempt any person from the provisions of subsection (1).

##### **Hunting of wild animals or feral animals by client**

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72C. (1) A client shall not hunt a wild animal or a feral animal unless—

- (a) the hunt is organised or conducted by a hunting outfitter, and
- (b) the client is escorted by a professional hunter.

(2) A professional hunter who escorts a client shall ensure that the client does not hunt contrary to the provisions of this Ordinance and may give the client any lawful instruction.

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(3) A client shall obey an instruction given in terms of subsection (2).

(4) A professional hunter may while escorting a client and if this is necessary in defence of life or property or to prevent unnecessary suffering of a wild animal or a feral animal, kill a wild animal or a feral animal.

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**Landowner's permission to hunting outfitters**

**72D.** Subject to the provisions of this Ordinance, a hunting outfitter shall not present for hunting or organise the hunting of, a wild animal or a feral animal for a client unless the hunting outfitter is the holder of a written permission from the owner of the land on which the hunt is presented or organised. 5

**Prohibited act**

**72E.** A person who under false pretences presents, organises or conducts a hunt contemplated in this Chapter for a client shall be guilty of an offence.

**Advisory committee**

**72F.** The [Director] Board may obtain advice from a representative South African Professional Hunting Committee. 10

**Regulations**

**72G.** (1) The [Administrator] responsible Minister may make regulations relating to professional hunters, hunting outfitters, Directors of Professional Hunting Schools and the control and regulation of the hunting of wild animals or feral animals. 15

(2) Regulations made in terms of subsection (1) may, in respect of any contravention thereof or failure to comply therewith, impose a penalty of a fine or imprisonment for a period not exceeding 12 months or both a fine and such term of imprisonment.

**Offences**

**72H.** A person who contravenes or fails to comply with the provisions of section 72B, 72C or 72D shall be guilty of an offence and liable on conviction to a fine or imprisonment for a period not exceeding two years or both a fine and such term of imprisonment. 20

**CHAPTER VII****GENERAL AND SUPPLEMENTARY (secs 73-90) 25****Permits etc. to be issued by [Director] Board**

**73.** Whenever any permit, certificate, written authority, exemption or order is by any provision of this ordinance required for the lawful performance of any act, such permit, certificate, written authority, exemption or order may, unless specific provision is made for the issue thereof by any other authority, on application in the prescribed form, in [his] its discretion be issued by the [Director] Board subject to such conditions as [he] it may, either generally or specially, consider necessary or desirable in regard thereto. 30

**Period of validity of permits etc**

**74.** Unless otherwise provided in this ordinance, any permit, certificate, written authority, licence or exemption issued thereunder shall be valid for the period specified therein. 35

**Cancellation of permits etc. and alteration of conditions relating thereto**

**75.** (1) The [Director] Board or a local authority may at any time if [in his or its] either of them is of the opinion that it is necessary or desirable in the interests of nature [and environmental] conservation— 40

- (a) cancel any permit, certificate, written authority, licence, exemption or order (hereinafter in this section referred to as “document”) issued by [him or it]



either of them in terms of any provision of this ordinance or the issue of which was so authorised by **[him or it]** either of them, or

- (b) consistently with the provisions of this ordinance, amend the conditions, if any, subject to which a document was issued by the deletion or substitution of any condition or the addition of any other condition. 5

(2) For the purpose of exercising any powers contemplated by subsection (1), the **[Director]** Board or the local authority concerned shall notify the holder of such document of **[his or]** its decision to exercise such power, either—

- (a) in writing delivered to him or her personally or posted by registered mail properly stamped and addressed, to his or her last known business or residential address, or 10
- (b) orally through a nature **[and environmental]** conservation officer or ranger under **[his or]** its control.

(3) The holder of such document shall return such document to the **[Director]** Board or local authority, as the case may be, by registered mail within fourteen days after receipt of a notification in terms of subsection (2)(a) or by handing such document to the officer or ranger informing him or her of such decision as contemplated by subsection (2)(b). 15

(4) Any cancellation or amendment in terms of subsection (1) of the conditions specified in any document, shall take effect as soon as the holder of the document is in terms of subsection (2) apprised of the decision concerned. 20

(5) In any case contemplated by subsection (1)(b) the **[Director]** Board or the local authority concerned may, after receipt of the document in question in terms of subsection (3), issue to the holder of such document a copy of the original thereof incorporating the conditions as amended in terms of subsection (1) by the **[Director]** Board or local authority, as the case may be. 25

(6) When any document is cancelled in terms of subsection (1)(a), the holder thereof shall not be entitled to a refund of any fee or portion thereof paid by him or her in respect of such document.

**[No reasons need be given for decisions taken in exercise of powers under ordinance]** 30

**76. No person authorised by any provision of this ordinance to issue or cancel, or to impose or amend conditions relating to any permit, certificate, written authority, exemption, licence or order shall be obliged to furnish to any other person his reasons for any decision taken by him in the exercise of any such power].** 35

**Amendment of Schedules by [Administrator] responsible Minister**

**77.** (1) The **[Administrator]** responsible Minister may at any time by proclamation and with effect from a date specified in such proclamation, substitute or amend any Schedule to this ordinance other than Schedule 6 by the deletion of any species of fauna or flora specified in any such Schedule or the addition of any other species of fauna or flora. 40

(2) Any amendment in terms of subsection (1) may be made to apply in respect of the Province or any area therein specified in the relevant proclamation and either indefinitely or for a period so specified.

(3) A copy of any proclamation issued in terms of subsection (1) shall be laid upon the table of the Provincial **[Council]** Parliament within seven days of the promulgation of such proclamation if the Provincial **[Council]** Parliament is then in session, or, if the Provincial **[Council]** Parliament is not then in session, within seven days after the commencement of its next ensuing session. 45

**Hunting and angling seasons** 50

**78.** The **[Administrator may by proclamation]** Board may by notice in the *Provincial Gazette* in respect of the Province or any area therein specified in such **[proclamation]** notice—

- (a) each year determine the period in such year during which any species of protected wild animal specified in such **[proclamation] notice** may be hunted under the authority of a permit or licence referred to in section 27(1)(a), or
- (b) determine either indefinitely or for a specified period, the period in each year during which any species of fish specified in such **[proclamation] notice** may be caught by angling under the authority of a license referred to in section 53. 5

#### Miscellaneous powers of **[Administrator] Board**

- 79.** The **[Administrator may by proclamation] Board** may by notice in the *Provincial Gazette*, in respect of the Province or any area therein specified in such **[proclamation] notice** and either indefinitely or for a specified period- 10
- (a) determine the number of any species of protected wild animal or of fish specified in such **[proclamation] notice** which may subject to the provisions of this ordinance be killed, captured or caught- 15
    - (i) in the case of protected wild animals, during the period commencing one hour before sunrise and ending one hour after sunset, and
    - (ii) in the case of fish, during the period of twenty-four hours commencing at midnight, on any one day;
  - (b) if in **[his] its** opinion it is necessary or desirable in the interests of nature **[and environmental]** conservation and subject to such conditions as **[he] it** may deem fit suspend the operation of any provision of section 29 or of any other provision of this ordinance in so far as such provision relates to any species of fauna or flora specified in such **[proclamation] notice**; 20
  - (c) notwithstanding anything to the contrary contained in this ordinance, prohibit, control or restrict the hunting of wild animals or any species of wild animal or the catching of fish or any species of fish; 25
  - (d) declare any species of wild animal which in **[his] its** opinion is, by reason of its prevalence in any area or its mode of living or other characteristics, detrimental to any other species of wild animal or any property, to be a problem wild animal and suspend the operation of any provision of section 29 in so far as it relates to such animal in any area specified in such **[proclamation] notice**; 30
  - (e) prohibit, restrict or regulate the capture, injuring, destruction, export, sale or acquisition in any manner of any species of invertebrate animal specified in such **[proclamation] notice**;
  - (f) prohibit, restrict or regulate the transport of any wild animal specified in such **[proclamation] notice**; 35
  - (g) prohibit or regulate the use either generally or specially—
    - (i) on any inland waters, of any boat or craft designed or intended for propulsion by any means other than human power, or
    - (ii) on the shores below the high water mark of any inland waters, of any motor vehicle as defined in section I of the Road Traffic **[Ordinance, 1966 (Ordinance 21 of 1966)] Act, 1989 (Act 29 of 1989)**; 40
  - (h) notwithstanding anything to the contrary contained in any regulation made under section 82—
    - (i) prohibit the use of any tool, instrument or device for the digging for, or the gathering, catching or collecting of any kind of crab, prawn, pencil bait, shell bait or worm or specify any tool, instrument or device which may be used for such purpose; 45
    - (ii) prohibit or regulate the use of any equipment for the catching of fish or any species of fish in any inland waters; 50
    - (iii) prohibit, control or regulate the removal of any kind of crab, prawn, pencil bait, shell bait or worm, whether alive or not, caught in any inland waters, to other inland waters or the sea, or
  - (i) prohibit, control or regulate the picking of flora or any species of flora in any manner or by any means specified in such **[proclamation] notice**. 55

## Exemptions

80. The [Administrator] Board may, if in [his] its opinion it is necessary or desirable in the public interest or in the interests of nature [and environmental] conservation, in writing and subject to such conditions and for such period as [he] it may determine, exempt any person from any provision of this ordinance in so far as such provision relates to any specified species of fauna or flora. 5

## Disposal of articles confiscated or forfeited under ordinance

81. Whenever any article, animal or thing has been confiscated or forfeited to the [Administration] Board under any provision of this ordinance-

- (a) the owner thereof may, within three months from the date of such confiscation or forfeiture or, where proceedings in a Superior Court involving such confiscation or forfeiture have been instituted within such period, within three months after judgement in such proceedings, as the case may be, apply to the [Administrator] Board for the return of such article, animal or thing, and
- (b) the [Administrator] Board may—
  - (i) in the event of an application contemplated by paragraph (a) being made within the relevant period contemplated by the said paragraph return such article, animal or thing to the owner thereof;
  - (ii) after expiration of the relevant period contemplated by paragraph (a), deal in any manner [he] it may deem fit (including the alienation or disposal thereof) with any such article, animal or thing, and
  - (iii) if such article, animal or thing has been alienated or disposed of in terms of subparagraph (ii), pay the proceeds of such alienation or disposal to the owner of the article, animal or thing concerned.

## Regulations

82. (1) The [Administrator] responsible Minister may make regulations-
- (a) relating to the surrender of licences, permits and exemptions at the expiration thereof or when cancelled by a court;
  - (b) regulating or restricting the use of dogs in the hunting of any wild animal in any area in respect of which the operation of section 29(1) has been suspended by [proclamation] notice under section 79(b);
  - (c) regulating or restricting the use of persons as beaters at a hunt of wild animals as contemplated by section 27(3);
  - (d) regulating or restricting the number or the species of wild animals which may be kept in captivity or held in possession and prescribing the conditions under and the manner in which any such wild animal or species shall be so kept or held;
  - (e) specifying measures relating to the control, restriction or prevention of the breeding of wild animals kept in captivity or held in possession;
  - (f) requiring the keeping of books, statements or invoices and the retention thereof by persons who—
    - (i) carry on business by buying or selling flora, fish caught in inland waters or wild animals, or
    - (ii) keep wild animals in captivity or are in possession thereof,
 and specifying the particulars to be entered in such books, statements and invoices;
  - (g) providing for and regulating the putting and keeping in quarantine of any wild animal or fish imported into the Province;
  - (h) determining for the purposes of section 55(b), a size or mass in respect of any species of fish and specifying the methods to be employed in determining the size of fish;
  - (i) providing for the protection, preservation and propagation of any fish food in inland waters;

- (j) regulating, restricting or prohibiting the sale of fish caught or of any kind of crab, prawn, pencil bait, shell bait or worm gathered in any inland waters;
- (k) providing for or prohibiting the use in any inland waters of any type of tool, instrument or device for the digging for or the gathering, catching or collecting of any kind of crab, prawn, pencil bait, shell bait or worm; 5
- (l) providing for and regulating the replacement of soil and plant life removed in the process of collecting any kind of crab, prawn, pencil bait, shell bait or worm;
- (m) providing for the protection of beacons, buoys, notices, notice boards, signs or other marks erected, used or required for the purposes of this ordinance; 10
- (n) providing for or regulating the killing by means of poison of rodents, insects or any bird referred to in section 47(1)(b);
- (o) prescribing the fees payable in respect of the issue of licences, permits, certificates, written authorities or exemptions under this ordinance;
- (p) relating to the forms of licences, permits, certificates or other documents to be issued or used for the purposes of this ordinance; 15
- (q) relating to any matters which are required or permitted to be prescribed by regulation,

and, generally, in regard to any matter which the **[Administrator]** responsible Minister considers necessary or expedient to prescribe or regulate in order to further or achieve the objects of this ordinance, the generality of this provision not being limited by the preceding paragraphs of this subsection. 20

(2) Regulations made under subsection (1) may be made applicable throughout the Province or to or in respect of different areas, inland waters or species of fauna or flora and may prescribe, in respect of any contravention thereof or failure to comply therewith, a penalty of a fine not exceeding one thousand five hundred rand or imprisonment for a period not exceeding six months. 25

### **Restriction of liability**

**83.** No person, including the **[Administration]** Board, or an employee of the Board and a local authority, shall be liable for any damage suffered by any other person in consequence of anything done in good faith in the exercise or performance of any power, duty or function conferred or imposed by or under this ordinance. 30

### **Presumptions**

- 84.** (1) In any prosecution under this ordinance—
- (a) any wild animal, the carcase of any such animal or any fire-arm having a barrel exceeding one hundred millimetres in length, found or proved to have been in or on any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance, shall, unless the contrary is proved, be presumed to have been in possession of the person in charge of such vehicle, vessel, boat, craft, float, aircraft or other means of conveyance at the relevant time; 35 40
  - (b) any person found or proved to have been in possession of any flora shall unless the contrary is proved, be presumed to have picked such flora in contravention of the provisions of this ordinance or to have bought it from a person not authorised by this ordinance to sell it;
  - (c) any person found or proved to have been in possession of any wild animal shall, unless the contrary is proved, be presumed to have kept such animal in captivity at the relevant time; 45
  - (d) any person found removing or proved to have removed any wild animal or the carcase of any such animal from any trap, snare, pitfall, net, birdlime or other

similar device, shall, unless the contrary is proved, be deemed to have laid or prepared such trap, snare, pitfall, net, birdlime or other device and to have captured the animal concerned;

- (e) any person who is found trespassing, while in control of a dog, on any land on which wild animals are normally found or who is proved to have so trespassed on such land shall, unless the contrary is proved, be presumed to have hunted the wild animals normally found on such land by the use of such dog. 5

(2) Whenever—

- (a) a vehicle, vessel, boat, craft, float, aircraft or other means of conveyance is being or has been used for the purpose of or in connection with the commission of an offence under this ordinance; 10

- (b) any wild animal, the carcase of such animal or fish in respect of which an offence is being or has been committed under this ordinance is found or has been in or on a vehicle, vessel, boat, craft, float, aircraft or other means of conveyance, or 15

- (c) a weapon, line, poison, net or any other object which could be used for the hunting of wild animals or the catching of fish and which is being or was used or forms or formed an element in the commission of an offence under this ordinance, is found or has been in or on a vehicle, vessel, boat, craft, float, aircraft or other means of conveyance, 20

the owner of such vehicle, vessel, boat, craft, float, aircraft or other means of conveyance as well as the person in charge thereof at the time of the commission of the offence or at the time when the wild animal, carcase, fish or any object contemplated by paragraph (c) is found or was in or on such vehicle, vessel, boat, craft, float, aircraft or other means of conveyance shall be presumed to have committed the offence concerned and be liable to be convicted and sentenced in respect thereof unless it is proved that he or she did not commit such offence and was unable to prevent the commission thereof. 25

## Offences

85. Any person who—

- (a) contravenes or fails to comply with any provision of this ordinance or any regulation made or instruction given or demand made thereunder; 30

- (b) alters, fabricates or forges any document issued or required for the lawful performance of any act in terms of this ordinance;

- (c) passes, uses, utters or has in his or her possession any altered, fabricated or forged document contemplated by paragraph (b); 35

- (d) under a false name obtains any document contemplated by paragraph (b);

- (e) while prohibited by an order of court from obtaining any document in terms of this ordinance, obtains or applies for such document;

- (f) being the holder of any document issued under this ordinance authorising or directing him or her to perform any act or to perform any act in a specified manner, performs such act without having such document in his or her possession or in a manner other than that so specified; 40

- (g) fails to comply with any term or condition subject to which any document was issued to him or her under this ordinance;

- (h) falsely holds himself or herself out to be a nature [and environmental] conservation officer, nature [and environmental] conservation ranger or an honorary nature [and environmental] conservation officer; 45

- (i) hinders, obstructs or interferes with any officer referred to in paragraph (h) in the exercise of his or her powers or the performance of his or her functions under this ordinance or without good cause refuses or fails on demand to furnish any such officer with his or her name and address or with any information or document required by such officer for the purposes of this ordinance or furnishes any such officer with a false name and address; 50

- (j) while in possession of a fire-arm having a barrel exceeding one hundred

- millimetres in length or of any trap, net, gin, snare, birdlime, cage or other contrivance intended to be used or which could be used for the hunting of wild animals, trespasses on land on which there is or is likely to be any wild animal;
- (k) is found in possession of any wild animal or the carcase of any such animal or of any bait referred to in section 59 and is unable to give a satisfactory account of such possession, or
- (l) knowingly makes a false statement in any application made or in any other document furnished by him or her in terms of any provision of this ordinance, shall be guilty of an offence.

### Penalties

- 86.** (1) Any person convicted of an offence under this ordinance shall, subject to the provisions of subsection (2), be liable, in the case of—
- (a) a contravention of section 29 or 44(1) involving an endangered wild animal, 63(1) involving endangered flora, 14, 26, 32(1), 48, 50, 52(a), 57(a), 58(b), 60, 62(1), 72B or 85(i), to a fine not exceeding one hundred thousand rands or to imprisonment for a period not exceeding ten years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any endangered wild animal or the carcase thereof or any endangered flora in respect of which the offence was committed;
- (b) a contravention of section 27(1), 29, 31, 40, 41, 42(1), 44(1)(a), (b) or (e) or 46 involving an African elephant, to a fine not exceeding one hundred thousand rands or to imprisonment for a period not exceeding ten years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any African elephant or the carcase thereof in respect of which the offence was committed;
- (c) a contravention of section 27(1), 29, 31, 40, 41, 42(1) 44(1)(a), (b) or (e), 46 or 58(c) involving any protected wild animal other than an African elephant, 63(1) involving protected or indigenous unprotected flora, 64, 66 or 70, to a fine not exceeding ten thousand rands or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any such protected wild animal or the carcase thereof or any such flora in respect of which the offence was committed, and
- (d) any other offence in terms of this ordinance or any contravention of any other provision of this ordinance in respect of which no specific penalty is prescribed, to a fine not exceeding five thousand rands or to imprisonment for a period not exceeding one year or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any wild animal or the carcase thereof or any flora in respect of which the offence was committed.
- (2) Where a penalty is specifically prescribed by regulation for a contravention of or failure to comply with any regulation, a person convicted of any such contravention or failure shall be liable only to the penalty so prescribed.

### Cancellation of certificates etc. and forfeiture of certain articles

- 87.** (1) The court convicting any person of an offence under this ordinance—
- (a) may issue an order that any certificate, licence, permit, written authority or exemption issued to such person under this ordinance be cancelled if in its opinion the rights conferred by such certificate, licence, permit, written authority or exemption were abused by such person in the commission of such offence;

- (b) may issue an order disqualifying such person from obtaining for a specified period not exceeding three years, any specified certificate, licence, permit, written authority or exemption under this ordinance, and
- (c) (i) may declare any animal, vehicle, vessel, boat, craft, float, aircraft or other means of conveyance (hereafter referred to as “means of conveyance”) and any weapon, instrument, receptacle or other thing (hereafter referred to as “article”) which was used for the purpose of or in connection with the commission of the offence and was produced to the court, to be forfeited to the **[Administration] Board**; provided that no declaration shall be made in terms of this subparagraph in respect of any means of conveyance or article referred to in this subparagraph if the court is satisfied that the convicted person at the time of the commission of the offence was not the owner thereof and that the owner thereof was unable to prevent the use thereof by the convicted person, and
- (ii) shall declare any wild animal or the carcase thereof or any flora in respect of which the offence was committed and which was submitted to the court to be forfeited to the **[Administration] Board**.
- (2) The registrar or clerk of any court which has—
- (a) issued an order under subsection (1)(a) or (b), shall advise the person or authority who or which issued or, in the case of an order under subsection (1)(b), is authorised to issue the certificate, licence, permit, written authority or exemption in question, of such order and of the sentence imposed on the convicted person, or
- (b) made a declaration under subsection (1)(c), shall advise the **[Director] Board** of such order and of the sentence imposed on the convicted person and shall also forward the article or thing to which the declaration relates to the **[Director] Board** for disposal in terms of section 81.

#### **Disposal of licence fees, fines and proceeds of sale of articles declared forfeited**

**88.** (1) Subject to the provisions of subsection (2), all fees paid in respect of licences, permits, certificates, written authorities or exemptions issued, all fines imposed in respect of offences and the proceeds of the sale of anything declared to be forfeited to the **[Administration] Board** under this ordinance shall be paid **[into the Provincial Revenue Fund] to the Board**.

(2) All fees paid in respect of permits issued under by-laws made by a local authority and all fines paid in respect of contraventions of such by-laws shall be paid into the revenue fund of the local authority concerned.

#### **[Savings in respect of Walvis Bay**

**88A.** (1) Any authority, permit (other than a permit for the importing or exporting of wild animals, fish or flora), licence, order, registration, approval, permission, exemption or document effected, given, granted or issued in relation to wild animals, fish or flora in Walvis Bay in terms of or under any law in force in Walvis Bay immediately prior to the first day of April, 1978, and which would, but for the repeal of such law, still have been of force in Walvis Bay on such first day, shall remain of force in Walvis Bay on and after such first day until the date on which the currency thereof would, in terms of such law, have expired or until the thirtieth day of September, 1978, whichever is the earlier and shall, while it so remains of force, be deemed to have been effected, given, granted or issued in terms of this ordinance.

(2) Any person who, immediately prior to the first day of April, 1978, performed any act or did any thing in relation to wild animals, fish or flora in Walvis Bay for which any authority, permit, licence, order, registration, approval, permission, exemption or document—

- (a) was not required in terms of or under the law in force in Walvis Bay immediately prior to such first day, and

- (b) is required on or after such first day in terms of this ordinance, may, during the period expiring on the thirtieth day of September, 1978, and notwithstanding the provisions of this ordinance, continue to perform such act or do such thing without obtaining or holding the authority, permit, licence, order, registration, approval, permission, exemption or document contemplated by paragraph (b).] 5

#### Repeal of laws

**89.** (1) Subject to the provisions of subsection (2), the laws specified in Schedule 6 are hereby repealed.

(2) Unless otherwise provided in this ordinance, any proclamation, notice, regulation, certificate, licence, permit, permission, written authority or exemption issued, made, promulgated, granted, or given and any other thing done under a law repealed by subsection (1) shall be deemed to have been issued, made, promulgated, granted, given or done under the corresponding provision of this ordinance; provided that— 10

- (i) no permit or other authority issued or granted to any person under a law repealed by subsection (1) authorising such person to keep any wild animal in captivity, shall remain valid for a period longer than three months from the commencement of this ordinance, and 15
- (ii) any regulations made by a local authority under a law repealed by subsection (1), relating to the constitution of an advisory board appointed in respect of a nature reserve established by such local authority, shall be deemed to have been amended in accordance with the provisions of section 8(2). 20

#### Short title and commencement

**90.** This ordinance shall be called the Nature [**and Environmental**] Conservation Ordinance, 1974, and shall come into operation on the first day of September, 1975. 25



## SCHEDULE 1/BYLAE 1

## ENDANGERED WILD ANIMALS/BEDREIGDE WILDE DIERE

(The scientific names shown in the last column are the species of the class or order under which they appear./Die wetenskaplike name in die laaste kolom aangedui is die spesies van die klas of orde waaronder hulle voorkom.)

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
	CLASS/KLAS: MAMMALIA Order/Orde: PHOLIDOTA	
African Scaly Ant-eater	Ietermago	<i>Manis temmincki</i>
	Order/Orde: CARNIVORA	
Cheetah	Jagluiperd	<i>Acinonyx jubatus</i>
	Order/Orde: PERISSODACTYLA	
Black Rhinoceros	Swartrenoster	<i>Diceros bicornis</i>
Square-lipped Rhinoceros	Witrenoster	<i>Ceratotherium simum</i>
Cape Mountain Zebra	Kaapse Bergkwagga	<i>Equus zebra zebra</i>
	Order/Orde: ARTIODACTYLA	
Oribi	Oorbietjie	<i>Ourebia ourebi</i>
	Order/Orde: LAGAMORPHA	
Riverine Rabbit	Rivierkonyn	<i>Bunolagus monticularis</i>
	CLASS/KLAS: AVES	
	Order/Orde: CICONIFORMES	
Bald Ibis	Wildekalkoen	<i>Geronticus calvus</i>
	Order/Orde: FALCONIFORMES	
Bearded Vulture	Lammergier	<i>Gypaelus barbatus</i>
	Order/Orde: SPHENISCIFORMES	
	Family/Familie: SPHENISCIDAE	
All penguins	Alle pikkewyne	
	CLASS/KLAS: AMPHIBIA	
	Order/Orde: ANURA	
Gill's Clawed Toad	Gill se Platanna	<i>Xenopus gilli</i>
Micro Frog	Miniatuurpadda	<i>Microbatrachelia capensis</i> <i>Cacosternum capense</i>
	CLASS/KLAS: REPTILIA	
	Order/Orde: TESTUDINATA	
Geometric Tortoise	Suurpootjie	<i>Psammobates geometricus</i> (= <i>Testudo geometrica</i> )
	CLASS/KLAS: PISCES	
	Order/Orde: CYPRINIFORMES	
	Family/Familie: CYPRINIDAE	
Eastern Cape Redfin	Oos-Kaapse Rooivlerkie	<i>Pseudobarbus afer</i>
Whitefish	Witvis	<i>Barbus andrewi</i>
Smallscale Redfin	Kleinskub-rooivlerkie	<i>Pseudobarbus asper</i>
Burchell's Redfin	Burchell se Rooivlerkie	<i>Pseudobarbus burchellii</i>
Berg River Redfin	Bergrivier-rooivlerkie	<i>Pseudobarbus burgi</i>
Clanwilliam Redfin	Clanwilliam-rooivlerkie	<i>Barbus calidus</i>
Clanwilliam Yellow Fish	Clanwilliam-geelvis	<i>Barbus capensis</i>
Twee River Redfin	Tweerivier-rooivlerkie	<i>Barbus erubescens</i>
Namaqua Barb	Namakwa-ghieliementjie	<i>Barbus hospes</i>
Gold Barb	Goud-ghieliementjie	<i>Barbus pallidus</i>
Straightfin Barb	Lynvin-ghieliementjie	<i>Barbus paludinosus</i>
Fiery Redfin	Vurige Rooivlerkie	<i>Pseudobarbus phlegethon</i>

Sawfin	Saagvin	<i>Barbus serra</i>
Slender Redfin	Slank Rooivlerkie	<i>Pseudobarbus tenuis</i>
Border Barb	Grens-ghieliemientjie	<i>Barbus trevelyani</i>
Threespot Barb	Driekol-ghieliemientjie	<i>Barbus trimaculatus</i>
Clanwilliam Sandfish	Clanwilliam-sandvis	<i>Labeo seeberi</i>
	Order/Orde: SILURIFORMES	
	Family/Familie: BAGRIDAE	
Barnard's Rock Catfish	Barnard se Klipbaber	<i>Austroglanis barnardii</i>
Clanwilliam Rock Catfish	Clanwilliam-klipbaber	<i>Austroglanis gilli</i>
Rock Catfish	Klipbaber	<i>Austroglanis sclateri</i>
	Order/Orde: PERCIFORMES	
	Family/Familie: ANABANTIDAE	
Eastern Province Rocky Cape Kurper	Oostelike Provinsiekurper	<i>Sandelia bainsii</i>
	Kaapse Kurper	<i>Sandelia capensis</i>
	CLASS/KLAS: INSECTA	
	Order/Orde: COLEOPTERA	
	Family/Familie: SCARABAEIDAE	
Cape Dung Beetle	Kaapse Miskruier	<i>Circellium bacchus</i>
	Family/Familie: LUCANIDAE	
Stag Beetle	Grootkaakkewer	Genus <i>Colophon</i>
All species	Alle spesies	
	CLASS/KLAS: ONYCHOPHORA	
	Family/Familie: PERIPATOPSIDAE	
<i>Onychophora</i>	<i>Onychophora</i>	Genus <i>Peripatopsus</i> en/
All species	Alle spesies	and Genus <i>Opisthopatus</i>

## SCHEDULE 2/BYLAE 2

### PROTECTED WILD ANIMALS/BESKERMDE WILDE DIERE

(The scientific names shown in the last column are the families or species of the class or order under which they appear./Die wetenskaplike name in die laaste kolom aangedui is die families of spesies van die klas of orde waaronder hulle voorkom.)

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
	CLASS/KLAS: MAMMALIA	
	Order/Orde: INSECTIVORA	
Elephant Shrew	Klaasneus	Family/Familie: MACROSCOLIDIDAE
Shrews	Skeerbekmuise	Family/Familie:SORICIDAE
Hedgehog	Krimpvarkie	<i>Erinaceus frontalis</i>
	Order/Orde: PRIMATES	
Bush-baby	Nagapie	<i>Galago senegalensis</i>
Samango Monkey	Samango-aap	<i>Cercopithecus mitis</i>
	Order/Orde: CHIROPTERA	
All bats except	Alle vlermuise behalwe	
Fruit Bats of the family PTEROPODIDAE	Vrugtevlerruise van die familie PTEROPODIDAE	
	Order/Orde: CARNIVORA	
African Lion	Leeu	<i>Panthera leo</i>
Leopard	Luiperd	<i>Panthera pardus</i>
Black-footed Cat	Miershooptier	<i>Felis nigripes</i>
Serval Cat	Tierboskat	<i>Felis serval</i>
Aardwolf	Maanhaarjakkals	<i>Proteles cristatus</i>
Brown Hyaena	Strandwolf	<i>Hyaena brunnea</i>

Honey Badger	Ratel	<i>Mellivora capensis</i>
Silver Jackal	Silwerjakkals	<i>Vulpes chama</i>
Bat-eared Fox	Bakoorjakkals	<i>Olocyon megalotis</i>
Snake Mongoose	Slangmuishond	<i>Poecilogale albinucha</i>
	Order/Orde: PROBOSCIDEA	
African Elephant	Olifant	<i>Loxodonta africana</i>
	Order/Orde: HYRACOIDEA	
Tree Dassie	Boomdassie	<i>Dendrohyrax arboreus</i>
	Order/Orde: TUBULIDENTATA	
Ant-bear	Erdvark	<i>Orycteropus afer</i>
	Order/Orde: PERISSODACTYLA	
Burchell's Zebra	Bontkwagga	<i>Equus burchelli</i>
Hartmann's Zebra	Suidwes-bergkwagga	<i>Equus zebra hartmannae</i>
	Order/Orde: ARTIODACTYLA	
Warthog	Vlakvark	<i>Phacochoerus aethiopicus</i>
Hippopotamus	Seekoei	<i>Hippopotamus amphibius</i>
Giraffe	Kameelperd	<i>Giraffa camelopardalis</i>
	Order/Orde: ARTIODACTYLA (cont.)	
Klipspringer	Klipspringer	<i>Oreotragus oreotragus</i>
Grey Duiker	Duiker	<i>Sylvicapra grimmia</i>
Blue Duiker	Bloubokkie	<i>Cephalophus monticola</i>
Steenbok	Steenbok	<i>Raphicerus campestris</i>
Grysbok	Grysbok	<i>Raphicerus melanotis</i>
Grey Rhebuck	Vaalribbok	<i>Pelea capreolus</i>
Kudu	Koedoe	<i>Tragelaphus strepsiceros</i>
Bush-buck	Bosbok	<i>Tragelaphus scriptus</i>
Impala	Rooibok	<i>Aepyceros melampus</i>
Reed-buck	Rietbok	<i>Redunca arundinum</i>
Mountain Rhebuck	Rooiribbok	<i>Redunca fulvorufula</i>
Springbok	Springbok	<i>Antidorcas marsupialis</i>
Oryx	Gemsbok	<i>Oryx gazella</i>
Eland	Eland	<i>Taurotragus oryx</i>
African Buffalo	Buffel	<i>Syncerus caffer</i>
Blue Wildebeest	Blouwildebees	<i>Connochaetes taurinus</i>
Black Wildebeest	Swartwildebees	<i>Connochaetes gnou</i>
Red Hartebeest	Rooihartbees	<i>Alcelaphus buselaphus</i>
Bontebok	Bontebok	<i>Damaliscus dorcas dorcas</i>
Blesbok	Blesbok	<i>Damaliscus dorcas phillipsi</i>
	CLASS/KLAS: AMPHIBIA	
	Order/Orde: ANURA	
All frogs and toads except those specified in Schedule 1.	Alle paddas behalwe dié in Bylae 1 bepaal.	
	CLASS/KLAS: REPTILIA	
	Order/Orde: LACERTILIA	
All lizards	Alle akkedisse	
	Order/Orde: TESTUDINATA	
All tortoises and turtles except those specified in Schedule 1.	Alle skilpaaie en waterskilpaaie behalwe dié in Bylae 1 bepaal.	
	Order/Orde: SQUAMATA	
	Sub-order/Suborde: SERPENTES	
	Family/Familie: COLUBRIDAE	
Water Snakes	Waterslange	<i>Genus Lycodonomorphus</i>
House Snakes	Huisslange	<i>Genus Lamprophis</i>

Wolf Snakes	Wolfslange	<i>Genus Lycophidion</i>
File Snakes	Vylslange	<i>Genus Mehelya</i>
Slug-eaters	Slakvreters	<i>Genus Duberria</i>
Egg-eaters	Eiervreters	<i>Genus Dasypeltis</i>
Mole Snakes	Molslange	<i>Genus Pseudaspis</i>
Green and Bush Snakes	Groen- en Bosslange	<i>Genus Philothamnus</i>
Shovel-snout snakes	Graafneusslange	<i>Genus Prosymna</i>
	CLASS/KLAS: AVES	
All birds except—	Alle voëls behalwe—	
(1) those specified in	(1) dié in Bylae 1	
Schedule 1, and	bepaal, en	
(2) the following:—	(2) die volgende:—	
All Colies	Alle Muisvoëls	Family/Familie:
		COLIIDAE
All Crows	Alle Kraaie	Family/Familie:
		CORVIDAE
Black-eyed Bulbul	Swartoog-tiptol	<i>Pycnonotus barbatus</i>
Cape Bulbul	Kaapse Tiptol	<i>Pycnonotus capensis</i>
Red-eyed Bulbul	Rooioog-tiptol	<i>Pycnonotus nigricans</i>
Cape Sparrow	Kaapse Mossie	<i>Passer melanurus</i>
European Sparrow	Engelse Mossie	<i>Passer domesticus</i>
Masked Weaver	Rietvink	<i>Ploceus velatus</i>
Cape Weaver	Geelvink	<i>Ploceus capensis</i>
<b>[Cape Widow-bird]</b> <u>Yellow</u>	Kaapse <b>[Kaffervink]</b> <u>Flap</u>	
Rumped widow		<i>Euplectes capensis</i>
Red Bishop[ <b>-bird</b> ]	Rooi <b>[Kaffer]</b> vink	<i>Euplectes orix</i>
European Starling	Europese Spreeu	<i>Sturnus vulgaris</i>
Red-billed Quelea	Rooibekvink	<i>Quelea quelea</i>
Red-winged Starling	Rooivlerkspreu	<i>Onychognathus morio</i>
All exotic birds other	Alle uitheemse voëls,	
than—	uitgesonderd—	
Exotic birds of the	Uitheemse voëls van die	
order ANSERIFORMES.	orde ANSERIFORMES.	
Bobwhite Quail	'Bobwhite'- kwartel	<i>Colinus virginianus</i>
Chukar Partridge	Chukarpatrys	<i>Alectoris graeca</i>
Andaman Mynah	Andamanse Spreeu	<i>Sturnus erythropygius</i>
		<i>andamanensis</i>
Pagoda Mynah	Pagodaspreeu	<i>Sturnus pagodarum</i>
Malabar Mynah	Malabaarse Spreeu	<i>Sturnus malabaricus</i>
Mandarin Mynah	Mandarynspreu	<i>Sturnus sinensis</i>
Bank Mynah	Rivierspreu	<i>Acridotheres ginginianus</i>
Common Mynah	Indiese Spreeu	<i>Acridotheres tristis</i>
Greater Hill Mynah	Groot Bergspreeu	<i>Gracula religiosa religiosa</i>
Lesser Hill Mynah	Klein Bergspreeu	<i>Gracula religiosa indica</i>
	CLASS/KLAS: INSECTA	
	Order/Orde: LEPIDOPTERA	
	Family/Familie: LYCAENIDAE	
—	—	<i>Aloeides egerides</i> (Riley)
—	—	<i>Aloeides lutescens</i> Tite
		and/en Dickson
Autumn Copper, Lion's	Leeukopkopervlerkie	<i>Argyrocupha malagrida</i>
Head Copper		<i>malagrida</i> (Wallengren)
Wineland Blue	Wynlandblouetjie	<i>Lepidochrysops bacchus</i>
		Riley
Dickson's Copper	Dickson se kopervlerkie	<i>Oxychaeta dicksoni</i>
—	—	(Gabriel)
		<i>Poecilmitis endymion</i>
		Pennington
Tsomo River Copper	Tsomorivierkopervlerkie	<i>Poecilmitis lyncurium</i>
		(Trimen)
Blue Jewel Copper	Bloujuweelkopervlerkie	<i>Poecilmitis nigricans</i>
		<i>Aurivillius</i>

—	—	<i>Poecilmitis rileyi</i> Dickson
Dickson's Thestor	Dickson se skollie	<i>Thestor dicksoni dicksoni</i>
		Riley
Kaplan's Thestor	Kaplan se skollie	<i>Thestor kaplani</i> Dickson
		and/en Stephen
Wallengren's Copper	Wallengren se kopervlerkie	<i>Trimenia wallengrenii</i>
		(Trimen)
	Family/Familie: HESPERIIDAE	
Bamboo Sylph	Bamboeswaksertjie	<i>Metisella syrinx</i> (Trimen)
Dickson's Sylph	Dickson se waksertjie	<i>Tsitana dicksoni</i> Evans
	Family/Familie: NYMPHALIDAE	
(Western) Forest Emperor, Forest King Charaxes	Boskoningdubbelstert	<i>Charaxes xiphares xiphares</i> <i>f. occidentalis</i> van Son
	Family/Familie: SATYRIDAE	
Dickson's Brown	Dickson se bruintjie	<i>Stygionympha dicksoni</i>
		(Riley)
	Family/Familie: HEPIALIDAE	
Silver-spotted Ghost Moth	Keurboomspeekmot	<i>Leto venus</i> Stoll

### SCHEDULE 3/BYLAE 3

#### ENDANGERED FLORA/BEDREIGDE FLORA

(The scientific names shown in the third column are the species of the family under which they appear./Die wetenskaplike name in die derde kolom aangedui is die spesies van die familie waaronder hulle voorkom.)

<i>Common name</i> (Where known)	<i>Volksnaam</i> (Waar bekend)	<i>Scientific name/ Wetenskaplike naam</i>
	Family/Familie: APOCYNACEAE	
	Halfmens	<i>Pachypodium namaquanum</i>
	Family/Familie: GESNERIACEAE	
	Cape Gloxinia	<i>Charadrophila capensis</i>
	Family/Familie: LILIACEAE	
		<i>Aloe pillansii</i>
		<i>Aloe buhrii</i>
		<i>Aloe erinacea</i>
	Family/Familie: PROTEACEAE	
		<i>Mimetes capitulatus</i>
		<i>Mimetes hottentoticus</i>
		<i>Mimetes stokoei</i>
Mountain Rose	Vleiroos	<i>Orothamnus zeyheri</i>
		<i>Protea odorata</i>
	Family/Familie: STANGERIACEAE	
Bobbejaankos		<i>Stangeria eriopus</i>
	Family/Familie: ZAMIACEAE	
Cycad	Broodboom	<i>Encephalartos</i> spp.

## SCHEDULE 4/BYLAE 4

## PROTECTED FLORA/BESKERMDE FLORA

(The scientific names shown in the third column are the species of the family under which they appear./Die wetenskaplike name in die derde kolom aangedui is die spesies van die familie waaronder hulle voorkom.)

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
	Family/Familie: AMARYLLIDACEAE All species/Alle spesies	
All species except those specified in Schedule 3.	Family/Familie: APOCYNACEAE Alle spesies behalwe dié in Bylae 3 bepaal.	<i>Pachypodium</i> spp.
Cape Holly	Family/Familie: AQUIFOLIACEAE Waterhout	<i>Ilex mitis</i>
Yellow Arum Lily	Family/Familie: ARACEAE Geelvarkblom	<i>Zantedeschia elliotiana</i>
	Family/Familie: ASCLEPIADACEAE All species/Alle spesies	
	Family/Familie: BORAGINACEAE	<i>Echiostachys spicatus</i>
	Family/Familie: BRUNIACEAE All species/Alle spesies	
	Family/Familie: COMPOSITAE	<i>Senecio coleophyllus</i> <i>Cotula duckittae</i>
	Family/Familie: CRASSULACEAE Koesnaatjie	<i>Crassula columnaris</i> <i>Crassula falcata</i> <i>Crassula perfoliata</i> <i>Crassula pyramidalis</i> <i>Kalanchoe thyrsiflora</i> <i>Rochea coccineaas</i>
Red Crassula Pointed-leaf Crassula		
Red Crassula	Klipblom, ook bekend Keiserskroon.	
	Family/Familie: CUNONIACEAE Rooi-els	<i>Cunonia capensis</i> <i>Platylophus trifoliatius</i>
Elephant's Foot	Family/Familie: DIOSCOREACEAE Skilpad Olifantsvoet	<i>Testudinaria sylvatica</i> <i>Testudinaria elephantipes</i>
	Family/Familie: ERICACEAE All species/Alle spesies	
	Family/Familie: EUPHORBIACEAE	<i>Euphorbia bupleurtfolia</i> <i>Emphorbia fasciculata</i> <i>Euphorbia globosa</i> <i>Euphorbia horrida</i> <i>Euphorbia meloformis</i> <i>Emphorbia obesa</i> <i>Euphorbia schoenlandii</i>
[Kaffir Hut] <u>Vetmense</u>	Eselkos of Pol [Kafferhut] <u>Vetmense</u>	

[Kaffir Hut] <u>Vetmenseie</u>	[Kafferhut] <u>Vetmenseie</u>	<i>Euphorbia symmetrica</i> <i>Euphorbia valida</i>
	Family/Familie: GEISSOLOMACEAE All species/Alle spesies	
	Family/Familie: GESNERIACEAE	
Cape Primrose, also known as Rexia, Nodding Bells, Twin Sisters or Wild Gloxinia.		Alle spesies van die genus <i>Streptocarpus</i> All species of the genus <i>Streptocarpus</i>
	Family/Familie: GRAMINEAE	
Mountain Bamboo	Bergbamboes	<i>Arundinaria tessellata</i>
Wild Rye Grass	Wilde Rog	<i>Secale africanum</i>
	Family/Familie: GRUBBIACEAE All species/Alle spesies	
	Family/Familie: IRIDACEAE All species/Alle spesies	
	Family/Familie: LEGUMINOSAE	
Tambookie Thorn	Tamboekiedoring	<i>Erythrina acanthocarpa</i> <i>Erythrina humeana</i>
	Klipblom	<i>Liparia comantha</i>
Orange Nodding Head, also known as Mountain Dahlia.	Geelkoppie	<i>Liparia sphaerica</i> <i>Liparia splendens</i>
Wild Sweet Pea	Keurtjie	<i>Podalyria calyprata</i> <i>Priestleya vestita</i>
Silver Pea	Silwerertjie	<i>Priestleya tomentosa</i>
	Family/Familie: LILIACEAE	
All species of the genus ALOE except those specified in Schedule 3 and the species <i>Aloe ferox</i> ./Alle spesies van die genus ALOE behalwe dié in Bylae 3 bepaal en die spesie <i>Aloe ferox</i> .		
		<i>Gasteria beckeri</i> <i>Gloriosa superba</i>
Gloriosa Lily, also known as Turk's Cap.		
Haworthia, also known as Window Plant.		Alle spesies van die genus <i>Haworthia</i> All species of the genus <i>Haworthia</i>
Red-hot Poker	Vuurpyl	Alle spesies van die genus <i>Kniphofia</i> All species of the genus <i>Kniphofia</i>
	Viooltjies	Alle spesies van die genus <i>Lachenalia</i> All species of the genus <i>Lachenalia</i>
Climbing Bells Christmas Bells	Geelklokkie	<i>Littonia modesta</i> <i>Sandersonia aurantiaca</i>
Forest Lily		Alle spesies van die genus <i>Veltheimia</i> All species of the genus <i>Veltheimia</i> <i>Agapanthus walshii</i> <i>Daubenya aurea</i>

Chinese Lantern	Family/Familie: MELIACEAE Klapperbos	<i>Nymania capensis</i>
	Family/Familie: MESEMBRYANTHEMACEAE All species/Alle spesies	
	Family/Familie: MUSACEAE	Alle spesies van die genus <i>Strelitzia</i> All species of the genus <i>Strelitzia</i>
Blue Water-lily	Family/Familie: NYMPHAEACEAE Blou Waterlelie, ook bekend as Kaaimanblom.	<i>Nymphaea capensis</i>
	Family/Familie: ORCHIDACEAE All species/Alle spesies	
	Family/Familie: OXALIDACEAE Watersuring	<i>Oxalis nutans</i>
	Family/Familie: PEDALIACEAE Kloudoring (Duiwelsklou)	<i>Harpagophytum procumbens</i>
	Family/Familie: PENAEACEAE All species/Alle spesies	
	Family/Familie: POLYGALACEAE	<i>Muraltia minuta</i>
Maidenhair Fern	Family/Familie: POLYPODIACEAE Vrouehaar	Alle spesies van die genus <i>Adiantum</i> All species of the genus <i>Adiantum</i>
Tree Ferns	Boomvarings	<i>Hemitelia capensis</i>
Seven Weeks Fern	Seweweeksvaring	<i>Polystichum adiantiforme</i>
Love-plant	Family/Familie: PORTULACACEAE Hasieskos	Alle spesies van die genus <i>Anacampseros</i> All species of the genus <i>Anacampseros</i>
	Family/Familie: PROTEACEAE	
All species except those specified in Schedule 3./Alle spesies behalwe dié in Bylae 3 bepaal.		
Anemone	Family/Familie: RANUNCULACEAE Anemoon	<i>Anemone capensis</i>
	Family/Familie: RESTIONACEAE	Alle spesies van die genus <i>Chondropetalum</i> All species of the genus <i>Chondropetalum</i> <i>Acockii pillans</i> <i>Elegia fenestrata</i> <i>Restio acockii</i> <i>Restio micans</i> <i>Restio sabulosus</i>



Family/Familie: RETZIACEAE

*Retzia capensis*

Family/Familie: RHAMNACEAE

*Phylica pubescens*

Family/Familie: RORIDULACEAE

All species/Alle spesies

Family/Familie: RUTACEAE

All species/Alle spesies

Family/Familie:  
SCROPHULARIACEAE

Alle spesies van die genus

*Diascia*

All species of the genus

*Diascia*

Harveya

Inkblom

Alle spesies van die genus

*Harveya*

All species of the genus

*Harveya*

Nemesia

Rooileubekkie

*Nemesia strumosa*

Alle spesies van die genus

*Halleria*

All species of the genus

*Halleria*Family/Familie:  
THYMELAEACEAE*Lachnaea aurea***SCHEDULE 5/BYLAE 5****NOXIOUS AQUATIC GROWTHS/SKADELIKE WATERGEWASSE**

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
<i>Water Hyacinth</i>	<i>Waterhiasint</i>	<i>Eichhornia</i> spp.
Parrot's Feather	Duisendblaar	<i>Myriophyllum</i> spp.
Water Fern	Watervaring	<i>Salvinia</i> spp.

**SCHEDULE 6/BYLAE 6****ORDINANCES REPEALED**

<i>No. and Year</i>	<i>Short Title</i>
26 of 1965	Nature Conservation Ordinance, 1965.
16 of 1967	Nature Conservation Amendment Ordinance, 1967.
30 of 1968	Nature Conservation Amendment Ordinance, 1968.
32 of 1970	Nature Conservation Amendment Ordinance, 1970.

## SCHEDULE 2

ACT	AMENDMENT OF ACT
<p>Environmental Conservation Act, 1989 (Act 73 of 1989), as assigned in terms of Proclamation No. R.29, 1995 of 7 April 1995.</p>	<ol style="list-style-type: none"> <li>1. Amendment of section 1 — by the insertion after the definition of “administrative body” of the following definition: <ul style="list-style-type: none"> <li>“ ‘Board’ ” means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998);</li> </ul> </li> <li>2. Amendment of section 16 — <ul style="list-style-type: none"> <li>(a) by the substitution in subsections (1)(a), (1A) and (6) for the words “A competent authority” of the words “The Board”, and</li> <li>(b) by the substitution in subsections (1)(b) (4) and (5) for the words “competent authority” of the word “Board”, and</li> <li>(c) by the substitution in subsection (1)(b) for the words “Director-General of that province” of the words “chief executive officer of the Board”.</li> </ul> </li> <li>3. Amendment of section 17 — <ul style="list-style-type: none"> <li>(a) by the substitution in subsections (1) and (4) for the words “A competent authority” and “a competent authority” of the words “The Board” and “the Board” respectively, and</li> <li>(b) by the substitution in subsections (2), (3)(a) and (b), (5) and (6) for the words “competent authority” of the word “Board”;</li> <li>(c) by the substitution in the proviso to subsection (6) for the word “his” of the word “its”, and</li> <li>(d) by the substitution for subsection (7) of the following subsection: <ul style="list-style-type: none"> <li>“(7) The chief executive officer of the Board must designate as many of the Board’s employees as may be necessary to assist a management advisory committee in the administrative work connected with the performance of the functions of the committee: Provided that where the control and management of a protected natural environment has been assigned to another local authority or government institution in terms of section 16(6) the chief executive officer of such local authority or government institution must designate as many employees of the relevant local authority or government institution as may be necessary to assist a management advisory committee with the said administrative work: Provided further that with the approval of the Board such administrative work may be performed by any person other</li> </ul> </li> </ul> </li> </ol>

ACT	AMENDMENT OF ACT
	<p>than such an employee at the remuneration and allowances which the competent authority with the concurrence of the Minister of State Expenditure may determine.”.</p> <p>4. Amendment of section 28A — by the substitution in subsections (1), (2), (3), (4), and (5) for the words “a competent authority” of the words “the Board”.</p> <p>5. Amendment of section 32 — (a) by the insertion in subsection (1) after the words “a competent authority” of the words “the Board”, and (b) by the insertion in subsection (3), after the words “competent authority” of the word “Board”.</p> <p>6. Section 35 is amended in subsection (2), by the substitution for the words “officer or employee” of the words “employee of the Board”.</p> <p>7. Amendment of section 41A — by the insertion in subsection (1) after the words “a competent authority” of the words “or the Board”.</p>

**SCHEDULE 3**

<b>ACT</b>	<b>AMENDMENT OF ACT</b>
The Sea Shore Act, 1935 (Act 21 of 1935), as assigned in terms of Proclamation No. R.27, 1995 of 7 April 1995.	<ol style="list-style-type: none"> <li>1. Section 1 of the Act is amended by the insertion before the definition of “high-water mark” of the following definition:  “ ‘Board’ means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998);”</li> <li>2. Section 3 of the Act is amended by the substitution for the word “Minister” wherever it appears, of the word “Board”.</li> <li>3. Section 11 of the Act is amended by the substitution for subsection (1) of the following subsection:  “(1) The Board may delegate to any of its employees the powers conferred on it by section 3(1) or (2), but shall not thereby be divested of its powers so delegated, and may modify or withdraw any decision of any such employee.”</li> </ol>

## SCHEDULE 4

ACT	AMENDMENT OF ACT
<p>Mountain Catchment Areas Act, 1970 (Act 63 of 1970), as assigned in terms of Proclamation No. R.28, 1995 of 7 April 1995.</p>	<p>1. Amendment of the Act —</p> <p>(a) by the substitution for the word “Minister” in sections 6 (except subsection (3)(b)), 7, 9, 10 and 12 of the word “Board, and</p> <p>(b) where applicable in any of the sections referred to in paragraph (a), by the substitution for the word “he” or “him” of the word “it”.</p> <p>2. Amendment of section 1 —</p> <p>(a) by the insertion after the definition of “advisory committee” of the following definition:</p> <p>“ ‘Board’ means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998)”, and</p> <p>(b) by the deletion of the definition of “Director-General”.</p> <p>3. By the substitution for section 2A of the following section:</p> <p>“The Board may, for the purposes of the definition of any area by it under section 2, cause beacons to be erected on the land concerned at places designated by the Board.”</p> <p>4. Amendment of section 6 —</p> <p>(a) by the substitution in subsection (2)(c) for the word “chairman” of the word “chairperson”, and</p> <p>(b) by the substitution for subsection (7) of the following subsection:</p> <p>“(7) If a member of an advisory committee —</p> <p>—</p> <p>(a) resigns;</p> <p>(b) is, without the permission of the chairperson of the advisory committee concerned, absent from two consecutive meetings of such committee, or</p> <p>(c) is removed from office under section (5), that member must vacate his or her office.”.</p> <p>5. Amendment of section 8 —</p> <p>(a) by the substitution in subsection (1) for the word “Director-General” of the word “Board”, and</p> <p>(b) by the substitution in subsection (3), for the words “Director-General” of the word “Board” and in paragraph (b) of that subsection for the words “he deems” and “known to him” of the words “it deems” and “known to it”, respectively.</p>

<b>ACT</b>	<b>AMENDMENT OF ACT</b>
	<p>6. Amendment of section 9 by the substitution for the word "Director-General" of the word "Board".</p> <p>7. The following section is substituted for section 17: "The Board may delegate to any of its employees all or any of the powers conferred on it by this Act, other than the powers referred to in section 2A."</p>

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**REPUBLIC OF SOUTH AFRICA**

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**MARINE LIVING RESOURCES  
ACT**

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**REPUBLIEK VAN SUID-AFRIKA**

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**WET OP LEWENDE MARIENE  
HULPBRONNE**

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**No           , 1998**

# ACT

To provide for the conservation of the marine ecosystem, the long-term sustainable utilisation of marine living resources and the orderly access to exploitation, utilisation and protection of certain marine living resources; and for these purposes to provide for the exercise of control over marine living resources in a fair and equitable manner to the benefit of all the citizens of South Africa; and to provide for matters connected therewith.

## ARRANGEMENT OF SECTIONS

### *Section*

1. Definitions

## CHAPTER 1

### INTRODUCTORY PROVISIONS

2. Objectives and principles
3. Application of Act
4. Conflict with other Acts

## CHAPTER 2

### ADMINISTRATION

5. Establishment of Forum
6. Functions of Forum
7. Composition of Forum
8. Industrial bodies and interest groups
9. Fishery control officers and honorary marine conservation officers
10. Marine Living Resources Fund
11. Appropriation of Fund
12. Register
13. Permits

## CHAPTER 3

### MANAGEMENT OF MARINE LIVING RESOURCES

#### PART 1: FISHERIES PLANNING

14. Determination of allowable catches and applied effort
15. Fisheries management areas
16. Emergency measures
17. Priority fishing areas

#### PART 2: LOCAL FISHING

18. Granting of rights
19. Subsistence Fishing
20. Recreational Fishing

#### PART 3: COMMERCIAL FISHING

21. Commercial Fishing
22. Leasing of rights

#### PART 4: GENERAL LOCAL MATTERS

23. Local fishing vessel licence



24. Reduction of rights
25. Fees
26. Recovery of interest and fees
27. Fishing harbours
28. Cancellation and suspension of rights, licences and permits

**PART 5: FISHERIES TRANSFORMATION COUNCIL**

29. Establishment of Fisheries Transformation Council
30. Main object of Council
31. Allocation of rights to and by Council
32. Powers of Council
33. Management and control
34. Composition of Council
35. Staff
36. Reporting
37. Abolishment of Council

**PART 6: FOREIGN FISHING**

38. International agreements
39. Foreign fishing vessel licences

**PART 7: HIGH SEAS FISHING**

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41. High seas licences
42. Implementation of international conservation and management measures

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**MARINE PROTECTED AREAS**

43. Marine protected areas

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**LAW ENFORCEMENT**

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52. Powers of fishery control officers beyond South African waters
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54. Seizure of vehicles or aircraft
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56. Co-operation with officials
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59. Limitation of liability
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61. Payment for information leading to conviction
62. Security for release of vessel, vehicle or aircraft
63. Disposal of perishables
64. Treatment of things detained or seized
65. Application of security
66. Liability for loss, damage or deterioration of things in custody
67. Removal from custody
68. Forfeiture orders by court
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70. Jurisdiction of courts
71. Documentary evidence
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**CHAPTER 8****GENERAL PROVISIONS**

77. Power to make regulations
78. Assignment to provinces
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81. Exemptions
82. Inquiries
83. Scientific investigations and practical experiments
84. Repeal of laws, and savings
85. Transitional measures
86. Short title and commencement

**SCHEDULE 1**

**B**E IT ENACTED by the Parliament of the Republic of South Africa, as follows:—

**Definitions**

1. In this Act, unless the context indicates otherwise—
  - (i) “aircraft” means any craft capable of self-sustained movement through the atmosphere and includes a hovercraft; (lx) 5
  - (ii) “allowable commercial catch” means that part of the total allowable catch available annually for commercial fishing rights in terms of section 14; (xliii)

- (iii) “aquatic plant” means any kind of plant, algae or other plant organism found in the sea and in or on the seashore; (lxiv)
- (iv) “commercial fishing” means fishing for any of the species which have been determined by the Minister in terms of section 14 to be subject to the allowable commercial catch or total applied effort, or parts of both; (xx) 5
- (v) “Constitution” means the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996); (xv)
- (vi) “Council” means the Fisheries Transformation Council established in terms of section 29; (xxxii)
- (vii) “court” means a competent court of law; (xvii) 10
- (viii) “Department” means the Department of Environmental Affairs and Tourism; (v)
- (ix) “Director-General” means the Director-General of the Department; (vi)
- (x) “driftnet” means a gillnet or other net or a combination of nets, the purpose of which is to enmesh, entrap or entangle fish by drifting on the surface of or in the water, irrespective of whether it is used or intended to be used while attached to any point of land or the seabed or to any vessel; (vii) 15
- (xi) “driftnet fishing activities” means fishing with the use of a driftnet and includes any related activities, including transporting, transshipping and processing any driftnet catch, and the provision of food, fuel and other supplies for vessels used or outfitted for driftnet fishing; (viii) 20
- (xii) “exclusive economic zone” means the exclusive economic zone as defined in section 7 of the Maritime Zones Act, 1994 (Act No. 15 of 1994); (x)
- (xiii) “fish” means the marine living resources of the sea and the seashore, including any aquatic plant or animal whether piscine or not, and any mollusc, crustacean, coral, sponge, holothurian or other echinoderm, reptile and marine mammal, and includes their eggs, larvae and all juvenile stages, but does not include sea birds and seals; (xlix) 25
- (xiv) “fish aggregating device” means an artificially made or partially artificially made floating, submerged or semi-submerged device, whether anchored or not, intended to aggregate fish, including any natural floating object on which a device has been placed to facilitate its location; (lvi) 30
- (xv) “fisheries management area” means a fisheries management area declared in terms of section 15(1); (lv)
- (xvi) “fishery” means one or more stock or stocks of fish or any fishing operations based on such stocks which can be treated as a unit for purposes of conservation and management, taking into account geographical, scientific, technical, recreational, economic and other relevant characteristics; (liii) 35
- (xvii) “fishery control officer” means any person appointed as a fishery control officer in terms of section 9; (liv) 40
- (xviii) “fishing” means—
  - (a) searching for, catching, taking or harvesting fish or an attempt to any such activity;
  - (b) engaging in any other activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fish; 45
  - (c) placing, searching for or recovering any fish aggregating device or associated gear, including radio beacons;
  - (d) any operation in support or in preparation of any activity described in this definition; or
  - (e) the use of an aircraft in relation to any activity described in this definition; (lviii) 50
- (xix) “fishing harbour” means a declared fishing harbour contemplated in section 27(1); (lii)
- (xx) “fishing vessel” means any vessel, boat, ship or other craft which is used for, equipped to be used for or of a type that is normally used for fishing or related activities, and includes all gear, equipment, stores, cargo and fuel on board the vessel; (li) 55
- (xxi) “fish processing establishment” means any vehicle, vessel, premises or place where any substance or article is produced from fish by any method, including the work of cutting up, dismembering, separating parts of, cleaning, sorting, lining and preserving of fish, or where fish are canned, packed, dried, gutted, 60

- salted, iced, chilled, frozen or otherwise processed for sale in or outside the territory of the Republic; (lix)
- (xxii) “fish product” means any product, whether in a processed form or not, wholly or partially derived from fish; (l)
- (xxiii) “foreign fishing vessel” means any fishing vessel other than a local fishing vessel; (iii) 5
- (xxiv) “foreign fishing vessel licence” means a licence issued in terms of section 39(2); (iv)
- (xxv) “Forum” means the Consultative Advisory Forum for Marine Living Resources established under section 5; (xii) 10
- (xxvi) “Fund” means the Marine Living Resources Fund referred to in section 10(1); (xi)
- (xxvii) “gear” means, in relation to fishing, any equipment, implement or other object that can be used in fishing, including any net, rope, line, float, trap, hook, winch, aircraft, boat or craft carried on board a vessel, aircraft or other craft; (lvii) 15
- (xxviii) “high seas” means the waters beyond South African waters, but does not include waters subject to the particular jurisdiction of another state; (xxiv)
- (xxix) “high seas fishing vessel” means a vessel in respect of which a high seas fishing vessel licence has been issued in terms of section 41(1); (xxv) 20
- (xxx) “high seas fishing vessel licence” means a licence issued in terms of section 41(1); (xxvi)
- (xxxi) “internal waters” means the internal waters as defined in section 3 of the Maritime Zones Act, 1994; (ii)
- (xxxii) “international conservation and management measures” means measures to conserve or manage one or more species of marine living resources contained in international conventions, treaties or agreements, or that are adopted or applied in accordance with the relevant rules of international law as reflected in the United Nations Convention on the Law of the Sea, whether by global, regional or subregional fishery organisations and which measures are binding on the Republic in terms of international law; (xviii) 30
- (xxxiii) “local fishing vessel” means any fishing vessel registered in the Republic which is—
- (a) wholly owned and controlled by one or more South African persons;
- (b) wholly owned by the State; 35
- (c) wholly owned and controlled by any body corporate, society or other association of persons incorporated or established under the laws of the Republic and in which the majority of the shares and the voting rights are held and controlled by South African persons; or
- (d) wholly owned by a body corporate designated as an authorised body corporate by the Minister; (xxx) 40
- (xxxiv) “local fishing vessel licence” means a licence issued in terms of section 23(1); (xxxi)
- (xxxv) “mariculture” means the culture or husbandry of fish in sea water; (xxi)
- (xxxvi) “master” means, in relation to a vessel, aircraft or other craft, the person having lawful command or charge, or for the time being in charge, of the vessel, aircraft or other craft, as the case may be, including a person who has principal responsibility for fishing on board, but does not include a pilot aboard a fishing vessel solely for the purpose of providing navigational assistance; (xxxvi) 50
- (xxxvii) “Minister” means the Minister responsible for the Department; (xxii)
- (xxxviii) “nautical mile” means the international nautical mile of 1 852 metres; (xxxv)
- (xxxix) “net” means a fabric of rope, cord, twine or other material knotted or woven into meshes by which fish can be taken; (xxiii)
- (xl) “observation device” means any device or machine placed on a fishing vessel in terms of this Act as a condition of its licence which transmits, whether in conjunction with other machines elsewhere or not, information or data concerning the position and fishing activities of the vessel; (lxiii) 55
- (xli) “observer” means any person authorised in writing by the Director-General in terms of section 50 to perform scientific, compliance, monitoring and other similar observation duties on board a fishing vessel in accordance with this Act; (lxii) 60

- (xlii) “organ of state” means an organ of state as defined in section 239 of the Constitution; (xxxviii)
- (xliii) “owner” means any person exercising or discharging or claiming the right or accepting the obligation to exercise or discharge any of the powers or duties of an owner whether on his or her own behalf or on behalf of another, including a person who is the owner jointly with one or more other persons and the manager, director, secretary, or other similar officer or any person purporting to act in such a capacity, of any body corporate or company which is an owner; (ix) 5
- (xliv) “permit” means a permit contemplated in section 13; (xxviii) 10
- (xlv) “person” includes a trust; (xxix)
- (xlvi) “prescribe” means to prescribe by regulation; (lxi)
- (xlvii) “recreational fishing” means, any fishing done for leisure or sport and not for sale, barter, earnings or gain; (xxxvii)
- (xlviii) “regulation” means a regulation made and includes a notice issued under this Act; (xxxiii) 15
- (xlix) “related activities” include—
- (a) storing, buying, selling, transshipping, processing or transporting of fish or any fish product taken from South African waters up to the time it is first landed or in the course of high seas fishing; 20
- (b) on-shore storing, buying, selling or processing of fish or any fish product from the time it is first landed;
- (c) refuelling or supplying fishing vessels, selling or supplying fishing equipment or performing any other act in support of fishing;
- (d) exporting and importing fish or any fish product; or 25
- (e) engaging in the business of providing agency, consultancy or other similar services for and in relation to fishing or a related activity; (xlviii)
- (l) “right of access” means a right of access to fish granted in terms of this Act; (xlii)
- (li) “seashore” means the sea-shore as defined in section 1 of the Sea-shore Act, 1935 (Act No. 21 of 1935); (xxxix) 30
- (lii) “sedentary species” means organisms which, at the harvestable stage, either are immobile on or under the seabed, or are unable to move except in constant physical contact with the seabed or the subsoil; (xxxiv)
- (liii) “South African person” means— 35
- (a) a South African citizen in terms of the South African Citizenship Act, 1995 (Act No. 88 of 1995);
- (b) a company registered in terms of the Companies Act, 1973 (Act No. 61 of 1973), of which the majority of shareholders, as prescribed by the Minister, are South African persons; 40
- (c) a close corporation in terms of the Close Corporations Act, 1984 (Act No. 69 of 1984), of which the majority of members are South African persons; or
- (d) a trust in which—
- (i) the majority of trustees having the controlling power at any given time are South African citizens; or 45
- (ii) a majority of the beneficial interests are held by South African citizens; (xl)
- (liv) “South African waters” means the seashore, internal waters, territorial waters, the exclusive economic zone, and in relation to the sedentary species as defined in Article 77 of the United Nations Convention on the Law of the Sea, the continental shelf as defined in section 7 of the Maritime Zones Act, 1994, and such waters include tidal lagoons and tidal rivers in which a rise and fall of the water level takes place as a result of the tides; (xli) 50
- (lv) “subsistence fisher” means a natural person who regularly catches fish for personal consumption or for the consumption of his or her dependants, including one who engages from time to time in the local sale or barter of excess catch, but does not include a person who engages on a substantial scale in the sale of fish on a commercial basis; (i) 55
- (lvi) “territorial waters” means the territorial waters as defined in section 4 of the Maritime Zones Act, 1994; (xiv) 60
- (lvii) “this Act” includes any regulation or notice made or issued under this Act; (xvi)

- (lviii) “total allowable catch” means the maximum quantity of fish of individual species or groups of species made available annually, or during such other period of time as may be prescribed, for combined recreational, subsistence, commercial and foreign fishing in terms of section 14; (xlv)
- (lix) “total applied effort” means the maximum number of fishing vessels, the type, size and engine power thereof or the fishing method applied thereby for which fishing vessel licences or permits to fish may be issued for individual species or groups of species, or the maximum number of persons on board a fishing vessel for which fishing licences or permits may be issued to fish individual species or groups of species; (xlv) 5 10
- (lx) “transship” means transferring fish or gear from one vessel to another; (xxvii)
- (lxi) “trap” means an enclosure, not being a net, that may be used to take fish; (xiii)
- (lxii) “United Nations Convention on the Law of the Sea” means the United Nations Convention on the Law of the Sea, 1982, adopted at Montego Bay on 10 December 1982; (xlvii) 15
- (lxiii) “vessel” includes any canoe, lighter, floating platform, decked boat, carrier vessel, vessel equipped with an inboard or outboard motor or any other craft, whether a surface craft or submarine; (xlvi)
- (lxiv) “year” means any period extending from a day in one year to a day preceding the day corresponding numerically to that day and month in the following year, both days inclusive. (xix) 20

## CHAPTER 1

### INTRODUCTORY PROVISIONS

#### Objectives and principles

2. The Minister and any organ of state shall in exercising any power under this Act, have regard to the following objectives and principles: 25
- (a) The need to achieve optimum utilisation and ecologically sustainable development of marine living resources;
- (b) the need to conserve marine living resources for both present and future generations; 30
- (c) the need to apply precautionary approaches in respect of the management and development of marine living resources;
- (d) the need to utilise marine living resources to achieve economic growth, human resource development, capacity building within fisheries and mariculture branches, employment creation and a sound ecological balance consistent with the development objectives of the national government; 35
- (e) the need to protect the ecosystem as a whole, including species which are not targeted for exploitation;
- (f) the need to preserve marine biodiversity;
- (g) the need to minimise marine pollution; 40
- (h) the need to achieve to the extent practicable a broad and accountable participation in the decision-making processes provided for in this Act;
- (i) any relevant obligation of the national government or the Republic in terms of any international agreement or applicable rule of international law; and
- (j) the need to restructure the fishing industry to address historical imbalances and to achieve equity within all branches of the fishing industry. 45

**Application of Act**

3. (1) Unless the context indicates otherwise, this Act shall apply—
- (a) to all persons, whether or not South African persons, and to all fishing vessels and aircraft, including foreign fishing vessels and aircraft, on, in or in the airspace above South African waters; 5
  - (b) to fishing activities carried out by means of local fishing vessels or South African aircraft in, on, or in the airspace above waters outside South African waters, including waters under the particular jurisdiction of another state; and
  - (c) to the Prince Edward Islands referred to in section 1 of the Prince Edward Islands Act, 1948 (Act No. 43 of 1948), and any reference in this Act to the Republic shall include a reference to those Islands. 10
- (2) This Act, including any applicable regulation, shall have extraterritorial application.
- (3) This Act shall not apply in respect of fish found in water which does not at any time form part of the sea. 15

**Conflict with other Acts**

4. If any conflict relating to marine living resources dealt with in this Act arises between this Act and the provisions of any other law, save the Constitution or any Act expressly amending this Act, the provisions of this Act shall prevail.

**CHAPTER 2**

20

**ADMINISTRATION****Establishment of Forum**

5. The Minister shall establish a body called the Consultative Advisory Forum for Marine Living Resources.

**Functions of Forum**

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6. The Forum shall advise the Minister on any matter—
- (a) referred to it by him or her, and in particular—
    - (i) the management and development of the fishing industry, including issues relating to the total allowable catch;
    - (ii) marine living resources management and related legislation; 30
    - (iii) the establishment and amendment of operational management procedures, including management plans;
    - (iv) recommendations and directives on areas of research, including multi-disciplinary research; and
    - (v) the allocation of money from the Fund; and 35
  - (b) in respect of the objectives and principles referred to in section 2 that in the opinion of the Forum should be brought to the attention of the Minister.

**Composition of Forum**

7. (1) The forum shall consist of at least five members, including a chairperson, appointed by the Minister for the period determined by him or her, but not exceeding three years at a time. 40
- (2) The Minister shall ensure that the Forum be broadly representative and multidisciplinary, with members qualified to make a substantial contribution towards the proper functioning of the Forum.
- (3) Before the members of the Forum are appointed, the Minister shall invite nominations by interested parties by notice in the *Gazette*: Provided that the Minister shall not be bound by any such nomination. 45
- (4) A member of the Forum shall vacate his or her office if he or she—
- (a) becomes insolvent;

- (b) becomes of unsound mind;
- (c) is convicted of an offence and is sentenced to imprisonment without the option of a fine;
- (d) is absent from three consecutive meetings of the Forum without leave of the chairperson; 5
- (e) resigns by written notice to the Minister; or
- (f) is removed from office by the Minister if there are sufficient reasons in the opinion of the Minister for doing so.

(5) The Director-General may pay to a member of the Forum who is not in the full-time employment of an organ of state, from money appropriated by Parliament for that purpose, the allowances which the Minister may determine in general or in a specific case, in consultation with the Minister of Finance. 10

(6) The Minister may prescribe the necessary matters relating to meetings of the Forum.

#### **Industrial bodies and interest groups** 15

8. (1) The Minister may, by notice in the *Gazette*, recognise any industrial body or interest group in a branch of the fishing industry which, in the opinion of the Minister, is representative of the specific body or group.

(2) The Forum shall give consideration to information submitted to it by industrial bodies and interest groups recognised in terms of subsection (1). 20

#### **Fishery control officers and honorary marine conservation officers**

9. (1) The Minister may, subject to the laws governing the public service, designate posts or ranks in any organ of state of which the incumbents shall be fishery control officers.

(2) The Minister may by written notice to any other person that he or she deems fit to be an honorary marine conservation officer, appoint that person, and in doing so may specify the powers to be exercised by such a person in terms of this Act. 25

(3) A fishery control officer and an honorary marine conservation officer shall be furnished by the Director-General with the prescribed identity card.

#### **Marine Living Resources Fund** 30

10. (1) The Sea Fishery Fund referred to in section 27 of the Sea Fishery Act, 1988 (Act No. 12 of 1988), shall continue to exist under the name the Marine Living Resources Fund, notwithstanding the repeal of the said Act by section 84.

(2) Into the Fund there shall be paid, notwithstanding the provisions of any other Act, but subject to section 22— 35

- (a) money paid in respect of fines, penalties and interest for any offence committed in terms of this Act, including any proceeds from the sale of any vessel, vehicle, aircraft, gear or fish forfeited or seized in terms of this Act;
- (b) all interest and fees collected in terms of this Act;
- (c) money appropriated by Parliament for the realisation of the objects of the Fund; 40
- (d) interest on investments;
- (e) donations, with the approval of the Minister in consultation with the Minister of Finance;
- (f) money which, with the approval of the Minister in consultation with the Minister of Finance, may accrue to the Fund from any other source; and 45
- (g) any levy on fish, fish products, aquatic plants or other marine resources, imposed and collected in terms of this Act, the Sea Fishery Act, 1988, or any other law.

(3) The Fund shall be administered by the Director-General in consultation with the Minister, in accordance with an estimate or a supplementary or revised estimate of revenue and expenditure approved by the Minister with the concurrence of the Minister of Finance in respect of every financial year, which shall end on 31 March, and no expenditure payable from the Fund may be incurred except in accordance with such estimate of expenditure. 50 55

(4) The Director-General shall be the accounting officer charged with the responsibility of accounting for money received and expenditure incurred by the Fund.



(5) The Director-General shall invest money in the fund not required for immediate use with the Public Investment Commissioners.

(6) Any unexpended balance in the Fund at the end of a financial year shall be carried forward as a credit in the Fund to the next financial year.

(7) The Auditor-General shall annually audit the books and accounts of the Fund. 5

### **Appropriation of Fund**

**11.** The Fund shall provide for the administration of the provisions of this Act, including any activity aimed at reaching the objectives referred to in section 2.

### **Register**

**12.** (1) The Director-General shall keep a register of all rights of access, other rights, permits and licences granted or issued in terms of this Act. 10

(2) The Minister may prescribe—

(a) the format of the register contemplated in subsection (1); and

(b) any registration system that he or she deems necessary.

(3) The register contemplated in subsection (1) shall be available for inspection by the public at the prescribed places and times. 15

### **Permits**

**13.** (1) No person shall exercise any right granted in terms of section 18 or perform any other activity in terms of this Act unless a permit has been issued by the Minister to such person to exercise that right or perform that activity. 20

(2) Any permit contemplated in subsection (1) shall—

(a) be issued for a specified period not exceeding one year;

(b) be issued subject to the conditions determined by the Minister in the permit; and

(c) be issued against the payment of any fees determined by the Minister in terms of section 25(1). 25

(3) The holder of a permit shall at all times have that permit available for inspection at the location where the right or activity in respect of which the permit has been issued, is exercised.

(4) A permit to exercise an existing right in terms of this Act may be refused if the conditions of a previously issued permit had not been adhered to. 30

## **CHAPTER 3**

### **MANAGEMENT OF MARINE LIVING RESOURCES**

#### **PART 1: FISHERIES PLANNING**

#### **Determination of allowable catches and applied effort 35**

**14.** (1) The Minister shall determine the total allowable catch, the total applied effort, or a combination thereof.

(2) The Minister shall determine the portions of the total allowable catch, the total applied effort, or a combination thereof, to be allocated in any year to subsistence, recreational, local commercial and foreign fishing, respectively. 40

(3) In the execution of his or her powers in terms of this section, the Minister may determine that the total allowable catch, or the total applied effort, or a combination thereof, shall apply—

(a) in a particular area, or in respect of particular species or a group of species of fish; and 45

(b) in respect of the use of particular gear, fishing methods or types of fishing vessels.

(4) If the allowable commercial catch in respect of which commercial fishing rights exist, increases, the mass of the increase shall be available for allocation by the Minister.

- (5) The provisions of this section shall not be construed to mean that the Minister is prohibited from determining that—
- (a) the total allowable catch;
  - (b) a portion of the total allowable catch contemplated in subsection (2); or
  - (c) an allocation in terms of subsection (4),
- shall be nil. 5

### **Fisheries management areas**

**15.** (1) The Minister may by notice in the *Gazette* declare any area of the South African waters to be a fisheries management area for the management of the species described in the notice. 10

(2) The Minister may in respect of each fisheries management area approve a plan for the conservation, management and development of the fisheries.

(3) The Minister shall, during the preparation of any plan contemplated in subsection (2), consult with the Forum and other organs of state affected by the plan.

### **Emergency measures** 15

**16.** (1) If an emergency occurs that endangers or may endanger stocks of fish or aquatic life, or any species or class of fish or aquatic life in any fishery or part of a fishery, the Minister may—

- (a) suspend all or any of the fishing in that fishery or any specified part of it;
- (b) restrict the number of fishing vessels fishing in that fishery; or
- (c) restrict the mass of fish which may be taken from that fishery. 20

(2) The particulars of any measures taken in terms of this section shall be made known by notice in the *Gazette* and in any other appropriate manner.

### **Priority fishing areas**

**17.** If the Minister is of the opinion that special measures are necessary to ensure that authorised fishing within any area of the South African waters is not impeded or otherwise interfered with, he or she may, after consultation with the affected parties, by notice in the *Gazette*— 25

- (a) declare such an area to be a priority fishing area for the purposes stated in the notice; and
- (b) prohibit any activity determined in the notice. 30

## **PART 2: LOCAL FISHING**

### **Granting of rights**

**18.** (1) No person shall undertake commercial fishing or subsistence fishing, engage in mariculture or operate a fish processing establishment unless a right to undertake or engage in such an activity or to operate such an establishment has been granted to such a person by the Minister. 35

(2) An application for any right referred to in subsection (1) shall be submitted to the Minister in the manner that the Minister may determine.

(3) The Minister may require an environmental impact assessment report to be submitted by the applicant. 40

(4) Unless otherwise determined by the Minister in relation to the holders of existing rights, only South African persons shall acquire or hold rights in terms of this section.

(5) In granting any right referred to in subsection (1), the Minister shall, in order to achieve the objectives contemplated in section 2, have particular regard to the need to permit new entrants, particularly those from historically disadvantaged sectors of society. 45

(6) All rights granted in terms of this section shall be valid for the period determined by the Minister, which period shall not exceed 15 years, whereafter it shall automatically terminate and revert back to the State to be reallocated in terms of the provisions of this Act relating to the allocation of such rights. 50

(7) The Minister may determine sustainable conservation and management measures, including the use of a particular type of vessel or gear, or area of fishing, to which a right may be subject.

**Subsistence fishing**

- 19.** (1) The Minister may, in order to achieve the objectives contemplated in section 9(2) of the Constitution, by notice in the *Gazette*—
- (a) establish areas or zones where subsistence fishers may fish; and
  - (b) after consultation with the Forum, declare—
    - (i) a specified community to be a fishing community, from which inhabitants may be declared to be subsistence fishers; or
    - (ii) any other person to be a subsistence fisher; or
    - (iii) any other fishing or related activity or the exercise of any other right in that area or zone to be prohibited.
- (2) No subsistence fishing permit shall be transferable except with the approval of and subject to the conditions determined by the Minister.

**Recreational fishing**

- 20.** (1) No person shall sell, barter or trade any fish caught through recreational fishing.
- (2) No recreational fishing permit shall be transferable.

**PART 3: COMMERCIAL FISHING****Commercial fishing**

- 21.** (1) Subject to the provisions of this Act, a commercial fishing right may be leased, divided or otherwise transferred.
- (2) An application to transfer a commercial fishing right or a part thereof shall be submitted to the Minister in the manner that the Minister may determine, and subject to the provisions of this Act and any applicable regulation, the Minister may, in writing, approve the transfer of the right or a part thereof.
- (3) The Minister may, after consultation with the Forum, make regulations regarding—
- (a) the formula by which a commercial fishing right as a portion of the allowable commercial catch, the total applied effort, or a combination thereof, shall be determined;
  - (b) guidelines or criteria concerning the transfer of any right of access, including determining limits on the transfer of rights between holders of such rights on a temporary basis;
  - (c) the maximum or minimum portion of the allowable commercial catch, the total applied effort, or a combination thereof, which may be allocated or transferred to, or acquired or otherwise held by, any person;
  - (d) reallocation of any right of access, having regard to any significant alteration in the long-term revenue derived from the resource being exploited or in the long-term availability of the resource;
  - (e) the determination of rights to, or disposition of, by-catches in relation to any right;
  - (f) the monitoring and control of the use of rights of access;
  - (g) subject to the provisions of the Labour Relations Act, 1995 (Act No. 66 of 1995), the employment of South African persons on board fishing vessels that are used for the utilisation of any right of access;
  - (h) the utilisation of South African fish processing establishments in the exercise of a right of access; and
  - (i) the other measures that may be necessary or desirable to achieve the effective implementation of a scheme for rights of access.

**Leasing of rights**

- 22.** (1) As from a date fixed by the Minister in the *Gazette*, the rights contemplated in section 18 shall, subject to section 31, be leased by the State.

(2) The Minister may prescribe the method of allocation and payment in respect of leases contemplated in subsection (1), including criteria for the granting of the rights contemplated in section 18.

(3) The method of allocation and payment contemplated in subsection (2), which may include tendering and fixed price leasing, may vary between branches of the fishing industry. 5

(4) With the concurrence of the Minister of Finance, a determined portion of the money paid in respect of a right leased by the State shall be paid into the Fund and the remainder shall be paid into the National Revenue Fund.

#### **PART 4: GENERAL LOCAL MATTERS** 10

##### **Local fishing vessel licence**

**23.** (1) No person shall use a fishing vessel or any other vessel to exercise any right of access unless a local fishing vessel licence has been issued to such person.

(2) An application for a local fishing vessel licence shall be submitted to the Minister in the manner that the Minister may determine. 15

##### **Reduction of rights**

**24.** The Minister may in respect of any fishery, determine, after consultation with the Forum, that the portions of the total allowable catch, the total applied effort, or a combination thereof, allocated in any year to subsistence, local commercial and foreign fishing, and rights granted in respect thereof, shall be reduced. 20

##### **Fees**

**25.** (1) All rights, permits and licences in terms of this Act shall be granted or issued against the payment of the fees determined by the Minister in consultation with the Minister of Finance.

(2) An application for any right, permit or licence in terms of this Act shall be accompanied by an application fee determined by the Minister in consultation with the Minister of Finance. 25

##### **Recovery of interest and fees**

**26.** The Director-General may recover the amount of any interest or fee which is due and payable in terms of this Act in a competent court of law. 30

##### **Fishing harbours**

**27.** (1) Subject to subsection (2), the Minister may by notice in the *Gazette* declare a harbour or a defined portion of a harbour or a defined area of the sea and the seashore, to be a fishing harbour.

(2) If the Minister desires to declare a commercial harbour or a portion of such harbour to be a fishing harbour, he or she shall obtain the prior approval of the Minister of Transport. 35

(3) The Minister may, in consultation with the Minister of Finance, determine the fees payable in respect of the use of a fishing harbour or the facilities available in such a harbour. 40

##### **Cancellation and suspension of rights, licences and permits**

**28.** (1) If a holder of any right, licence or permit in terms of this Act—

(a) has furnished information in the application for that right, licence or permit, or has submitted any other information required in terms of this Act, which is not true or complete; 45

(b) contravenes or fails to comply with a condition imposed in the right, licence or permit;

(c) contravenes or fails to comply with a provision of this Act;  
 (d) is convicted of an offence in terms of this Act; or  
 (e) fails to effectively utilise that right, licence or permit,  
 the Director-General may by written notice delivered to such holder, or sent by registered post to the said holder's last known address, request the holder to show cause in writing, within a period of 21 days from the date of the notice, why the right, licence or permit should not be revoked, suspended, cancelled, altered or reduced, as the case may be. 5

(2) The Director-General shall after expiry of the period referred to in subsection (1) refer the matter, together with any reason furnished by the holder in question, to the Minister for the Minister's decision. 10

(3) When a matter is referred to the Minister in terms of subsection (2), the Minister may—

- (a) revoke the right, licence or permit;
- (b) suspend the right, licence or permit for a period determined by the Minister; 15
- (c) cancel the right, licence or permit from a date determined by the Minister;
- (d) alter the terms or conditions of the right, licence or permit; or
- (e) decide not to revoke, suspend, cancel, alter or reduce the right, licence or permit.

(4) Notwithstanding the provisions of subsections (1), (2) and (3), the Minister may, whenever he or she is of the opinion that it is in the interests of the promotion, protection or utilisation on a sustainable basis of a particular marine living resource, at any time by written notice to the holder of a right, licence or permit, revoke, suspend, cancel or reduce that right, licence or permit. 20

## **PART FIVE: FISHERIES TRANSFORMATION COUNCIL** 25

### **Establishment of Fisheries Transformation Council**

29. The Minister shall establish a body by notice in the *Gazette*, which shall be called the Fisheries Transformation Council.

### **Main object of Council**

30. The main object of the Council shall be to facilitate the achievement of fair and equitable access to the rights referred to in section 18. 30

### **Allocation of rights to and by Council**

31. (1) The Minister may, notwithstanding the provisions of this Act, allocate rights to the Council.

(2) The Council shall lease rights, according to criteria determined by the Minister, to persons from historically disadvantaged sectors of society and to small and medium size enterprises. 35

### **Powers of Council**

32. The Council may, subject to restrictions determined by the Minister—

- (a) lease commercial fishing rights; 40
- (b) determine the price to be paid by lessees of rights;
- (c) determine the conditions applicable to leases granted in terms of this section, which conditions shall govern the circumstances under which the lease may be revoked, cancelled, suspended or altered; and
- (d) assist in the development and capacity building of persons from historically disadvantaged sectors of society and small and medium size enterprises. 45

### **Management and control**

33. For the purposes of management and control of the Council, the Minister may—

- (a) issue criteria, guidelines and instructions for the operation of the Council; and

- (b) determine that the affairs of the Council shall be managed and controlled according to a business plan approved by him or her.

### Composition of Council

34. (1) The Council shall consist of at least five members, including a chairperson, appointed by the Minister for the period determined by him or her, but not exceeding three years at a time. 5

(2) The Minister shall ensure that the Council be broadly representative and multidisciplinary, with members qualified to make a substantial contribution towards the proper functioning of the Council.

(3) Before the members of the Council are appointed, the Minister shall invite nominations by interested parties by notice in the *Gazette*: Provided that the Minister shall not be bound by any such nomination. 10

(4) No person who has a direct interest in any manner whatsoever in commercial fishing or mariculture shall be appointed in terms of this section.

(5) A member of the Council shall vacate his or her office if he or she— 15

(a) becomes insolvent;

(b) becomes of unsound mind;

(c) is convicted of an offence and is sentenced to imprisonment without the option of a fine;

(d) is absent from three consecutive meetings of the Council without leave of the chairperson; 20

(e) resigns by written notice to the Minister; or

(f) is removed from office by the Minister if there are sufficient reasons in the opinion of the Minister for doing so.

(6) The Director-General may pay to a member of the Council who is not in the full-time employment of an organ of state, from money appropriated by Parliament for that purpose, the allowances and remuneration which the Minister may determine in general or in a specific case, in consultation with the Minister of Finance. 25

(7) The Minister may prescribe the necessary matters relating to meetings of the Council. 30

### Staff

35. The employees required for the proper performance of the Council's functions, shall be appointed subject to the laws governing the public service.

### Reporting

36. (1) The Council shall annually not later than the first day of March, submit to the Minister a report on all its activities during the previous year. 35

(2) The report referred to in subsection (1) shall be laid upon the Table in Parliament within 14 days after it was submitted to the Minister, if Parliament is then in session, or if Parliament is not then in session, within 14 days of the commencement of the next ensuing session. 40

### Abolishment of Council

37. The Minister may by notice in the *Gazette*, after consultation with the Forum, abolish the Council.

## PART 6: FOREIGN FISHING

### International agreements 45

38. (1) No international agreement entered into by the national government of the Republic concerning access to fish in South African waters shall exceed the total resources or the total mass of fish allowed to the appropriate category of foreign fishing vessels in terms of any applicable determination of the total allowable catch or applicable fishery plan. 50

(2) Any international agreement entered into by the national government of the

Republic concerning access to fish in South African waters shall include a provision establishing the responsibility of the foreign state or an association to take necessary measures to ensure compliance by its vessels with the terms and conditions of the agreement and with the legislation relating to fishing in South African waters.

### **Foreign fishing vessel licences** 5

**39.** (1) No foreign fishing vessel shall be used for fishing or related activities in South African waters unless a foreign fishing vessel licence has been issued to such vessel.

(2) Subject to the provisions of this Act, the Minister may issue a foreign fishing vessel licence in the prescribed format authorising a foreign fishing vessel to be used in South African waters, or any part thereof, for the fishing or related activities that may be determined in the licence. 10

(3) Subject to subsection (4), no foreign fishing vessel licence shall be issued to any foreign fishing vessel unless there is in force with the government of the flag state of the vessel or with an association of which the owner or charterer is a member, a fishery agreement to which the national government of the Republic is a party. 15

(4) Notwithstanding the absence of a fishery agreement contemplated in subsection (3), the Minister may issue a licence in respect of a foreign fishing vessel where the applicant provides sufficient financial and other guarantees relating to his or her fulfilment of all obligations arising in terms of this Act, as well as other conditions regarding insurance related to pollution and rescue, and the Minister is satisfied that those guarantees are adequate for that purpose. 20

(5) If a fishing vessel is used in contravention of subsection (1) or of any condition of a foreign fishing vessel licence, the master, owner and charterer of that fishing vessel shall each be guilty of an offence.

## **PART 7: HIGH SEAS FISHING** 25

### **Prohibition of high seas fishing**

**40.** No person shall undertake fishing or related activities on the high seas by means of a fishing vessel registered in the Republic unless a high seas fishing vessel licence has been issued in respect of such a fishing vessel.

### **High seas licences** 30

**41.** (1) The Minister may issue a high seas fishing licence in respect of a local fishing vessel, subject to the conditions that he or she considers appropriate.

(2) A high seas fishing licence shall be valid for a period not exceeding one year.

(3) A high seas fishing licence shall only be issued in respect of a local fishing vessel.

(4) A high seas fishing licence shall terminate— 35

(a) on expiration of the period for which it was valid;

(b) should the vessel cease to be registered in the Republic; or

(c) should the master, owner or charterer of the high seas fishing vessel be convicted of an offence in terms of section 39(5).

### **Implementation of international conservation and management measures** 40

**42.** (1) The Minister may provide appropriate information in terms of international conservation and management measures to an international organisation of which the Republic is a member, or to states parties to such international conservation and management measures.

(2) The Minister may exchange information, including evidentiary material, with other states that are parties to international conservation and management measures to enable the Republic and such other states to better implement the objects of such international conservation and management measures. 45

- (3) If the Director-General has reason to suspect that a foreign fishing vessel was involved in a contravention of an international conservation or management measure, he or she may—
- (a) provide to the appropriate authorities of the flag state of the foreign fishing vessel concerned, such information, including evidentiary material, relating to that contravention; and 5
  - (b) when such foreign fishing vessel is voluntarily in a port of the Republic, promptly notify the appropriate authorities of the flag state of the vessel accordingly.
- (4) The Minister may from time to time publish by notice in the *Gazette* particulars of any international conservation and management measures or international agreement concerning marine living resources. 10

## CHAPTER 4

### MARINE PROTECTED AREAS

#### Marine protected areas 15

43. (1) The Minister may, by notice published in the *Gazette*, declare an area to be a marine protected area—
- (a) for the protection of fauna and flora or a particular species of fauna or flora and the physical features on which they depend;
  - (b) to facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, and providing pristine communities for research; or 20
  - (c) to diminish any conflict that may arise from competing uses in that area.
- (2) No person shall in any marine protected area, without permission in terms of subsection (3)— 25
- (a) fish or attempt to fish;
  - (b) take or destroy any fauna and flora other than fish;
  - (c) dredge, extract sand or gravel, discharge or deposit waste or any other polluting matter, or in any way disturb, alter or destroy the natural environment; 30
  - (d) construct or erect any building or other structure on or over any land or water within such a marine protected area; or
  - (e) carry on any activity which may adversely impact on the ecosystems of that area.
- (3) The Minister may, after consultation with the Forum, give permission in writing that any activity prohibited in terms of this section may be undertaken, where such activity is required for the proper management of the marine protected area. 35

## CHAPTER 5

### PROHIBITED ACTIVITIES AND STOWAGE OF GEAR

#### Prohibited fishing methods 40

44. (1) No person shall—
- (a) use, permit to be used, or attempt to use any explosive, fire-arm, poison or other noxious substance for the purpose of killing, stunning, disabling or catching fish, or of in any way rendering fish to be caught more easily;
  - (b) carry or have in his or her possession or control any explosive, fire-arm, poison or other noxious substance for any of the purposes referred to in paragraph (a); or 45
  - (c) engage in a fishing or related activity by a method or in a manner prohibited by the Minister by notice in the *Gazette*.
- (2) No person shall land, sell, receive or possess any fish taken by any means in contravention of this Act. 50



**Possession of prohibited gear**

45. No person shall use, possess or have control of—
- (a) any net or trap, the mesh size of which does not conform to the prescribed minimum mesh size;
  - (b) any gear which does not conform to the standards that may be prescribed for that type of gear; or
  - (c) any gear which is prohibited in terms of this Act.

**Interference with gear**

46. No person shall—
- (a) remove, haul, empty, cast adrift or otherwise interfere with any fishing net, line, pot, trap, gear, tackle, or other equipment belonging to any other person without the consent of that person;
  - (b) place any object in the water, or promote or undertake any activity in a manner so as to obstruct a fishing operation being carried out by another person;
  - (c) destroy, damage, displace or move or alter the position of any fishing net, line, pot, trap, gear, tackle or other fishing equipment, or any buoy, float or other marker attached to it; or
  - (d) remove fish from any fishing net, line, pot, trap, gear, tackle or other fishing equipment belonging to any other person without the consent of that person.

**Driftnet fishing**

47. Except on the authority of a permit issued by the Minister—
- (a) no vessel shall be used for or to assist in any driftnet fishing activities;
  - (b) no person shall engage or assist in any driftnet fishing activities; and
  - (c) no person on board a local fishing vessel or a foreign fishing vessel in respect of which a foreign fishing vessel licence has been issued, shall be in possession of a driftnet or part thereof.

**Fish aggregating devices**

48. (1) An application to place a fish aggregating device in South African waters shall be submitted to the Minister in the manner that the Minister may determine.
- (2) A permit to place a fish aggregating device shall not confer any right to fish.
- (3) The Minister may by notice in the *Gazette*—
- (a) declare any fish aggregating device to be a designated fish aggregating device for the purposes of this section; and
  - (b) determine who may fish within a radius of one nautical mile of a designated fish aggregating device or a class of designated fish aggregating devices.
- (4) Subject to subsection (3), no person shall fish within a radius of one nautical mile from a designated fish aggregating device without the permission of the Minister and unless in accordance with the conditions that he or she may determine.
- (5) Permission to use a fish aggregating device does not affect any obligation to observe applicable conservation or management measures, unless the Minister determines in writing that a particular measure does not apply in respect of fish caught within one nautical mile of that device.

**Stowage of gear**

49. (1) Gear on board any foreign fishing vessel for which a foreign fishing vessel licence has not been issued shall be stowed in the prescribed manner while the vessel is within South African waters.
- (2) A foreign fishing vessel that is licensed in terms of section 39(2) to fish by means of a particular type of gear in any specific area of the South African waters—

- (a) shall stow any other gear on board the vessel in the prescribed manner while the vessel is within that area; and
- (b) shall stow all gear on board the vessel in the prescribed manner while the vessel is within any other area of the South African waters where it is not licensed to fish.

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## CHAPTER 6

### LAW ENFORCEMENT

#### Observers

**50.** (1) The Director-General may designate a person in writing to act as an observer on vessels issued with fishing licences in terms of this Act and shall furnish such an observer with the prescribed identity card. 10

(2) An observer may be designated in accordance with the terms of an agreement contemplated in section 38.

(3) Any person designated in accordance with subsection (2) who is not a citizen of the Republic shall, while in South African waters, be subject to the provisions of this Act for the purposes of carrying out his or her duties and enforcing his or her rights. 15

(4) An observer shall exercise the scientific, compliance, monitoring and other functions determined by the Minister.

(5) Any person on board any vessel issued with a licence or permit shall permit any observer to board and remain on such vessel for the purposes of performing his or her functions. 20

#### Powers of fishery control officers

**51.** (1) For the purposes of enforcing this Act any fishery control officer may with a warrant enter and search any vessel, vehicle, aircraft or premises or seize any property. 25

(2) For the purposes of enforcing this Act any fishery control officer may without a warrant—

- (a) order any foreign fishing vessel in South African waters, and any local fishing vessel in or beyond such waters to stop;
- (b) require the master of a vessel to stop fishing and take the gear of the vessel back on board; 30
- (c) require the master of a vessel to facilitate the boarding of a vessel by all appropriate means;
- (d) go on board a vessel and take with him or her such other persons as he or she may require for assistance in the execution of his or her powers; 35
- (e) muster the crew of a vessel;
- (f) require to be produced, examine and make copies of a certificate of registry, licence, permit, log book, official documents, record of fish caught and any other document required in terms of this Act or relating to a vessel and to the crew or any member thereof or to any person on board the vessel which is in their respective possession or control on board the vessel; 40
- (g) require the master to appear and give an explanation concerning the vessel, the crew, any person on board the vessel and any document referred to in paragraph (f);
- (h) make any examination or enquiry which he or she may consider necessary to ascertain whether any provision of this Act has been contravened; 45
- (i) make an entry dated and signed by him or her in any vessel's log book;
- (j) where he or she has reasonable grounds to believe that an offence in terms of this Act has been or is being committed, take or require the master to take the vessel to any place, port or harbour in the territory of the Republic for the purpose of carrying out any search, examination or enquiry; 50
- (k) give directions to the master and any crew member of any vessel stopped, boarded or searched as may be necessary or reasonably expedient for any

- purpose specified in this Act or for the compliance by the vessel, master or any crew member with any condition of a licence;
- (l) at all reasonable times enter and inspect any fish processing establishment or any other place where fish or fish products are kept or stored; and
- (m) take samples of any fish found in any vessel, vehicle, aircraft or on any premises searched in terms of this section. 5
- (3) A fishery control officer may, without a warrant—
- (a) enter and search any vessel, vehicle, aircraft or premises if he or she has reasonable grounds to believe that an offence has been or is being committed or that fish illegally fished or substances or devices for use contrary to section 44 or 45 are being stowed, if— 10
- (i) the person in control of the vessel, vehicle, aircraft or premises consents to such entry or search; or
- (ii) the fishery control officer has reasonable grounds to believe that a warrant will be issued, if he or she were to apply for such warrant, and the delay caused by the obtaining of such a warrant would defeat the object of the entry or search; 15
- (b) stop, enter and search any vessel, vehicle or aircraft which he or she reasonably suspects is being used or is involved in the commission of an offence in terms of this Act; 20
- (c) seize—
- (i) any property on board any vessel, vehicle or aircraft or on any premises if—
- (aa) the person in control of the vessel, vehicle, aircraft or premises consents to such seizure; or 25
- (bb) the fishery control officer has reasonable grounds to believe that a warrant will be issued, if he or she were to apply for such warrant, and the delay caused by the obtaining of such a warrant would defeat the object of the seizure;
- (ii) any vessel, including its gear, equipment, stores and cargo, and any vehicle or aircraft of which he or she has reasonable grounds to believe that it has been or is being used in the commission of an offence in terms of this Act or in respect of which he or she suspects such offence to have been committed or which he or she knows or has reasonable grounds to suspect that it has been seized or forfeited in terms of any provision of this Act; 30 35
- (iii) any fish or fish product which he or she has reasonable grounds to suspect to have been taken or produced in the commission of such offence or which are possessed in contravention of this Act;
- (iv) any substance or device which he or she has reasonable grounds to suspect to have been used or to be possessed or controlled in contravention of section 44 or 45; 40
- (v) any log book, chart or other document required to be maintained in terms of this Act or in terms of any licence, in respect of which he or she has reasonable grounds to believe that it shows or tends to show, with or without other evidence, the commission of an offence in terms of this Act; or 45
- (vi) anything which he or she has reasonable grounds to believe might be used as evidence in any proceedings in terms of this Act; or
- (d) arrest any person whom he or she has reasonable grounds to suspect to have committed an offence in terms of this Act. 50
- (4) In exercising the powers referred to in this section a fishery control officer may, where necessary, use only the minimum force which is reasonable in the circumstances, with due regard to human dignity and privacy.
- (5) A fishery control officer shall in the exercise of his or her powers in terms of this Act, be deemed to be a peace officer as defined in section 1 of the Criminal Procedure Act, 1977 (Act No. 51 of 1977). 55

#### **Powers of fishery control officers beyond South African waters**

**52.** A fishery control officer may without a warrant following hot pursuit in

accordance with international law as reflected in article 111 of the United Nations Convention on the Law of the Sea—

- (a) stop, board and search outside South African waters, any foreign fishing vessel which he or she has reasonable grounds to believe has been used in the commission of an offence in terms of this Act in South African waters and bring such vessel and all persons and things on board to any place, port or harbour in the territory of the Republic; and 5
- (b) exercise beyond South African waters all the powers conferred on a fishery control officer in terms of this Act.

#### **Seizure of vessels** 10

**53.** (1) Where any vessel is seized in terms of section 51, the master and crew thereof shall take the vessel to such place, port or harbour in the territory of the Republic as the fishery control officer shall require and the vessel may be detained pending the outcome of any proceedings in terms of this Act until it is released on payment or lodging of security in terms of section 62. 15

(2) If a master fails or refuses to take a vessel contemplated in subsection (1) to the designated place, port or harbour, a fishery control officer may take charge of the vessel for the purpose of taking it to the designated place, port or harbour.

#### **Seizure of vehicles or aircraft**

**54.** (1) Where any vehicle or aircraft is seized in terms of section 51, the driver or pilot thereof shall take the vehicle or aircraft to such place in the territory of the Republic as a fishery control officer shall designate as being the nearest or most convenient place for the holding of such vehicle or aircraft and the vehicle or aircraft may be detained pending the outcome of any proceedings in terms of this Act until it is released on payment or lodging of security in terms of section 62. 20 25

(2) If a driver or pilot fails or refuses to take a vehicle or aircraft contemplated in subsection (1) to the designated place, a fishery control officer may take charge of the vehicle or aircraft for the purpose of bringing it to the designated place.

(3) A court with jurisdiction over a vessel seized in terms of section 51, shall have jurisdiction over any vehicle or aircraft seized in connection with the same offence in terms of this section notwithstanding the whereabouts of the said vehicle or aircraft. 30

#### **Immobilisation of vessels, vehicles or aircraft**

**55.** (1) Having regard to the safety of a vessel, vehicle or aircraft seized, taken or detained, which is in the custody of the State in terms of this Act, a fishery control officer may take steps to immobilise it and may remove any part thereof. 35

(2) Any part removed as contemplated in subsection (1) shall be kept safely and returned to the vessel, vehicle or aircraft immediately upon its release from custody.

#### **Co-operation with officials**

**56.** (1) Whenever a fishing control officer or an honorary marine conservation officer exercises any power or performs any duty in terms of this Act, he or she shall at the request of any person affected thereby, produce the identity card contemplated in section 9(3) to such person for inspection. 40

(2) The master and each member of the crew of any fishing vessel, the driver of any vehicle and the pilot and crew of any aircraft shall immediately comply with any lawful instruction given or request made by a fishery control officer and shall facilitate safe boarding, entry and inspection of the vessel, vehicle or aircraft and any gear, equipment, register, document, fish and fish product. 45

(3) The master and each member of the crew of any fishing vessel, the driver of any vehicle and the pilot and crew of any aircraft shall take all measures to ensure the safety of a fishery control officer in the performance of his or her duties. 50

(4) The holder of a permit for and all persons employed at any fish processing establishment, shall immediately comply with any instruction or request given by a fishery control officer, facilitate his or her safe entry and inspection of the fish processing establishment, records, documents, fish and fish products and take all measures necessary to ensure the safety of a fishery control officer in the performance of his or her duties. 5

(5) No person shall—

- (a) assault, obstruct, resist, delay, refuse the boarding of, intimidate or fail to take all reasonable measures to ensure the safety of, or otherwise interfere with a fishery control officer or observer in the performance of his or her duties; 10
- (b) incite or encourage any other person to assault, resist or obstruct any fishery control officer while exercising or performing his or her powers or duties, or any other person lawfully acting under the orders of the fishery control officer in his or her aid;
- (c) use threatening language or behave in a threatening or insulting manner or use abusive language or insulting gestures towards any fishery control officer or observer while exercising or performing his or her powers or duties, or towards any other person lawfully acting under the orders of a fishery control officer in his or her aid; 15
- (d) fail to comply with the lawful requirements of any fishery control officer or observer; 20
- (e) furnish to any fishery control officer any particulars which are false or misleading;
- (f) impersonate or falsely represent himself or herself as a fishery control officer; or 25
- (g) falsely represent himself or herself as a person lawfully acting under a fishery control officer's orders or in his or her aid.

### **Duty to report**

57. A holder of a right, license or permit granted or issued in terms of this Act shall report to the Minister any contravention of the provisions of this Act by any other person. 30

## **CHAPTER 7**

### **JUDICIAL MATTERS**

#### **Offences and penalties**

58. (1) Any person who, subject to the provisions of subsections (2) or (3)— 35
- (a) undertakes fishing or related activities in contravention of—
    - (i) a provision of section 13;
    - (ii) the conditions of any right of access, other right, licence or permit granted or issued in terms of Part 1, 2 or 3 of Chapter 3; or
    - (iii) an authorisation to undertake fishing or related activities in terms of Part 6 or 7 of Chapter 3, but excluding section 39(5); or 40
  - (b) contravenes any other provision of this Act,
- shall be guilty of an offence and liable on conviction to a fine not exceeding two million rand, or to imprisonment for a period not exceeding five years.
- (2) Any person who contravenes— 45
- (a) a provision of an international conservation and management measure inside or outside South African waters, or otherwise fails to comply with any provision of Part 7 of Chapter 3, by means of a vessel registered in the Republic; or
  - (b) the conditions imposed in a high seas fishing permit or high seas fishing vessel licence, 50
- shall be guilty of an offence and liable on conviction to a fine not exceeding three million rand.

(3) Any person who contravenes a provision of section 39(5), 45, 47, 48 or 49 shall be guilty of an offence and liable on conviction to a fine not exceeding five million rand.

(4) A regulation made under this Act may provide that a person who contravenes or fails to comply with a provision thereof, shall be guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding two years.

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### **Limitation of liability**

**59.** (1) The State, the Minister, any person in the employment of an organ of state or any person appointed to perform any function in terms of this Act shall not be liable by virtue of anything done in good faith under a provision of this Act.

(2) The State, the Minister or any persons contemplated in subsection (1) shall not be liable, except in the case of any intentional act or omission on the part of any such person, to any person who, except in the performance of any function in terms of this Act or any other law—

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(a) makes use of any vessel, vehicle or aircraft which is the property or under control of the State;

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(b) is present in any fishing harbour; or

(c) leaves any vessel or any other property in a fishing harbour or makes use of the facilities of a fishing harbour,

or to the spouse or any dependant of any such person, for any loss or damage resulting from any bodily injury, loss of life or loss of or damage to any property caused by or arising out of or in any manner connected with the use of any vessel, vehicle of aircraft referred to in paragraph (a), the presence referred to in paragraph (b) or the presence of any property or the use of any facilities referred to in paragraph (c).

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### **Destruction of evidence**

**60.** (1) No person who, being on board any vessel being pursued, about to be boarded or notified that it will be boarded by a fishery control officer shall throw overboard or destroy any fish, fish product, gear, explosive, fire-arm, poison, noxious substance, chart, log book, document or other thing to avoid the seizure thereof or the detection of any contravention of this Act.

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(2) Subsection (1) shall as far as applicable also apply to vehicles, aircraft, fish processing plants and other premises.

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### **Payment for information leading to conviction**

**61.** The Minister may from money appropriated by Parliament for that purpose and in consultation with the Minister of Finance, pay to any person, excluding a person in the employment of the State or an organ of state who has furnished any information or material of proof which leads to a conviction by a court, a remuneration in cash which, in the opinion of the Minister, is reasonable and fair in the circumstances.

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### **Security for release of vessel, vehicle or aircraft**

**62.** (1) If a fishing vessel, vehicle or aircraft is taken, seized or detained in terms of this Act and judicial proceedings are instituted in respect of an offence for which the vessel has been detained, the master, owner, charterer or agent of the owner or the charterer of the vessel, vehicle or aircraft may at any time apply to the court which will hear the matter, for the release of the vessel, vehicle or aircraft on the provision of security in terms of this section.

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(2) On hearing the application the court shall—

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(a) determine the amount of security to be deposited with the court by adding to the value of the vessel, vehicle or aircraft—

(i) the maximum fine for the offence or offences alleged; and

- (ii) costs and expenses incurred or reasonably foreseen to be incurred by the State, and recoverable in terms of this Act, and order the release of the vessel subject to the lodging of a guarantee or depositing of the security as determined; or
- (b) where it is satisfied that there are special and exceptional circumstances to justify it doing so, order the release of the vessel, vehicle or aircraft subject to the payment of security which is less than the amount contemplated in paragraph (a). 5
- (3) The furnishing of security shall, subject to subsection (4), be subject to the conditions that the court determine. 10
- (4) Any security granted in terms of subsection (2) shall be subject to the condition that, if—
- (a) the accused is found not guilty of the charge; or
- (b) the accused, on being convicted of the charge, pays in full within 14 days, or such time as the court may determine, after he or she is convicted, the amount of the fine imposed by the court and the amount of all costs and expenses due by him or her to the State in terms of subsection (2), 15
- the security shall be of no effect and any amount that has been deposited, shall forthwith be returned to the accused.
- (5) Any security granted in terms of subsection (2) shall be recoverable in full in any court as a debt due to the State jointly and severally by the person or persons by whom the security has been given unless the person or persons prove the due performance of the conditions on which the security was given. 20
- (6) The Minister may order the release of any vessel, vehicle, aircraft or gear, equipment or fish seized in terms of this Act. 25

### **Disposal of perishables**

- 63.** (1) If any fish or other thing of a perishable nature is seized in terms of section 51 the Minister may, notwithstanding any other provision of this Act—
- (a) return the fish or other thing to the person from whom it was seized on receiving adequate security equivalent to the value of the fish or thing; or 30
- (b) cause the sale of the fish or other thing at a price which is reasonable in the circumstances and, if court proceedings are instituted, pay the proceeds of the sale into a suspense account of the Department pending a court order in respect of the forfeiture of the proceeds or, if no proceedings are instituted, release the proceeds to the person from whom the fish or other thing was seized: Provided that, if, after making all reasonable efforts, the Minister is unable to sell the fish or other thing, or where such fish or other things are unfit for sale, he or she may dispose thereof in such other manner as he or she deems fit, including by destruction. 35
- (2) If any live fish has been seized in terms of section 51, it may be released or destroyed at the discretion of the seizing fishery control officer where he or she for any sufficient reason considers such act desirable. 40

### **Treatment of things detained or seized**

- 64.** (1) If any vessel, vehicle, aircraft or other thing has been detained or seized in terms of section 51, and a person who has been properly charged with an offence in relation thereto fails to appear to answer the charge within 90 days of the detention or seizure, the Minister may apply to the court for it to be forfeited to the State and the court shall make such order as it shall deem fit. 45
- (2) If the lawful owner of a vessel, vehicle, aircraft or thing seized or detained in terms of section 51 cannot be traced within 90 days of such seizure it shall be forfeited to the State and be disposed of as the Director-General in his or her discretion shall consider fit. 50
- (3) If a vessel, vehicle, aircraft or thing has been seized or detained in terms of section 51 and the court does not order the forfeiture of it, any proceeds realised from its

disposal shall be returned to the owner thereof or the person having the possession, care or control of it at the time of such detention or seizure.

(4) If the owner of a vessel, vehicle, aircraft or thing or the person having the possession, care or control of it at the time of its seizure or detention is convicted of an offence in terms of this Act and a fine is imposed, it may be detained until all fines, orders for costs and penalties imposed in terms of this Act have been paid. 5

(5) If any payment contemplated in subsection (4) is not made within such time as the court may determine, the vessel, vehicle, aircraft or thing may be sold in satisfaction and the proceeds shall be dealt with in accordance with section 65.

(6) Any vessel, vehicle, aircraft or other thing ordered to be forfeited in terms of this Act may, if no appeal has been lodged at the expiry of the time limited for appeal in a court, be disposed of in the manner that the Minister may determine. 10

### **Application of security**

**65.** Any security or net proceeds of sale held in respect of any vessel, vehicle, aircraft or other thing shall be applied as follows and in that order: 15

- (a) The discharge of any forfeiture ordered in terms of section 68;
- (b) the payment of all fines or a contribution towards such a fine, for offences in terms of this Act or penalties imposed in terms of this Act, arising out of the use of or in connection with the vessel, vehicle, aircraft or other thing;
- (c) the discharge of all orders for costs in proceedings in terms of this Act arising out of the use of or in connection with the vessel, vehicle, aircraft or other thing; 20
- (d) return as provided for in section 64.

### **Liability for loss, damage or deterioration of things in custody**

**66.** The State shall not be liable to any person for any loss, damage to or deterioration in the condition of any vessel, vehicle, aircraft or other thing while in the custody of the State in terms of this Act. 25

### **Removal from custody**

**67.** (1) Any person who knows or can reasonably be expected to know that a vessel, vehicle, aircraft or other thing is held in the custody of the State in terms of this Act and who removes such vessel, vehicle, aircraft or thing, shall be guilty of an offence. 30

(2) If any vessel, vehicle, aircraft or other thing held or forfeited in terms of this Act has been unlawfully removed from the custody of the State it is liable to seizure in accordance with international law.

### **Forfeiture orders by court**

**68.** (1) If any person is convicted of an offence in terms of this Act, the court may, in addition to any other penalty, order that any fishing vessel, together with its gear, equipment, any fish caught unlawfully or the proceeds of sale of such fish or any perishables, and any vehicle or aircraft used or involved in the commission of that offence be forfeited to the State. 40

(2) If any vessel, vehicle, aircraft or other thing seized in terms of this Act, or any security or net proceeds of sale in respect thereof is not forfeited or applied in the discharge of any fine, order for costs or penalty imposed in terms of this Act, it shall be made available to the registered owner or his or her nominee or, in the absence of such persons, a person who appears to be entitled to it. 45

(3) If any vessel, vehicle, aircraft or other thing has been released upon the lodging of security, an order for forfeiture shall, unless the court for special reasons fixes a smaller sum, operate as an order for forfeiture of the security.



(4) If any vessel, vehicle, aircraft or other thing has been released upon the lodging of security, the court may order any person convicted of an offence in connection therewith and the owner of the vessel, vehicle, aircraft or other thing concerned, whether or not he or she is an accused, to pay the difference between the amount lodged in respect of security and the aggregate value of the forfeited property. 5

### **Disposal of forfeited things and discharge of forfeiture orders**

**69.** (1) Any vessel, including its gear, cargo, stores and fuel, and any vehicle or aircraft, gear, net or other equipment, explosive, fire-arm or poison ordered to be forfeited in terms of this Act shall be disposed of in such manner as the Minister may determine. 10

(2) The owner or any other person with real security in any property forfeited in terms of section 68, may apply to court for the release of the property in question or for the realisation of his or her security therein, as the case may be.

(3) The court may release the property contemplated in subsection (2) or order the realisation of the security therein, if the applicant proves that he or she was in no way implicated in the commission of the offence, and that he or she could not have prevented it. 15

### **Jurisdiction of courts**

**70.** (1) Any act or omission in contravention of any of the provisions of this Act which is committed— 20

- (a) by any person within South African waters;
- (b) outside South African waters by any citizen of the Republic or any person ordinarily resident in the Republic; or
- (c) by any person on board any local fishing vessel;

shall be dealt with and judicial proceedings taken as if such act or omission had taken place in the territory of the Republic. 25

(2) Any offence in terms of this Act shall, for purposes in relation to jurisdiction of a court to try the offence, be deemed to have been committed within the area of jurisdiction of the court in which the prosecution is instituted.

(3) Notwithstanding anything to the contrary in any other Act, a magistrate's court shall have jurisdiction to impose any penalty prescribed by this Act. 30

### **Documentary evidence**

**71.** (1) The Minister may issue a certificate stating that—

- (a) a specified vessel was or was not a local fishing vessel or a foreign fishing vessel on a specified date; 35
- (b) a specified vessel or person was or was not on a specified date the holder of any specified licence, permit, authorisation or certificate of registration;
- (c) an appended document is a true copy of the licence, authorisation or certificate of registration for a specified vessel or person and that specified conditions were those of a licence, permit, authorisation or certificate of registration issued in respect of a specified vessel or person; 40
- (d) a particular location or area of water was on a specified date within South African waters, or within an area of South African waters subject to specified conditions;
- (e) an appended chart shows the boundaries on a specified date of South African waters, internal waters, territorial waters, the exclusive economic zone or any area within such waters or zones which is subject to specified conditions; 45
- (f) a call sign, name or number is that of a particular vessel or has been allotted under any system of naming or numbering of vessels to a particular vessel; or
- (g) a particular position or catch report was given in respect of a specified vessel. 50

(2) Any certificate issued in terms of this section shall be—

- (a) signed by the person who made it; and
- (b) headed “Certificate: Section 71 Marine Living Resources Act, 1998”.

(3) In the absence of evidence to the contrary, a document purporting to be a certificate issued in terms of this section shall be deemed to be such a certificate and to have been duly given. 5

(4) In any proceedings for any offence in terms of section 44, a certificate as to the cause and manner of death or injury of any fish, signed by the Director-General, shall, in the absence of the evidence to the contrary, be sufficient evidence as to the matters stated in that certificate. 10

### Validity of certificates

**72.** (1) Subject to this section, in any proceedings in terms of this Act, a certificate issued in terms of section 71 shall be admissible in evidence and shall be *prima facie* evidence of the facts averred in it.

(2) A court may, of its own accord or on application by any party to proceedings, require that the person who issued the certificate attend and give oral evidence at the hearing. 15

(3) Any omission or mistake in any certificate issued in terms of section 71 shall not render it inadmissible in evidence unless the court considers such omission or mistake to be material to any issue in the proceedings concerned, or the court is of the opinion that the defendant or accused is unduly prejudiced thereby. 20

### Certificate as to location of vessel

**73.** (1) A certificate given by a fishery control officer or observer shall be *prima facie* evidence in any proceedings in terms of this Act, of the place or area in which a vessel has been at a particular date and time or during a particular period of time. 25

(2) A fishery control officer shall in any certificate issued in terms of subsection (1) state the following:

- (a) His or her name, address, official position, place of appointment and provision in terms of which he or she is appointed; 30
- (b) the name and, if known, call sign of the fishing vessel concerned;
- (c) the date and time or period of time the vessel was in a place or area;
- (d) the place or area in which it is alleged the vessel was located;
- (e) the position fixing instruments used to fix the place or area referred to in paragraph (d) and their accuracy within their specified limits;
- (f) that he or she checked the position fixing instruments a reasonable time before and after they were used to fix the position and that they appeared to be working correctly; and 35
- (g) if a position fixing instrument which is not a designated machine or is not generally recognised as reliably accurate is used, that he or she checked the instrument as soon as possible after the time concerned against such an instrument. 40

(3) Section 71 shall, with the necessary changes, apply to a certificate issued in terms of this section.

### Designated machines

**74.** (1) The Minister may by notice published in the *Gazette* designate any machine or instrument or class of machines or instruments as a designated machine. 45

(2) The readings of a designated machine shall be admissible as evidence of the facts that they aver if—

- (a) the readings were made by a person who has received training in the operation of designated machines; and 50
- (b) the machine was checked for correct working a reasonable time before and after the readings it is sought to adduce in evidence were made and the machine appeared to be working correctly.

(3) If a designated machine has been checked for correct working and read by a person trained in the operation thereof, it shall, in the absence of evidence to the contrary, be presumed to give accurate readings within the manufacturer’s specified limits. 55

(4) The readings of designated machines may be made from a printout or as observed from a visual display unit.

(5) Any machine contemplated in subsection (1) must be capable either wholly or partially in itself of producing the readings concerned and not merely be a receiver of information or data.

5

### Photographic evidence

**75.** (1) If a photograph is taken of any fishing or related activity and the date and time on and position from which the photograph is taken are simultaneously superimposed upon the photograph, it shall be *prima facie* evidence that the photograph was taken on the date, at the time and in the position so appearing.

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(2) The provisions of subsection (1) shall apply only when—

(a) the camera taking the photograph is connected directly to the instruments which provide the date, time and position concerned; and

(b) the instruments which provide the date, time and position are generally recognised as being accurate or are designated machines or were checked as soon as possible after the taking of the photograph against such instruments.

15

(3) Any fishery control officer or observer who takes a photograph contemplated in subsection (1) may issue a certificate appending the photograph stating the following:

(a) His or her name, address, official position, place of appointment and provision in terms of which he or she is appointed;

20

(b) the name and call sign, if known, of any fishing vessel appearing in the photograph;

(c) the brand and model names of the camera, watch, clock or other instruments supplying the date and time, including the position fixing instrument, and that he or she checked those instruments a reasonable time before and after the taking of the photograph and, if necessary, in accordance with subsection (2)(b), and that they all appeared to be working correctly;

25

(d) the matters set out in subsection (2)(a);

(e) the accuracy of the fixing instrument if used within specified limits;

(f) the maximum possible distance and the direction of the subject of the photograph away from the camera at the time the photograph was taken.

30

(4) Section 71 shall, with the necessary changes, apply to a certificate issued in terms of this section.

### Observation devices

**76.** (1) The Minister may, by notice published in the *Gazette*, designate any device or machine or class of device or machine as an observation device.

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(2) The information or data concerning the vessel's position and fishing activities referred to in subsection (3) may be fed or captured manually into the observation device or automatically from machines aboard the vessel or ascertained by the use of the observation device's transmissions in conjunction with other machines.

40

(3) All information or data obtained or ascertained by the use of an observation device, shall be *prima facie* evidence that such information—

(a) came from the vessel so identified;

(b) was accurately relayed or transferred; and

(c) was given by the master, owner and charterer of the fishing vessel,

45

and evidence may be given of information and data so obtained or ascertained whether from a printout or visual display unit.

(4) Subsection (3) applies irrespective of whether or not the information was stored before or after any transmission or transfer.

(5) Any fishery control officer or observer may issue a certificate stating the following:

50

(a) His or her name, address, official position, place of appointment and provision in terms of which he or she is appointed;

(b) that he or she is competent to read the printout or visual display unit of any machine capable of obtaining or ascertaining information from an observation device;

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- (c) the date and time the information was obtained or ascertained from the observation device and the details thereof;
- (d) the name and call sign of the vessel on which the observation device is or was located as known to him or her or as ascertained from any official register, record or other document; and 5
- (e) that there appeared to be no malfunction in the observation device, its transmissions or other machines used in obtaining or ascertaining the information.
- (6) Section 71 shall, with the necessary changes, apply to a certificate issued in terms of this section. 10
- (7) No person shall destroy, damage, render inoperative or otherwise interfere with an observation device or machine aboard a vessel, vehicle or aircraft which automatically feeds or inputs information or data into an observation device.
- (8) No person shall intentionally feed or capture information or data into an observation device which is not officially required in terms of this Act, or is false or inaccurate. 15

## CHAPTER 8

### GENERAL PROVISIONS

#### Power to make regulations

77. (1) The Minister may make regulations regarding— 20
- (a) any matter required or permitted to be prescribed in terms of this Act; and
- (b) generally all matters which are reasonably necessary or expedient to be prescribed in order to achieve the objects of this Act.
- (2) Without prejudice to the generality of the provisions of subsection (1), the Minister may make regulations— 25
- (a) prescribing fines greater in amount than those already specified in any provision of this Act—
- (i) if necessary as a result of inflation or a rise in the consumer price index; or
- (ii) to be in accordance with international law; 30
- (b) providing for the forfeiture of any vessel, vehicle, aircraft or thing used in the commission of an offence in terms of this Act;
- (c) providing for the forfeiture of any fish caught in contravention of any provision of this Act;
- (d) providing for the imposition of an additional fine to an amount representing 35 the value in whole or in part of any vessel, vehicle, aircraft, gear, equipment or fish in the place of forfeiture of such vessel, vehicle, aircraft, gear, equipment or fish;
- (e) prescribing fisheries management and conservation measures, including mesh sizes, gear standards, minimum species sizes, closed seasons, closed areas, prohibited methods of fishing or gear and schemes for limiting entry into all or any specified fisheries; 40
- (f) to regulate the catching and utilisation of fish taken incidentally when fishing for a species for which a licence or permit has been issued;
- (g) regarding licences or authorisation in respect of any vessel or class or category 45 of vessels to be used for fishing, related activities or any other purpose pursuant to this Act, including application procedures and forms, and the format and requirements for the issuing of licences or permits, grounds for denial, terms and conditions;
- (h) prescribing different classes of and formats for licences or permits, including 50 application procedures and forms, and the area or fishing method or type of gear in respect of which each class of licence or permit shall be valid;
- (i) prescribing the operation of, and conditions and procedures to be observed by any fishing vessel while in South African waters, having due regard to the provisions of the United Nations Convention on the Law of the Sea; 55
- (j) prescribing the operation of, and conditions and procedures to be observed by,

- any vessel which enters South African waters for any purpose, including transiting the South African fisheries waters, in terms of this Act;
- (k) regulating—
    - (i) the navigation of foreign fishing vessels through South African waters, having due regard to the provisions of the United Nations Convention on the Law of the Sea; and 5
    - (ii) the manner in which gear is to be stowed aboard such vessels;
  - (l) regarding the catching, loading, landing, handling, processing, transshipping, transporting, possession and disposal of fish;
  - (m) regarding the import, export, trade in, distribution and marketing of fish and fish products; 10
  - (n) prescribing the manner in which any gear shall be stowed;
  - (o) providing for the implementation of any agreement or arrangement entered into under section 38 or 42;
  - (p) regarding the appointment, powers and duties of fishery control officers, honorary marine conservation officers and observers; 15
  - (q) prescribing the duties and procedures to be followed by the master and crew of any vessel in respect of fishery control officers and observers;
  - (r) prescribing the licensing, control and use of fish aggregating devices and the rights to the aggregated fish, and setting times and the minimum distances from such devices any vessel may fish around such devices; 20
  - (s) regulating or prohibiting the use of any diving apparatus, spear guns or other similar devices for fishing or related activities;
  - (t) establishing standards and measures for the safety of local fishers and local fishing vessels; 25
  - (u) requiring the provision of statistical and other information related to fisheries, including fishing log books, and the format in which the information shall be recorded;
  - (v) regulating and controlling the operation of fish processing establishments, including quality control measures and inspection of such establishments; 30
  - (w) regarding the prevention of marine pollution;
  - (x) regulating or prohibiting, either generally or in any specified fisheries—
    - (i) the management and protection of marine protected areas;
    - (ii) the taking of coral;
    - (iii) the setting of fish traps, nets, fish pens or seine nets; 35
    - (iv) the taking of fish for aquarium purposes; or
    - (v) the taking of turtles;
  - (y) establishing measures for the protection of specified species;
  - (z) governing the administration of fishing harbours and any other matter incidental thereto; 40
  - (aa) relating to the circumstances in which fish which have been caught shall be returned or not returned to the sea or shall be released or not released;
  - (bb) relating to the dumping or discharging of anything which is or may be injurious to fish, or which may disturb or change the ecological balance in any area of the sea; 45
  - (cc) to ensure the orderly development and control of mariculture in the Republic;
  - (dd) to ensure the orderly development of high seas fishing by South African persons and vessels.

### **Assignment to provinces**

**78.** The Minister may assign the administration of any provision of this Act to the executive authority of a province. 50

### **Delegation of powers**

**79.** (1) The Minister may—

- (a) upon the conditions that he or she deems fit, delegate any or all the powers conferred upon him or her in terms of this Act, save a power to make regulations, to the Director-General or an officer of the Department nominated by the Director-General; or
- (b) by notice in the *Gazette*, delegate any power conferred upon him or her in terms of this Act, excluding the power to make regulations, to an authority in the local sphere of government.

(2) The Director-General may delegate any power conferred upon him or her in terms of this Act to an officer in the Department upon the conditions that he or she deems fit.

(3) No delegation of any power shall prevent the exercise of such power by the Minister or the Director-General.

### **Appeal to Minister**

**80.** (1) Any affected person may appeal to the Minister against a decision taken by any person acting under a power delegated in terms of this Act or section 238 of the Constitution.

(2) An appeal under subsection (1) must be noted and shall be dealt with in the manner and in accordance with the procedure prescribed by the Minister.

(3) The Minister shall consider any matter submitted to him or her on appeal, after giving every person with an interest in the matter an opportunity to state his or her case.

### **Exemptions**

**81.** (1) If in the opinion of the Minister there are sound reasons for doing so, he or she may, subject to the conditions that he or she may determine, in writing exempt any person or group of persons or organ of state from a provision of this Act.

(2) An exemption granted in terms of subsection (1) may at any time be cancelled or amended by the Minister.

### **Inquiries**

**82.** (1) The Minister may order an inquiry into any matter forming the subject matter of this Act.

(2) For the purposes of an inquiry contemplated in subsection (1), the Minister may appoint one or more persons, including a chairperson, as a committee to conduct the inquiry.

(3) A committee contemplated in subsection (2) may—

- (a) order any person who in its opinion may be able to give information of material importance concerning the subject of the inquiry, or who is believed to have in his or her possession or custody or control, any register, book, document or thing which may have a bearing on that subject, to appear before the committee with such register, book, document or thing;
- (b) call upon, and administer an oath to, or accept an affirmation from any person present at the inquiry, whether he or she has been or could have been ordered in terms of paragraph (a);
- (c) interrogate or require any person who has been called upon in terms of paragraph (b) to produce a register, book, document or thing referred to in paragraph (a).

(4) An order for the attendance before a committee shall be in the form determined by that committee, and shall be signed by the chairperson.

(5) The law relating to privilege as applicable to a person to give evidence or produce a register, book, document or thing before a court of law, shall be applicable in respect of the interrogation of, or production of a register, book, document or thing by, a person referred to in subsection (3).

### **Scientific investigations and practical experiments**

**83.** The Minister may, notwithstanding the provisions of this Act, permit any scientific investigation or practical experiment.

### Repeal of laws, and savings

**84.** (1) The laws mentioned in Schedule 1 are hereby repealed to the extent indicated in the third column thereof.

(2) A registration of, or any licence in respect of, a fishing boat, factory or implement and any right, permit or permission for the performance of any act in connection with fish or fish products under any provision of a law referred to in subsection (1) shall be deemed to be an appropriate registration, licence, permit, right or permission in terms of the corresponding provision of this Act (if any), respectively, for the unexpired portion of the period for which it would have been valid had this Act not been passed. 5

(3) Notwithstanding the provisions of subsection (2), the Minister may by notice in the *Gazette* terminate a right of exploitation granted in terms of a provision of a law referred to in subsection (1). 10

(4) An area set aside as a marine reserve under a provision of a law referred to in subsection (1), shall be deemed to have been declared a marine protected area in terms of this Act. 15

### Transitional measures

**85.** Notwithstanding the provisions of section 84, the Minister shall for a period of six months after the commencement of this Act, exercise the powers of all institutions established by or under any Act repealed by that section, including the Sea Fishery Advisory Committee and Quota Board established by the Sea Fishery Act, 1988 (Act No. 12 of 1988). 20

### Short title and commencement

**86.** This Act shall be called the Marine Living Resources Act, 1998, and shall come into operation on a date fixed by the President by proclamation in the *Gazette*.

**Schedule 1****(Section 84)**

<b>No. and year of law</b>	<b>Short title</b>	<b>Extent of repeal</b>
Act No. 12 of 1988	Sea Fishery Act, 1988	The whole, except— (a) section 1 in its application to sections 29, 38, 47 and 50(1), (2) and (3); (b) section 29; (c) section 38 in its application to shells; (d) section 47 in its application to sections 29 and 38; (e) section 48 in its application to shells; and (f) section 50(1), (2) and (3) in its application to shells
Act No. 98 of 1990	Sea Fishery Amendment Act, 1990	The whole, except sections 1, 10(d) and 12
Act No. 57 of 1992	Sea Fishery Amendment Act, 1992	The whole, except sections 1, 10 and 18(a)
Act No. 129 of 1993	General Law Third Amendment Act, 1995	Sections 66, 67 and 68
Act No. 15 of 1994	Maritime Zones Act, 1994	Section 15(1) in respect of the amendment of the Sea Fishery Act, 1988
Act No. 74 of 1995	Sea Fishery Amendment Act, 1995	The whole, except section 5
Act No. 49 of 1996	General Law Amendment Act, 1996	Section 1 in respect of the amendment of the Sea Fishery Act, 1988
Act No. 88 of 1996	Abolition of Restrictions on the Jurisdiction of Courts Act, 1996	Sections 103 and 104



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**REPUBLIC OF SOUTH AFRICA**

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**NATIONAL HERITAGE  
RESOURCES ACT**

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**REPUBLIEK VAN SUID-AFRIKA**

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**WET OP NASIONALE  
ERFENISHULPBRONNE**

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**No           , 1999**

# ACT

**To introduce an integrated and interactive system for the management of the national heritage resources; to promote good government at all levels, and empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations; to lay down general principles for governing heritage resources management throughout the Republic; to introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa; to establish the South African Heritage Resources Agency together with its Council to co-ordinate and promote the management of heritage resources at national level; to set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance; to control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries; to enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources; to provide for the protection and management of conservation-worthy places and areas by local authorities; and to provide for matters connected therewith.**

## PREAMBLE

This legislation aims to promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations. Our heritage is unique and precious and it cannot be renewed. It helps us to define our cultural identity and therefore lies at the heart of our spiritual well-being and has the power to build our nation. It has the potential to affirm our diverse cultures, and in so doing shape our national character.

Our heritage celebrates our achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing and material and symbolic restitution and it promotes new and previously neglected research into our rich oral traditions and customs.

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#### SCHEDULE

**B**E IT ENACTED by the Parliament of the Republic of South Africa, as follows:—

#### **Application and interpretation**

1. This Act binds the State.

#### **Definitions**

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2. In this Act, unless the context requires otherwise—
  - (i) “alter” means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or other decoration or any other means; (xiiil)
  - (ii) “archaeological” means—
    - (a) material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures; 10
    - (b) rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation; 15
    - (c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation; and 20

25

- (d) features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found; (ii)
- (iii) “conservation”, in relation to heritage resources, includes protection, maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance; (vi) 5
- (iv) “Council” means the Council of the South African Heritage Resources Agency established in terms of section 14; (xxxv)
- (v) “cultural property agreement” in relation to a foreign state, means an agreement between South Africa and a foreign state or an international agreement to which South Africa and a foreign state are both parties, relating to the prevention of illicit international traffic in cultural property; (xx) 10
- (vi) “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance; (xix)
- (vii) “Department” means the national department responsible for arts and culture and heritage; (viii) 15
- (viii) “development” means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including— 20
- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carrying out any works on or over or under a place;
- (c) subdivision or consolidation of land comprising, a place, including the structures or airspace of a place;
- (d) constructing or putting up for display signs or hoardings; 25
- (e) any change to the natural or existing condition or topography of land; and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil; (xxix)
- (ix) “Director-General” means the Director-General of the Department; (ix)
- (x) “expropriate” means the process as determined by the terms of and according to procedures prescribed in the Expropriation Act, 1975 (Act No. 63 of 1975); (xxviii) 30
- (xi) “foreign cultural property”, in relation to a reciprocating state, means any object that is specifically designated by that state as being of importance for archaeology, history, literature, art or science; (vii) 35
- (xii) “*Gazette*” means the *Government Gazette*; (xl)
- (xiii) “grave” means a place of interment and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place; (xvi)
- (xiv) “heritage agreement” means an agreement referred to in section 42; (xiii) 40
- (xv) “heritage register” means a list of heritage resources in a province; (xiv)
- (xvi) “heritage resource” means any place or object of cultural significance; (xi)
- (xvii) “heritage resources authority” means the South African Heritage Resources Agency, established in terms of section 11, or, insofar as this Act is applicable in or in respect of a province, a provincial heritage resources authority; (xii) 45
- (xviii) “heritage site” means a place declared to be a national heritage site by SAHRA or a place declared to be a provincial heritage site by a provincial heritage resources authority; (xv)
- (xix) “improvement”, in relation to heritage resources, includes the repair, restoration and rehabilitation of a place protected in terms of this Act; (xivl) 50
- (xx) “land” includes land covered by water and the air space above the land; (xvii)
- (xxi) “living heritage” means the intangible aspects of inherited culture, and may include—
- (a) cultural tradition;
- (b) oral history; 55
- (c) performance;
- (d) ritual;
- (e) popular memory;

- (f) skills and techniques;
- (g) indigenous knowledge systems; and
- (h) the holistic approach to nature, society and social relationships; (xxi)
- (xxii) “local authority” means a municipality as defined in section 10B of the Local Government Transition Act, 1993 (Act No. 209 of 1993); (xxxii) 5
- (xxiii) “management”, in relation to heritage resources, includes the conservation, presentation and improvement of a place protected in terms of this Act; (v)
- (xxiv) “MEC”, unless otherwise stated and insofar as a provision of this Act is applicable in or in respect of a province, means the member of the executive council of a province responsible for cultural matters; (xxii) 10
- (xxv) “meteorite” means any naturally-occurring object of extraterrestrial origin; (xxiii)
- (xxvi) “Minister” means the Minister responsible for arts and culture; (xxiv)
- (xxvii) “national estate” means the national estate as defined in section 3; (xxv)
- (xxviii) “national symbols” means any heraldic representation so determined under section 5 of the Heraldry Act, 1963 (Act No. 18 of 1963); (xxvi) 15
- (xxix) “object” means any movable property of cultural significance which may be protected in terms of any provisions of this Act, including—
- (a) any archaeological artefact;
- (b) palaeontological and rare geological specimens; 20
- (c) meteorites; and
- (d) other objects referred to in section 3; (xvii)
- (xxx) “owner” includes the owner’s authorised agent and any person with a real interest in the property and—
- (a) in the case of a place owned by the State or State-aided institutions, the Minister or any other person or body of persons responsible for the care, management or control of that place; 25
- (b) in the case of tribal trust land, the recognised traditional authority; (x)
- (xxxi) “palaeontological” means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trances; (xxxii) 30
- (xxxii) “place” includes—
- (a) a site, area or region;
- (b) a building or other structure which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure; 35
- (c) a group of buildings or other structures which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures; 40
- (d) an open space, including a public square, street or park; and
- (e) in relation to the management of a place, includes the immediate surroundings of a place; (xxxiii)
- (xxxiii) “planning” means urban and regional planning, as contemplated in the Physical Planning Act, 1991 (Act No. 125 of 1991), and provincial town planning and land use planning legislation; (iii) 45
- (xxxiv) “planning authority” means an office of the State, including a province, a local authority or a regional authority, which is invested with a physical planning capacity; (iv)
- (xxxv) “prescribe” means prescribed by regulation; (xvi) 50
- (xxxvi) “presentation” includes—
- (a) the exhibition or display of;
- (b) the provision of access and guidance to;
- (c) the provision, publication or display of information in relation to; and
- (d) performances or oral presentations related to, 55
- heritage resources protected in terms of this Act; (i)

- (xxxvii) “provincial heritage resources authority”, insofar as this Act is applicable in a province, means an authority established by the MEC under section 23; (xxxiv)
- (xxxviii) “public monuments and memorials” means all monuments and memorials—
- (a) erected on land belonging to any branch of central, provincial or local government, or on land belonging to any organisation funded by or established in terms of the legislation of such a branch of government; or
  - (b) which were paid for by public subscription, government funds, or a public-spirited or military organisation, and are on land belonging to any private individual; (xxx)
- (xxxix) “reciprocating state” means a foreign state that is party to a cultural property agreement; (xviii)
- (xl) “regulations” means regulations made under this Act; (xxxvi)
  - (xli) “SAHRA” means the South African Heritage Resources Agency, established in terms of section 11; (xxxvii)
  - (xlii) “site” means any area of land, including land covered by water, and including any structures or objects thereon; (xlii)
  - (xliii) “State” includes a province; (xxxix)
  - (xliv) “structure” means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith; (xli)
  - (xlv) “supported body” means a body funded or financially supported by the State, and includes State-owned enterprises; (xxvii)
  - (xlvi) “this Act” includes the regulations; (xviii)
  - (xlvii) “victims of conflict” means—
    - (a) certain persons who died in any area now included in the Republic as a direct result of any war or conflict as specified in the regulations, but excluding victims of conflict covered by the Commonwealth War Graves Act, 1992 (Act No. 8 of 1992);
    - (b) members of the forces of Great Britain and the former British Empire who died in active service in any area now included in the Republic prior to 4 August 1914;
    - (c) persons who, during the Anglo-Boer War (1899-1902) were removed as prisoners of war from any place now included in the Republic to any place outside South Africa and who died there; and
    - (d) certain categories of persons who died in the “liberation struggle” as defined in the regulations, and in areas included in the Republic as well as outside the Republic; (xxxviii)
- (xlviii) “wreck” has the meaning given under the definition of “archaeological” in this section. (xviii)

## CHAPTER I

### SYSTEM FOR MANAGEMENT OF NATIONAL HERITAGE RESOURCES

#### *Part 1: General Principles*

##### **National estate**

**3.** (1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include—

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;

- (e) geological sites of scientific or cultural importance;
  - (f) archaeological and palaeontological sites;
  - (g) graves and burial grounds, including—
    - (i) ancestral graves;
    - (ii) royal graves and graves of traditional leaders; 5
    - (iii) graves of victims of conflict;
    - (iv) graves of individuals designated by the Minister by notice in the *Gazette*;
    - (v) historical graves and cemeteries; and
    - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983); 10
  - (h) sites of significance relating to the history of slavery in South Africa;
  - (i) movable objects, including—
    - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens; 15
    - (ii) objects to which oral traditions are attached or which are associated with living heritage;
    - (iii) ethnographic art and objects;
    - (iv) military objects;
    - (v) objects of decorative or fine art; 20
    - (vi) objects of scientific or technological interest; and
    - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996). 25
- (3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—
- (a) its importance in the community, or pattern of South Africa's history;
  - (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage; 30
  - (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
  - (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects; 35
  - (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
  - (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
  - (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; 40
  - (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
  - (i) sites of significance relating to the history of slavery in South Africa.

#### **Application** 45

- 4.** This Chapter establishes the national system for the management of heritage resources which it applies throughout the Republic and—
- (a) also applies to the actions of the State and a local authority;
  - (b) serves as guidelines by reference to which any heritage resources authority, whether established in terms of this Act or any other law, and any other competent authority must exercise any discretion or take any decision in terms of this Act or any other law dealing with heritage resources management; 50
  - (c) serves as the general framework with which—
    - (i) any heritage resources authority must perform its functions and make recommendations; and 55



- (ii) those recommendations must be considered by any competent authority in terms of this Act or any other law dealing with heritage resources management; and
- (d) establishes the South African Heritage Resources Agency to manage the national estate and makes provision for the establishment of provincial heritage resources authorities to manage provincial and local heritage resources. 5

### **General principles for heritage resources management**

5. (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognise the following principles: 10

- (a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival; 15
- (b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans;
- (c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and 20
- (d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.
- (2) To ensure that heritage resources are effectively managed—
  - (a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and 25
  - (b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.
- (3) Laws, procedures and administrative practices must—
  - (a) be clear and generally available to those affected thereby; 30
  - (b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and
  - (c) give further content to the fundamental rights set out in the Constitution.
- (4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management. 35
- (5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.
- (6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development. 40
- (7) The identification, assessment and management of the heritage resources of South Africa must—
  - (a) take account of all relevant cultural values and indigenous knowledge systems; 45
  - (b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;
  - (c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs; 50
  - (d) contribute to social and economic development;
  - (e) safeguard the options of present and future generations; and
  - (f) be fully researched, documented and recorded.

### Principles for management of heritage resources

6. (1) SAHRA, after consultation with the Minister, may by notice in the *Gazette*—
- (a) prescribe any principle for heritage resources management in addition to, but not inconsistent with, the principles set out in section 5;
  - (b) prescribe any principle as set out in section 5 in greater detail, but not inconsistent therewith; 5
  - (c) publish for general information national policy relating to heritage resources management or any aspect thereof which is consistent with the principles set out in section 5 or prescribed under paragraphs (a) and (b),
- whereupon such principle or policy must apply throughout the Republic. 10
- (2) A provincial heritage resources authority may, by notice in the *Provincial Gazette*—
- (a) prescribe any principles for heritage resources management in addition to, but not inconsistent with, the principles set out in section 5 or prescribed by SAHRA under subsection (1); 15
  - (b) prescribe any principle as set out in section 5 or prescribed by SAHRA under subsection (1) in greater detail, but not inconsistent therewith; and
  - (c) publish for general information provincial policy relating to heritage resources management or any aspect thereof which is consistent with the principles set out in section 5 or prescribed under subsection (1) or paragraphs (a) and (b) of this subsection, 20
- whereupon such principle or policy shall apply in the province on the basis set out in section 5.
- (3) A heritage resources authority must, before prescribing any principle or general policy under subsection (1) or (2)— 25
- (i) make a draft of such principle or policy available to the public; and
  - (ii) consider any comment on such draft received from any person during a reasonable period after such publication.

### Heritage assessment criteria and grading

7. (1) SAHRA, in consultation with the Minister and the MEC of every province, must by regulation establish a system of grading of places and objects which form part of the national estate, and which distinguishes between at least the categories— 30
- (a) Grade I: Heritage resources with qualities so exceptional that they are of special national significance;
  - (b) Grade II: Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and 35
  - (c) Grade III: Other heritage resources worthy of conservation,
- and which prescribes heritage resources assessment criteria, consistent with the criteria set out in section 3(3), which must be used by a heritage resources authority or a local authority to assess the intrinsic, comparative and contextual significance of a heritage resource and the relative benefits and costs of its protection, so that the appropriate level of grading of the resource and the consequent responsibility for its management may be allocated in terms of section 8. 40
- (2) A heritage resources authority may prescribe detailed heritage assessment criteria, consistent with the criteria set out in section 3(3), for the assessment of Grade II and Grade III heritage resources in a province. 45

### Responsibilities and competence of heritage resources authorities and local authorities for identification and management of national estate

8. (1) There is a three-tier system for heritage resources management, in which national level functions are the responsibility of SAHRA, provincial level functions are the responsibility of provincial heritage resources authorities and local level functions are the responsibility of local authorities. Heritage resources authorities and local authorities are accountable for their actions and decisions and the performance of functions under this system. 50 55

(2) SAHRA is responsible for the identification and management of Grade I heritage resources and heritage resources in accordance with the applicable provisions of this Act, and shall co-ordinate and monitor the management of the national estate in the Republic.

(3) A provincial heritage resources authority is responsible for the identification and management of Grade II heritage resources and heritage resources which are deemed to be a provincial competence in terms of this Act. 5

(4) A local authority is responsible for the identification and management of Grade III heritage resources and heritage resources which are deemed to fall within their competence in terms of this Act. 10

(5) For the purpose of any application for a permit or other authorisation to perform any action which is controlled in terms of this Act or provincial heritage legislation, a formal protection by a heritage resources authority at a higher level takes precedence over any formal or general protection at a local level, without prejudice to any incentives offered at any level. 15

(6) (a) A provincial heritage resources authority or a local authority shall not perform any function in terms of this Act or any other law for the management of heritage resources unless it is competent to do so. The capacity of a provincial heritage resources authority or local authority shall be assessed in terms of criteria prescribed by the Minister, including the availability of adequate staff, expertise, experience and administrative systems, to be applied— 20

(i) by SAHRA, in the assessment of the capacity of provincial authorities to perform specific functions in relation to prescribed categories of heritage resources; and

(ii) by provincial heritage resources authorities, to establish the capacity of local authorities to perform any function under this Act: 25

Provided that, in the event of a dispute, the matter shall be submitted to arbitration.

(b) If an authority at provincial or local level does not have the capacity or is not competent to perform a specific function for which it is responsible under this section, that function shall be performed on an agency basis by an authority at a higher level or a competent authority on the same level. 30

(c) A provincial heritage resources authority or a local authority shall apply to the relevant authority for the assessment of its competence under paragraph (a) in the manner prescribed by the assessing authority, and may apply for reassessment within the period and on the conditions prescribed by the assessing authority. 35

(d) The assessing authority may at any time, and shall at least every two years, reassess the competence of a subordinate authority and review the assumption of functions and powers under this Act.

### **Rights, duties and exemptions of State and supported bodies**

**9.** (1) All branches of the State and supported bodies must give heritage resources authorities such assistance in the performance of their functions as is reasonably practicable. 40

(2) All branches of the State and supported bodies must, on the request of a heritage resources authority, make available for its use and incorporation into its data base any information which it has on record on heritage resources under its control: Provided that the body supplying such information may set out conditions regarding the disclosure and distribution of such information by the heritage resources authority. 45

(3) Each State department and supported body must—

(a) maintain and conserve the heritage resources under its control in accordance with standards and procedures set out in regulations by SAHRA in consultation with the Department of Public Works; 50

(b) submit annually to SAHRA a report on the maintenance and development of such resources;

- (c) in accordance with regulations, on the request of the Minister, or within 10 years from the commencement of this Act, compile and submit to SAHRA, information on and an inventory of such heritage resources;
- (d) on the request of the Minister and in accordance with regulations, prepare management plans for specified heritage resources; 5
- (e) not take any action that adversely affects such a resource unless the authority concerned is satisfied that there is no feasible and prudent alternative to the taking of that action and that all measures that can reasonably be taken to minimise the adverse effect will be taken;
- (f) at the initiation of the planning process of the project, or at least 90 days before taking any action that could adversely affect such heritage resource, whichever is the greater, inform SAHRA of the proposed action and give them a reasonable opportunity to consider and comment on it; and 10
- (g) where the destruction of such heritage resources is permitted in terms of this Act, record such resources in accordance with standards set by SAHRA and undertake any other mitigating actions which may be required by SAHRA. 15
- (4) Where SAHRA has been informed of a proposed action by a State Department or supported body, it must, as soon as practicable, submit its comments to the Department or supported body.
- (5) An action for the purpose of this section shall be deemed to include the making of a recommendation which, if adopted, would affect a heritage resource, the making of a decision, the approval of a programme, the issue of a licence or the granting of a permission. 20
- (6) Compliance with subsection (3) does not exempt a State Department or supported body from complying with requirements in terms of this Act, regarding any heritage resource in its ownership which is protected in terms of this Act or equivalent provincial legislation. 25
- (7) The head of a government body at the national level of government must—
- (a) inform SAHRA of his or her intention to destroy or delete any architectural or technical drawings in whatever medium, as may be defined in the regulations published by SAHRA in consultation with the National Archivist; and 30
- (b) make such drawings available to SAHRA free of charge if requested by SAHRA.
- (8) The head of a government body at the provincial or local level of government must— 35
- (a) inform the provincial heritage resources authority of his or her intention to destroy or delete any architectural or technical drawings in whatever medium; and
- (b) make such drawings available to a heritage resources authority free of charge.
- (9) The Registrar of Deeds must inform SAHRA or the relevant heritage resources authority, in a notice as prescribed, of the particulars of the registration of transfer or subdivision of any place which is formally protected by such heritage resources authority in terms of Part 1 of Chapter 2 of this Act, within 14 days of such registration. 40
- (10) When—
- (a) a place has been declared a national heritage site or a provincial heritage site under section 27; 45
- (b) a place has been designated a protected area under section 28;
- (c) a place has been provisionally protected for a period longer than six months under section 29;
- (d) a place has been entered in a heritage register under section 30; 50
- (e) a place has been included in a heritage area under section 31;
- (f) a heritage agreement has been entered into in respect of a place for a period exceeding six months under section 42;
- (g) an order of no development under section 51(8) has been made in respect of a place, 55

- the heritage resources authority concerned must furnish the Surveyor-General and the Registrar of Deeds in whose deeds registry the land in question is registered with—
- (i) a copy of the notice in the *Gazette* or the *Provincial Gazette*;
  - (ii) the particulars of the protection;
  - (iii) a copy of any survey, including any diagram or plan, made under section 25(2)(d); and 5
  - (iv) a copy of the relevant order of no development or of a heritage agreement.
- (11) The Registrar of Deeds must—
- (a) endorse the title deed of the place in question filed in the deeds office;
  - (b) make an entry in the appropriate registers and upon the owner's title deed as soon as it is lodged in the deeds office, relating to the particulars furnished in terms of subsection (10); 10
  - (c) identify the area of the protected place; and
  - (d) clearly state the particulars of the protection order or heritage agreement.
- (12) The Surveyor-General must— 15
- (a) endorse upon the relevant records filed in his or her office an entry referring to the notice furnished in terms of subsection (10); and
  - (b) state the particulars of the protection order or heritage agreement in broad terms.
- (13) (a) When— 20
- (i) any notice is amended or withdrawn under section 27(7);
  - (ii) the designation of a protected area is withdrawn under section 28(1) or (2);
  - (iii) a provisional protection for a period longer than six months is withdrawn under section 29(1)(b) or (2)(b);
  - (iv) an entry in a heritage register is amended or deleted; 25
  - (v) a place is excluded from a heritage area; or
  - (vi) an order of no development is amended or repealed under section 51(11),
- the heritage resources authority concerned must furnish a copy of the notice or order to the Registrar of Deeds and the Surveyor-General.
- (b) The Registrar of Deeds must make the necessary endorsement upon the relevant title deeds and in the appropriate registers. 30
  - (c) The Surveyor-General must make the necessary endorsement upon the relevant records filed in his or her office.

### General principles of procedure

- 10.** (1) The general principles of procedure set out in subsection (2) apply to any decision regarding the administration and management of the national estate by an authority to which a responsibility has been assigned in terms of section 7 and any other competent authority to which functions and powers for the administration and management of the national estate have been assigned or delegated, including any decision— 35
- (a) to formally protect a heritage resource by notice in the *Gazette* or *Provincial Gazette*;
  - (b) to issue or not to issue a permit; and
  - (c) taken by any person or authority to whom an appeal is made. 40
- (2) The decisions contemplated in subsection (1) must be taken in accordance with the following general principles: 45
- (a) The decisions must be consistent with the principles or policy set out in section 5 or prescribed under section 6;
  - (b) a meeting at which decisions are taken, must be open to the public and the agenda and minutes must be available for public scrutiny: Provided that when there is good reason to do so, a matter may, by decision of the majority of members present, be declared confidential and the discussion and minutes may be excepted from public scrutiny; 50
  - (c) a person who may be affected by a decision has the right of appearance at such meeting; and 55
  - (d) written reasons must be given for any decision upon request.

*Part 2: Constitution, function, powers and duties of heritage resources authorities*

**Establishment of South African Heritage Resources Agency**

**11.** There is hereby established an organisation to be known as the South African Heritage Resources Agency (SAHRA) which shall be a body corporate capable of suing and being sued in its corporate name and which shall be governed by a Council established in terms of section 14. 5

**Object of SAHRA**

**12.** The object of SAHRA is to co-ordinate the identification and management of the national estate.

**Functions, powers and duties of SAHRA** 10

- 13.** (1) The general functions of SAHRA are to—
- (a) establish national principles, standards and policy for the identification, recording and management of the national estate in terms of which heritage resources authorities and other relevant bodies must function with respect to South African heritage resources; 15
  - (b) co-ordinate the management of the national estate by all agencies of the State and other bodies and monitor their activities to ensure that they comply with national principles, standards and policy for heritage resources management;
  - (c) identify, record and manage nationally significant heritage resources and keep permanent records of such work; 20
  - (d) advise, assist and provide professional expertise to any authority responsible for the management of the national estate at provincial or local level, and assist any other body concerned with heritage resources management;
  - (e) promote and encourage public understanding and enjoyment of the national estate and public interest and involvement in the identification, assessment, recording and management of heritage resources; 25
  - (f) promote education and training in fields related to the management of the national estate; and
  - (g) perform any other functions assigned to it by this Act or as directed by the Minister. 30
- (2) Without limiting the generality of subsection (1) and in addition to the general powers and duties conferred in terms of section 25, SAHRA—
- (a) must investigate and advise the Council on—
    - (i) the state of South Africa's heritage resources and any steps necessary to protect and conserve them; 35
    - (ii) national policy for the management of the national estate;
    - (iii) legislative amendment and enactment for the management of the national estate;
    - (iv) the repatriation of heritage resources which have been removed from South Africa and which SAHRA considers to be significant as part of the national estate; 40
    - (v) the role of the national estate in the development and promotion of a cultural profile for South Africa;
    - (vi) action and expenditure by the State for the identification and management of heritage resources, including financial incentives and concessions for heritage resources management; 45
    - (vii) education and training at all levels to promote the effective identification and management of the national estate;
    - (viii) any matter related to the operation of this Act; and
    - (ix) any other matter pertaining to the national estate or its management; 50

- (b) must establish and maintain, for its own use and for the use of all heritage authorities and bodies and the public, the national heritage resources library, including documentary and other records relating to the national estate;
- (c) must promote the systematic identification and recording of the national estate by—
  - (i) the development of a national strategy for the identification and assessment of heritage resources;
  - (ii) the establishment and funding of a standing South African Heritage Resources Survey which is tasked with annual projects aimed at identifying, assessing and documenting heritage resources;
  - (iii) the co-ordination and support of initiatives by provincial heritage resources authorities, any other bodies and persons to survey and record heritage resources;
  - (iv) the administration, co-ordination and funding of projects and research programmes aimed at the creation of graphic and other records of heritage resources;
  - (v) training programmes and other relevant activities aimed at conserving and documenting traditional South African building techniques and structural forms;
  - (vi) promoting the identification and recording of aspects of living heritage associated with heritage resources; and
  - (vii) projects aimed at increasing the volume and detail of information held in the inventory of the national estate referred to in section 39; and
- (d) must prescribe national norms and standards for the recording of information about heritage resources in data bases maintained by itself and by provincial heritage resources authorities.

#### **Establishment and constitution of SAHRA Council**

- 14.** (1) The affairs of SAHRA are under the control, management and direction of a Council consisting of—
- (a) at least nine but not more than 15 members appointed by the Minister in the prescribed manner, of which nine members must respectively represent each of the provinces of South Africa; and
  - (b) the chief executive officer of SAHRA.
- (2) The members of the Council contemplated in subsection (1)(a) must be appointed in accordance with the principles of transparency and representivity and their appointment must take into account the desirability that the members—
- (a) have among them qualifications or special experience or interest in fields relevant to heritage resources, and the financial knowledge needed for the efficient functioning of SAHRA; and
  - (b) be representative of the relevant sectoral interests and the cultural and demographic characteristics of the population of the Republic.
- (3) A member of the Council must vacate the office if the member—
- (a) resigns in writing;
  - (b) has been absent from three consecutive meetings of the Council without the leave of the Council;
  - (c) is an unrehabilitated insolvent;
  - (d) is found to be of unsound mind by a competent court; or
  - (e) is convicted of an offence involving dishonesty or bodily harm and is sentenced to imprisonment without the option of a fine.
- (4) The Minister may, after consultation with the Council, remove a member of the Council from office if in the opinion of the Minister there are sound reasons for doing so after hearing the member on those reasons.
- (5) A member of the Council holds office for a period not exceeding three years, and may be reappointed.
- (6) No member may serve more than two consecutive terms.

(7) If a member of the Council dies or vacates the office before the expiration of the period for which the member has been appointed, another person may be appointed to fill the vacancy for the unexpired portion of the period for which the member was appointed.

### **Chairperson of Council** 5

**15.** (1) The chairperson of the Council is elected from the appointed members of the Council and holds office for the period or the unexpired portion of the period for which he or she has been appointed as member of the Council, unless the Council otherwise determines.

(2) If the chairperson of the Council vacates the office as chairperson before the expiration of the period for which he or she was appointed, another member of the Council must, subject to subsection (1), be elected as a chairperson of the Council from the appointed members of the Council. 10

(3) If the chairperson of the Council is absent from a meeting of the Council or not able to preside at that meeting, the members present must elect one of their number to preside at that meeting and that person may, during that meeting and until the chairperson resumes his or her functions, perform all those functions. 15

### **Functions of Council**

**16.** The functions of the Council are to—

- (a) advise the Minister on matters concerning heritage resources management; 20
- (b) be responsible and accountable for the implementation of the functions, powers and duties of SAHRA;
- (c) advise and assist SAHRA in the performance of its functions, powers and duties;
- (d) promote the co-ordination of policy formulation and planning for the management of the national estate at national and provincial levels; and 25
- (e) furnish the Minister with such information as the Minister may require.

### **Meetings of Council**

**17.** (1) The Council may meet as often as necessary, but at least twice a year.

(2) A quorum for a meeting of the Council shall be a majority of its members. 30

(3) Any decision of the Council shall be taken by resolution of the majority of the members present at any meeting of the Council, and, in the event of an equality of votes on any matter, the person presiding at the meeting in question shall have a casting vote in addition to his or her deliberative vote as a member of the Council.

### **Committees of Council** 35

**18.** The Council may establish committees to assist it in the performance of its functions and, in addition to any members, it may appoint to such committees persons whom the Council considers competent or who possess specific skills and expertise.

### **Reimbursement of expenses incurred by members of Council and committees**

**19.** The Minister may, with the concurrence of the Minister of Finance, determine the reimbursement of expenses incurred by members of the Council and any committees it may establish who are not in the full-time employ of the State. 40

### **Employees of Council**

**20.** (1) The Council must appoint a senior member of staff as chief executive officer, who must— 45

- (a) be responsible for the management of the affairs of SAHRA and who must report on those affairs to the Council as the Council may require;



- (b) be the accounting officer charged with the responsibility of accounting for all the money received and the utilisation thereof and be responsible for the property of SAHRA;
  - (c) furnish the Council with an annual report on the financial affairs of SAHRA;
  - (d) be responsible for the appointment and management of the staff in accordance with the staffing policy in terms of subsection (2); and 5
  - (e) perform any other activities and duties assigned to the chief executive officer from time to time by the Council.
- (2) The Council must, in consultation with the chief executive officer, determine the staff needs and staffing policies of SAHRA and the posts, conditions of service, remuneration, allowances, subsidies and other benefits of the staff in accordance with a system approved by the Minister with the concurrence of the Minister of Finance. 10
- (3) The Council must designate one of the staff of SAHRA as acting chief executive officer when the office of chief executive officer is vacant or when the chief executive officer is absent. 15

### **Finances and property**

- 21.** (1) The funds of SAHRA consists of—
- (a) moneys appropriated by Parliament to enable it to perform its functions and exercise its powers;
  - (b) fees and fines received under the regulations; 20
  - (c) fees received in payment of services;
  - (d) funds raised by and donations and contributions to it;
  - (e) trust funds vested in it;
  - (f) interest derived from investments; and
  - (g) moneys received from any other source. 25
- (2) Subject to this section, SAHRA must use its funds to defray expenditure in connection with the performance of its functions.
- (3) The Council may invest any money not required for immediate use or as a reasonable operating balance in accordance with the directions determined by the Minister in consultation with the Minister of Finance. 30
- (4) The Council may establish and operate a reserve fund and may deposit therein such amounts as become available from time to time.
- (5) SAHRA, with the approval of the Council—
- (a) may not lend or borrow any money without the consent of the Minister given with the concurrence of the Minister of Finance; 35
  - (b) may purchase or otherwise acquire, hold, let, hire or receive in trust any real right in any immovable or movable property; and
  - (c) may not make over to any person to hold in trust or sell, exchange or otherwise alienate, or hypothecate, burden with a servitude or otherwise confer any real right in immovable property, without the approval of the Minister given with the concurrence of the Minister of Finance. 40
- (6) Once during every financial year, at a time determined by the Minister, SAHRA must submit a statement of its estimated income and expenditure for the following financial year to the Minister for approval, granted with the concurrence of the Minister of Finance. 45
- (7) SAHRA may during the course of a financial year submit supplementary estimates of its expenditure for that financial year to the Minister for approval, granted with the concurrence of the Minister of Finance.
- (8) SAHRA must not incur any expenditure except in accordance with an estimate of expenditure approved under subsections (6) and (7). 50
- (9) SAHRA must—
- (a) keep full and correct accounts and records of all its financial transactions and affairs, including all its transactions in its capacity of trustee of any trust fund, and all properties under its control, and must ensure that all payments out of its funds are correctly made and properly authorised and that adequate control is maintained over its assets, or those in its custody, and the incurring of liabilities; and 55

- (b) as soon as possible after the end of the financial year, draw up annual financial statements which must show money received and expenditure incurred and its assets and liabilities at the end of the financial year concerned.
- (10) The financial year of SAHRA ends on 31 March each year.
- (11) The accounts and annual financial statements referred to in subsection (9)(b) must be audited by the Auditor-General. 5
- (12) The accounts and annual financial statements referred to in subsection (9)(b) must be available for public inspection.

## Reports

- 22. (1) As soon as practicable after the end of the financial year, SAHRA must compile and submit to the Minister a report on all its activities during that financial year, including a balance sheet and statements of income and expenditure certified by the Auditor-General. 10
- (2) The report referred to in subsection (1) must include a description of the condition of the national estate during the period to which the report relates, including destruction and other losses incurred, threats to specific heritage resources or categories of heritage resources, and an account of offences and prosecutions and the results thereof. 15
- (3) The Minister must table the report referred to in subsection (1) in Parliament within 14 days after receipt thereof if Parliament is in ordinary session or, if Parliament is not in ordinary session, within 14 days after the commencement of its next ordinary session. 20

## Establishment of provincial heritage resources authorities

- 23. An MEC may establish a provincial heritage resources authority which shall be responsible for the management of the relevant heritage resources within the province, which shall be a body corporate capable of suing and being sued in its corporate name and which shall be governed by a Council constituted as prescribed by regulations published in the *Provincial Gazette*: Provided that the members of the Council shall be appointed in a manner which applies the principles of transparency and representivity and takes into account special competence, experience and interest in the field of heritage resources. 25 30

## Functions, powers and duties of provincial heritage resources authority

- 24. (1) A provincial heritage authority must—
  - (a) advise the MEC on the implementation of this Act or relevant provincial or municipal legislation;
  - (b) annually submit a report to the MEC regarding its activities during that year; 35
  - (c) promote the systematic identification, recording and assessment of heritage resources and heritage objects which form part of the national estate in a province;
  - (d) protect and manage heritage resources in a province which fulfil the heritage assessment criteria prescribed under section 7(1) for Grade II status; 40
  - (e) notify SAHRA of the presence of any heritage resource in the province which it considers fulfils the heritage assessment criteria prescribed under section 7(1) for Grade I status, nominate such resource for national level protection and furnish SAHRA with the information in its possession relating to such resource; 45
  - (f) maintain data bases on heritage resources in accordance with national standards, and at regular intervals furnish SAHRA with such data;
  - (g) establish policy, objectives and strategy plans for heritage resources management in the province;
  - (h) determine the competence of local authorities to manage heritage resources in accordance with the national system for the heritage grading of local authorities prescribed under section 8(6); 50
  - (i) co-ordinate and monitor the performance of local authorities in the implementation of their responsibilities in terms of this Act and provincial heritage legislation; 55

- (j) assist local authorities to manage heritage resources in their areas of jurisdiction; and
- (k) provide for any areas of responsibility in terms of this Act or any provincial heritage resources legislation when a local authority does not have competence, or has insufficient capacity, to perform a function in terms of the criteria prescribed under section 8(6). 5

### **General powers and duties of heritage resources authorities**

25. (1) A heritage resources authority must—
- (a) furnish information, advice and assistance to enhance public sensitivity towards and awareness of the need for management of the national estate; 10
  - (b) maintain a list of conservation bodies which have, in accordance with regulations by the heritage resources authority concerned, registered their interest in—
    - (i) a geographical area; or
    - (ii) a category of heritage resources; 15
  - (c) regularly inspect heritage resources which are formally protected by the heritage resources authority concerned in terms of any provision of Part 1 of Chapter II;
  - (d) endeavour to assist any community or body of persons with an established interest in any heritage resource to obtain reasonable access to such heritage resource, should they request it, and may for this purpose— 20
    - (i) enter into negotiations with the owner of such resource;
    - (ii) facilitate the making of arrangements as may be required for the achievement of such access, including the execution of a heritage agreement under section 42; and 25
    - (iii) if such negotiations are unsuccessful, refer the matter to the Minister or MEC, as the case may be; and
  - (e) make arrangements to ensure the protection and management of all heritage resources and property owned or controlled by it or vested in it. 30
- (2) A heritage resources authority may—
- (a) promote and engage in research relating to the identification, assessment and management of the national estate as necessary for the performance of its functions; 30
  - (b) publish, or by any other means make available or distribute in any form, or cause to be published or distributed, any knowledge and information relating to the national estate and any of its functions or activities; 35
  - (c) inspect or document any heritage resource—
    - (i) which has the potential to become protected in terms of this Act;
    - (ii) which is, or which the heritage authority has reason to believe may be, so protected; or 40
    - (iii) which it wishes to document for research purposes, for purposes of building up a public record of heritage resources or as part of an investigation into a suspected offence in terms of this Act, and must maintain a register of such inspections;
  - (d) whenever it is investigating the desirability of protecting any place in terms of this Act, take such steps as it considers necessary— 45
    - (i) for erecting beacons on the corners of and surveying and preparing a diagram or plan of such place; or
    - (ii) for determining by survey the location of such place or object in relation to the beacons and boundaries of the land on which it is situated; 50
  - (e) undertake or make arrangements for the presentation of any place under its control or, after consultation with the Department concerned, any heritage site which is owned by the State;
  - (f) by agreement with the authority or body concerned, co-operate in the management of any heritage resource which is owned or controlled by the State or a supported body; 55

- (g) lend anything under its control to a museum or public institution, subject to such conditions as it deems necessary and appropriate;
- (h) subject to the provisions of section 59, make and from time to time amend regulations relating to any matter which the heritage authority concerned considers to be necessary or expedient to prescribe to fulfil its functions and implement its powers and duties under this Act, including— 5
  - (i) the standards of practice and qualifications required of individuals, institutions or other bodies for the performance of work on heritage resources protected in terms of, and in the various fields covered by, this Act; and 10
  - (ii) the monitoring of activities at protected sites;
- (i) create and where necessary register with the relevant authorities a badge, or an emblem for the authority, any of its projects or any category of protection provided for in terms of this Act;
- (j) where appropriate, affix to or otherwise display at any place protected in terms of this Act a badge or other sign indicating its status; 15
- (k) produce, acquire and market products relating to the national estate, or enter into arrangements for the production, acquisition and marketing of such products;
- (l) recover costs incurred by it and, where appropriate, charge for the provision of services rendered in terms of this Act, including but not limited to the— 20
  - (i) processing of applications received;
  - (ii) carrying out of investigations;
  - (iii) production, acquisition and marketing of products; and
  - (iv) provision of information; 25
- (m) arrange for the provision of insurance cover for—
  - (i) itself against any loss, damage, risk or liability which it may suffer or incur regarding any property under its control;
  - (ii) members of the council of a heritage resources authority, co-opted members, members of committees and members of its staff, in respect of bodily injury, illness, disablement or death incurred wholly and directly in the course of the performance of their duties on behalf of the heritage resources authority concerned; 30
- (n) enter into contracts; and
- (o) employ consultants to assist in the performance of its functions. 35

#### **Delegation of functions or powers of heritage resources authorities**

- 26.** (1) Subject to subsection (3), the Minister or MEC, as the case may be, may make regulations to enable a heritage resources authority to delegate in writing any of its functions or powers under this Act to all or any of the following: 40
- (a) In the case of SAHRA, any member of the Council;
  - (b) in the case of a provincial heritage resources authority, any member of its council;
  - (c) a committee or any member of a committee;
  - (d) any employee, heritage inspector, volunteer or other representative of the authority concerned; 45
  - (e) specified office bearers or members of a conservation body registered with it in terms of section 25(1)(b);
  - (f) in the case of SAHRA, a provincial heritage resources authority, provincial government, local authority, and any other authority which shows competence to perform such functions, by agreement with such authority; 50
  - (g) in the case of a provincial heritage resources authority, a local authority or any other body which is competent to perform such functions, by agreement with such authority or body.
- (2) A power delegated under subsection (1), when exercised by the delegate, shall for the purposes of this Act be deemed to be exercised by the heritage resources authority concerned: Provided that a delegate shall be held accountable to the heritage resources authority for all actions performed by him, her or it during the period of delegation. 55
- (3) A heritage resources authority may not delegate power to do any of the following:

- (a) Delegate any of its functions or powers under this section;
- (b) make a recommendation to the Minister or MEC in terms of this Act;
- (c) borrow money under section 21(5)(a);
- (d) acquire or dispose of real property under section 21(5)(b) or (c); or
- (e) adopt any statement of general policy or conservation management plan under section 47. 5

(4) A delegation under this section shall be revocable at will and no such delegation shall prevent the exercise of any power by the heritage resources authority: Provided that the delegation of any power to a provincial heritage resources authority in terms of an agreement under subsection (1)(f) shall only be revoked by SAHRA with the consent of the Minister, after SAHRA has consulted such provincial heritage resources authority. 10

## CHAPTER II

### PROTECTION AND MANAGEMENT OF HERITAGE RESOURCES

#### *Part 1: Formal protections*

#### **National heritage sites and provincial heritage sites** 15

**27.** (1) SAHRA must identify those places with qualities so exceptional that they are of special national significance in terms of the heritage assessment criteria set out in section 3(2) and prescribed under section 6(1) and (2), and must investigate the desirability of their declaration as national heritage sites.

(2) A provincial heritage resources authority must identify those places which have special qualities which make them significant in the context of the province or a region in terms of the heritage assessment criteria set out in section 3(2) and prescribed under section 6(1) and (2) and must investigate the desirability of their declaration as provincial heritage sites. 20

(3) Any person may submit a nomination to SAHRA for a place to be declared a national heritage site or to the provincial heritage resources authority for a place to be declared a provincial heritage site. The heritage resources authority concerned may prescribe the format and procedures for such nominations. 25

(4) A written motivation for the declaration of a place as a heritage site must be prepared and kept on record by the heritage resources authority. 30

(5) SAHRA may, by notice in the *Gazette*, declare any place referred to in subsection (1) to be a national heritage site.

(6) A provincial heritage resources authority may, by notice in the *Provincial Gazette*, declare any place referred to in subsection (2) and described in the notice to be a provincial heritage site. 35

(7) The heritage resources authority concerned may, by similar notice—

- (a) amend any notice published under subsection (5) or (6); or
- (b) withdraw any notice published under subsection (5) or (6) or paragraph (a) of this subsection.

(8) Before declaration of a place as a heritage site, or amendment or withdrawal of a notice under subsection (7), the heritage resources authority— 40

- (a) must notify the owner;
- (b) must notify the mortgage holder, the occupier and any other person with a registered interest in the property;
- (c) must notify all conservation bodies which have, in terms of section 25(1)(b), registered their interest in the geographical area in which the proposed heritage site is situated, and give them at least 60 days to make submissions regarding the proposed declaration, amendment or withdrawal, and in the case of the owner, to propose conditions under which the action will be acceptable. All submissions must be considered by the heritage resources authority before a final decision is made; and 45 50

(d) before notifying the owner as provided in paragraph (a), must give to the owner reasonable opportunity for representations or submissions to be made in regard to the proposed notification.

(9) A heritage resources authority may at any time withdraw a notice which it has served in terms of subsection (8)(a). 5

(10) For the purposes of subsections (15) to (22), a place shall be deemed to be protected as a heritage site for six months from the date of service of a notice under subsection (8)(a) or until the notice is withdrawn or the place is declared to be a heritage site, whichever is the shorter period.

(11) Subject to subsection (12), if the owner objects to the proposed declaration of a place or proposes conditions which the heritage resources authority reasonably considers to be unacceptable, the heritage resources authority may, prior to the expiry of the notice in terms of subsection (10), renew a notice under subsection (8)(a), whereupon the protection under subsection (10) shall be extended for a further six months. If during this time consultation between the heritage resources authority and the owner fails to lead to the withdrawal of the owner's objection or the proposal of acceptable conditions, the heritage resources authority may declare the place to be a heritage site. 10 15

(12) The Minister, on the advice of SAHRA, must prescribe circumstances in which the State, a local authority or a supported body may object to the declaration as a heritage site of a place which it owns or controls. 20

(13) SAHRA must inform the provincial heritage resources authority, the provincial planning authority and the local authority within whose area of jurisdiction a national heritage site falls, within 30 days of its declaration.

(14) A provincial heritage resources authority must inform SAHRA, the provincial planning authority and the local authority within whose area of jurisdiction a provincial heritage site falls, within 30 days of its declaration. 25

(15) SAHRA is responsible for the protection of national heritage sites in accordance with the provisions of this section.

(16) A provincial heritage resources authority is responsible for the protection of provincial heritage sites in accordance with the provisions of this section. 30

(17) Except in cases where the heritage resources authority considers it inappropriate, all heritage sites must be marked with a badge indicating their status.

(18) No person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site. 35

(19) The responsible heritage resources authority may make regulations pertaining to heritage sites under its control, or to any other heritage site with the consent of the owner of that site—

(a) safeguarding heritage sites from destruction, damage, disfigurement, excavation or alteration; 40

(b) regulating the conditions of use of any heritage site or the conditions for any development thereof;

(c) regulating the admission of members of the public to a heritage site, and the fees payable for such admission. 45

(20) Any branch of the State or supported body which is the owner of a heritage site must maintain such site according to a minimum standard and according to a procedure prescribed by the responsible heritage resources authority after consultation with the relevant Departments of Works.

(21) The responsible heritage resources authority may, by agreement with the owner of a heritage site— 50

(a) conserve or improve any heritage site;

(b) construct fences, walls or gates around or on a heritage site;

(c) acquire or construct and maintain an access road to a heritage site over any land, and construct upon such land fences, walls or gates; or 55

(d) erect signs on or near a heritage site.

(22) No person may damage any fence, wall or gate constructed or sign erected by a heritage resources authority in terms of subsection (21).

(23) (a) All reproduction rights either in two or three dimensions in respect of a heritage site, subject to any existing rights and the agreement of the owner of such site, belong to the State and vest in the heritage resources authority responsible for the protection of such site or, by agreement, with the authority or public institution responsible for the management of such site. 5

(b) Subject to the provisions of paragraph (a), no person other than the owner of the site may make such reproduction for profit without a permit issued by SAHRA or a provincial heritage resources authority, as the case may be, which may prescribe the fees payable in respect of such reproduction and must deposit such fees in a trust fund dedicated to the conservation of such site or of heritage resources in general. 10

### Protected areas

28. (1) SAHRA may, with the consent of the owner of an area, by notice in the *Gazette* designate as a protected area—

- (a) such area of land surrounding a national heritage site as is reasonably necessary to ensure the protection and reasonable enjoyment of such site, or to protect the view of and from such site; or 15
- (b) such area of land surrounding any wreck as is reasonably necessary to ensure its protection; or
- (c) such area of land covered by a mine dump.

(2) A provincial heritage resources authority may, with the consent of the owner of an area, by notice in the *Provincial Gazette* designate as a protected area— 20

- (a) such area of land surrounding a provincial heritage site as is reasonably necessary to ensure the protection and reasonable enjoyment of such site, or to protect the view of and from such site; or
- (b) such area of land surrounding any archaeological or palaeontological site or meteorite as is reasonably necessary to ensure its protection. 25

(3) No person may damage, disfigure, alter, subdivide or in any other way develop any part of a protected area unless, at least 60 days prior to the initiation of such changes, he or she has consulted the heritage resources authority which designated such area in accordance with a procedure prescribed by that authority. 30

(4) With regard to an area of land covered by a mine dump referred to in subsection (1)(c) SAHRA must make regulations providing for the protection of such areas as are seen to be of national importance in consultation with the owner, the Minister of Minerals and Energy and interested and affected parties within the mining community.

(5) A heritage resources authority may make regulations providing for specific protections for any protected area which it has designated, including the prohibition or control of specified activities by any person in the designated area. 35

(6) A local authority may, with the agreement of the heritage resources authority which designated a protected area, make provision in its town planning scheme or in by-laws for the management of such area. 40

### Provisional protection

29. (1) SAHRA, or a provincial heritage resources authority, may, subject to subsection (4), by notice in the *Gazette* or the *Provincial Gazette*, as the case may be—

- (a) provisionally protect for a maximum period of two years any— 45
  - (i) protected area;
  - (ii) heritage resource, the conservation of which it considers to be threatened and which threat it believes can be alleviated by negotiation and consultation; or
  - (iii) heritage resource, the protection of which SAHRA or the provincial heritage resources authority wishes to investigate in terms of this Act; and 50

(b) withdraw any notice published under paragraph (a).

(2) A local authority may, subject to subsection (4), by notice in the *Provincial Gazette*—

- (a) provisionally protect for a maximum period of three months any place which it considers to be conservation-worthy, the conservation of which the local authority considers to be threatened and which threat it believes can be alleviated by negotiation and consultation; and
- (b) withdraw any notice published under paragraph (a): 5  
 Provided that it notifies the provincial heritage resources authority within seven days of such provisional protection.
- (3) A provincial heritage resources authority may, by notice in the *Provincial Gazette*, revoke a provisional protection by a local authority under subsection (2) or provisionally protect a place concerned in accordance with subsection (1). 10
- (4) A heritage resources authority or a local authority may not provisionally protect any heritage resource unless it has notified the owner of the resource in writing of the proposed provisional protection.
- (5) A heritage resource shall be deemed to be provisionally protected for 30 days from the date of service of a notice under subsection (4) or until the notice is withdrawn or the resource is provisionally protected by notice in the *Gazette* or the *Provincial Gazette*, whichever is the shorter period. 15
- (6) A heritage authority or a local authority may at any time withdraw a notice which it has issued under subsection (4).
- (7) SAHRA shall inform the relevant provincial heritage authority and local authority within 30 days of the publication or withdrawal of a notice under subsection (1). 20
- (8) A provincial heritage resources authority shall inform the relevant local authority within 30 days of the publication or withdrawal of a notice under subsection (1).
- (9) A local authority shall inform the provincial heritage authority of the withdrawal of a notice under subsection (2)(b). 25
- (10) No person may damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of a provisionally protected place or object without a permit issued by a heritage resources authority or local authority responsible for the provisional protection.

## **Heritage Registers** 30

- 30.** (1) A provincial heritage resources authority must compile and maintain a heritage register listing the heritage resources in the province which it considers to be conservation-worthy in terms of the heritage assessment criteria set out in section 3(3) and prescribed under section 7.
- (2) Subject to subsection (7), a provincial heritage resources authority may, by notice in the *Provincial Gazette*, list a heritage resource or amend or delete an entry in a heritage register. 35
- (3) Heritage resources must be listed in accordance with—
- (a) the sub-categories of Grade II and Grade III heritage resources prescribed under section 7, if any; 40
  - (b) the areas of jurisdiction of local authorities; and
  - (c) any additional categories prescribed by the provincial heritage resources authority in consultation with SAHRA.
- (4) A provincial heritage resources authority must prescribe the procedure and information required for— 45
- (a) the nomination of a resource for listing in a heritage register; and
  - (b) the compilation of an inventory of heritage resources referred to in subsection (5),
- which shall require at least compliance with such minimum standards as may be prescribed by SAHRA for the recording of information under section 39. 50
- (5) At the time of the compilation or revision of a town or regional planning scheme or a spatial development plan, or at any other time of its choosing, or at the initiative of a provincial heritage resources authority where in the opinion of a provincial heritage resources authority the need exists, a planning authority shall compile an inventory of the heritage resources which fall within its area of jurisdiction and submit such inventory to the relevant provincial heritage resources authority, which shall list in the heritage register those heritage resources which fulfil the assessment criteria under subsection (1). 55
- (6) A provincial heritage resources authority may approve an inventory of heritage resources submitted to it by any person for listing in the heritage register. 60



(7) A provincial heritage resources authority shall not list a place in a heritage register without having consulted the owner of such place regarding *inter alia* the provisions to be established under subsection (11) for the protection of the place.

(8) The MEC may, after consultation with the MEC for local government, prescribe the process of consultation referred to in subsection (7). 5

(9) On publication of a notice in the *Provincial Gazette* concerning the listing in the heritage register of a place within its area of jurisdiction, or the amendment or deletion of an entry for such place, a local authority must notify the owner of such place.

(10) A local authority shall notify SAHRA and the provincial heritage resources authority when a place within its area of jurisdiction which is listed in the heritage register is destroyed, whereupon the provincial heritage resources authority shall record the destruction of the place against the entry in the heritage register for that place, and SAHRA shall record such destruction in the inventory of the national estate. 10

(11) Within six months of the publication of a notice in the *Provincial Gazette* concerning the inclusion in the heritage register of a place falling within its area of jurisdiction, every local authority must make provision for the protection of such place through the provisions of its planning scheme or by-laws under this Act: Provided that any such protective provisions shall be jointly approved by the provincial heritage resources authority, the relevant local authority and the provincial planning authority, and provided further that— 15

(a) the special consent of the local authority shall be required for any alteration to or development affecting a place listed in the heritage register; 20

(b) the local authority must, prior to the consideration of an application under paragraph (a), notify any conservation bodies which have, in terms of section 25(1)(b), registered their interest in the geographical area or type of property concerned and give them a reasonable period in which to register an objection or make other representations with respect to the application; 25

(c) in assessing an application under paragraph (a), the local authority shall consider—

(i) the cultural significance of the place and how this could be affected by the proposed alteration or development; and 30

(ii) any objection or representations under paragraph (b);

(d) where the local authority resolves to approve an application under paragraph (a) which would materially affect the cultural significance of the place and an objection to such approval has been registered under paragraph (b), unless the conservation body concerned withdraws such objection, the objection shall be deemed to be an appeal in terms of section 49 and the local authority shall submit the application and all relevant information to the relevant appeal body; and 35

(e) in the event of any alteration or development of a place listed in a heritage register being undertaken without the consent of the local authority, the local authority may require the owner to stop such work instantly and restore the site to its previous condition within a specified period. If the owner fails to comply with the local authority's requirements the local authority shall have the right to carry out such restoration work itself and recover the cost thereof from the owner. 40 45

(12) A provincial heritage resources authority or a local authority within whose area of jurisdiction such site is located may provisionally protect any place in an inventory referred to in subsections (5) and (6): Provided that such provisional protection shall be withdrawn when the place is listed in the heritage register. 50

(13) A local authority may mark any place falling within its area of jurisdiction listed in a heritage register with a badge indicating its status.

(14) Inclusion of a place in a heritage register shall not exempt any person from complying with the provisions of sections 35 and 36.

## Heritage areas 55

**31.** (1) A planning authority must at the time of revision of a town or regional planning scheme, or the compilation or revision of a spatial plan, or at the initiative of the provincial heritage resources authority where in the opinion of the provincial heritage

resources authority the need exists, investigate the need for the designation of heritage areas to protect any place of environmental or cultural interest.

(2) Where the provincial heritage resources authority is of the opinion that the need exists to protect a place of environmental or cultural interest as a heritage area, it may request a planning authority to investigate its designation in accordance with proposals submitted by the provincial heritage resources authority with its request. The planning authority must inform the provincial heritage resources authority within 60 days of receipt of such a request whether it is willing or able to comply with the request. 5

(3) Where the planning authority informs the provincial heritage resources authority that it is willing and able, the provincial heritage resources authority must assist the planning authority to investigate the designation of the place as a heritage area. 10

(4) Where the planning authority does not so inform the provincial heritage resources authority, or informs the provincial heritage resources authority that it is not so willing and able, the provincial heritage resources authority may investigate the designation of the place as a heritage area and, with the approval of the MEC, designate such place to be a heritage area by notice in the *Provincial Gazette*. 15

(5) A local authority may, by notice in the *Provincial Gazette*, designate any area or land to be a heritage area on the grounds of its environmental or cultural interest or the presence of heritage resources, provided that prior to such designation it shall consult—

(a) the provincial heritage resources authority; and 20

(b) owners of property in the area and any affected community, regarding *inter alia* the provisions to be established under subsection (7) for the protection of the area.

(6) The MEC may, after consultation with the MEC responsible for local government, publish regulations setting out the process of consultation referred to in subsection (5). 25

(7) A local authority must provide for the protection of a heritage area through the provisions of its planning scheme or by-laws under this Act, provided that any such protective provisions shall be jointly approved by the provincial heritage resources authority, the provincial planning authority and the local authority, and provided further that— 30

(a) the special consent of the local authority shall be required for any alteration or development affecting a heritage area;

(b) in assessing an application under paragraph (a) the local authority must consider the significance of the area and how this could be affected by the proposed alteration or development; and 35

(c) in the event of any alteration or development being undertaken in a heritage area without the consent of the local authority, it shall have the power to require the owner to stop such work instantly and restore the site to its previous condition within a specified period. If the owner fails to comply with the requirements of the local authority, the local authority shall have the right to carry out such restoration work itself and recover the cost thereof from the owner. 40

(8) A local authority may erect signage indicating its status at or near a heritage area.

(9) Particular places within a heritage area may, in addition to the general provisions governing the area, be afforded further protection in terms of this Act or other heritage legislation. 45

### Heritage objects

**32.** (1) An object or collection of objects, or a type of object or list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including— 50

(a) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;

(b) visual art objects;

(c) military objects; 55

(d) numismatic objects;

- (e) objects of cultural and historical significance;
  - (f) objects to which oral traditions are attached and which are associated with living heritage;
  - (g) objects of scientific or technological interest;
  - (h) books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives; and
  - (i) any other prescribed category.
- (2) For the purposes of this section, an object within a type of objects declared to be a heritage object is deemed to be a heritage object.
- (3) Before declaring any object contemplated in subsection (1) as a heritage object, SAHRA may give to the owner such prior opportunity for representations or submissions to be made in regard to the proposed declaration as may be practicable in the circumstances and in such manner as may be prescribed. Nothing herein contained shall oblige SAHRA to give such prior opportunity if the circumstances militate against this.
- (4) SAHRA with the approval of the Minister may, by notice in the *Gazette*—
- (a) declare an object, or a collection thereof, or a type of object or list of objects, whether specific or generic, to be a heritage object;
  - (b) amend any notice published under paragraph (a); or
  - (c) withdraw any notice published under paragraph (a) or amended under paragraph (b).
- (5) SAHRA may not exercise its power under subsection (4) unless—
- (a) in the case of a specific object or collection, it has served on the owner a notice of its intention and has given him or her at least 60 days to lodge an objection or suggest reasonable conditions regarding the care and custody of such object under which such declaration is acceptable; or
  - (b) in the case of a type of objects, it has—
    - (i) published a notice of provisional declaration in the *Gazette*;
    - (ii) by public advertisement and any other means it considers appropriate, made known publicly the effect of the declaration and its purpose; and
    - (iii) invited any interested person who might be adversely affected to make submissions to or lodge objections with SAHRA within 60 days from the date of the notice,
 and has considered all such submissions and objections.
- (6) An object or collection shall be deemed to be protected as a heritage object for six months from the date of service or publication of a notice under subsection (5)(a) or (5)(b)(i), or until such notice is withdrawn or the object or collection or type of objects is declared to be a heritage object, whichever is the shorter period.
- (7) SAHRA must maintain a register of heritage objects in which all objects, collections of objects and types of objects which have been declared heritage objects must be listed.
- (a) The register shall be in two parts:
    - (i) Part I: Heritage objects listed by type.
    - (ii) Part II A: Specific heritage objects as listed in the inventory of a public museum in South Africa or otherwise displayed or kept in secure conditions.
    - (iii) Part II B: Other specific heritage objects.
  - (b) SAHRA may prescribe the further division of the parts of the register into categories or other subdivisions.
- (8) SAHRA must make available to the public, subject to subsection (9), a summary of information contained in the register.
- (9) Where it is necessary to ensure the proper protection of a heritage object which is entered in the register, no information which may identify the location of the object must be accessible to any person except with the express consent of SAHRA, for so long as SAHRA may determine.

(10) SAHRA may designate any person or any institution in South Africa as an expert examiner for the purposes of this section, on the basis of his, her or its special knowledge.

(11) SAHRA may provide to the owner or custodian of a heritage object listed in Part II of the register of heritage objects a certificate or badge indicating its status. 5

(12) The owner of a heritage object listed in Part II of the register of heritage objects must notify SAHRA of the name and address of the new owner when such object is sold or otherwise alienated and must provide the new owner or custodian with any certificate or badge under subsection (11) relating to such a heritage object.

(13) No person may destroy, damage, disfigure or alter any heritage object, or disperse any collection which is listed in Part II of the register, without a permit issued by SAHRA. 10

(14) SAHRA may make regulations relating to the registration of dealers in heritage objects and the control of trade in heritage objects.

(15) It is the responsibility of the owner or custodian of a heritage object listed in Part II of the register of heritage objects, to keep the heritage object in good condition and in a secure place. 15

(16) The owner or custodian of a heritage object, listed in Part II of the register of heritage objects, must immediately report to SAHRA any loss of or damage to such a heritage object or any part thereof upon discovery of such loss or damage. 20

(17) No person may carry out any work of restoration or repair of a heritage object, listed in Part II of the register of heritage objects, without a permit issued by a duly authorised representative of SAHRA.

(18) On application by the owner or custodian of a heritage object listed in Part II of the register of heritage objects, SAHRA may at its discretion assist in funding any restoration or repair work undertaken by a restoration or repair craftsman approved by SAHRA. 25

(19) No person may export or attempt to export from South Africa any heritage object without a permit issued by SAHRA.

(20) No heritage object may be removed from South Africa other than through a customs port of entry, and the relevant export permit issued under subsection (19) or certificate of exemption issued under subsection (32) must be produced to a custom officer before removal from South Africa is effected or allowed. 30

(21) An application for such an export permit must be made in the manner and contain such information as prescribed by SAHRA. 35

(22) On receipt of an application to export a heritage object SAHRA may refer it to one or more expert examiners, who must submit to SAHRA a written report on the application.

(23) SAHRA must consider the report and—

(a) issue a permit to export the object concerned, subject to such conditions, if any, as SAHRA considers necessary; or 40

(b) refuse to issue a permit.

(24) In considering an application to export any object of a type listed in Part I of the register of heritage objects permanently, an expert examiner and SAHRA must consider whether the object— 45

(a) is of outstanding significance by reason of its close association with South African history or culture, its aesthetic qualities, or its value in the study of the arts or sciences; and

(b) is of such a degree of national importance that its loss to South Africa would significantly diminish the national heritage, 50

and if satisfied that the object fulfils both these criteria, may not recommend the issue of a permit, or issue a permit, as the case may be, to export the object permanently.

(25) In the event of SAHRA refusing to issue an export permit the applicant may, within 30 days after such refusal, by written notice require the compulsory purchase of the heritage object to which such refusal relates. 55

(26) On receipt of a notification under subsection (25) SAHRA must—

(a) if it is of the opinion that a fair offer to purchase the object concerned might be made by a person or public authority in South Africa within the following six months, establish a delay period of not less than two months and not more

- than six months during which an export permit may not be issued in respect of such object; or
- (b) on its own behalf or on behalf of a public institution or authority in South Africa or a person who will undertake to keep the object in the country, offer to purchase the object either by an immediate cash payment or by payment of compensation in such manner as the Minister in consultation with the Minister of Finance may determine; or
- (c) in any other case, issue a permit to export the object concerned.
- (27) Where SAHRA establishes a delay period under subsection (26)(a) in respect of a heritage object, it—
- (a) must give written notice of the delay period to the applicant, and the Minister;
- (b) must advise such institutions and public authorities in South Africa as it sees fit of the delay period and of the object in respect of which such delay period was established;
- (c) may by public advertisement or any other means it deems appropriate make known the delay period and the object in respect of which it was established; and
- (d) may stipulate that the heritage object concerned is deposited on temporary loan with a specified South African museum or public authority for the duration of the delay period.
- (28) SAHRA, in consultation with the Minister, may extend a delay period established under subsection (26)(a) for a maximum period of two years.
- (29) In the event that—
- (a) during a delay period established under subsection (26)(a), an offer to purchase the heritage object concerned is made and the applicant and a public authority or person making such offer cannot agree as to the amount of a fair cash offer; or
- (b) SAHRA and the applicant cannot agree as to the amount of a fair offer or compensation under subsection (26)(b),
- such dispute must be arbitrated by a panel appointed by the Minister, consisting of equal representatives of dealers in heritage objects, museums and collectors of heritage objects, which must determine the amount of a fair cash offer to purchase such heritage object and must notify the parties concerned and SAHRA thereof.
- (30) Where a delay period established under subsection (26)(a) expires without a fair offer being made to purchase the heritage object concerned, SAHRA must forthwith on the request of the applicant issue a permit to export such heritage object.
- (31) Where a delay period established under subsection (26)(a) expires and SAHRA is satisfied that a fair offer to purchase the heritage object concerned has been made, SAHRA may not issue a permit to export such heritage object.
- (32) A person who intends to import an object which is of a type listed in Part I of the register of heritage objects, for temporary purposes or in circumstances in which the person may subsequently wish to export the object, may apply to SAHRA for a certificate of exemption authorising the export of the object concerned for the period specified in the certificate.

## *Part 2: General protections*

### **Import of objects protected in terms of laws of foreign states**

- 33.** (1) No person may import into South Africa any foreign cultural property other than through a customs port of entry, and the export permit or other permission issued in the country of origin of such object must be produced to a customs officer before import to South Africa is effected or allowed.
- (2) After a cultural property agreement between South Africa and a reciprocating state comes into force, no person may import into South Africa any foreign cultural property that has been illegally exported from a reciprocating state.
- (3) A customs officer who has reason to believe that a person is attempting to import an object in contravention of subsection (1) or (2), may withhold the object concerned and such object must be kept in the custody of SAHRA until such time, not exceeding six months, as an investigation into the provenance of such object is completed.

(4) SAHRA may, with the consent of the Minister and the Minister of Foreign Affairs, liaise and co-operate with the authority responsible for the protection of cultural property in any reciprocating state and may enter into agreements with any such authority with regard to the return to the country of origin of any heritage object or cultural property which is illegally imported into South Africa or the reciprocating state, whether specifically or in general. 5

### Structures

34. (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority. 10

(2) Within three months of the refusal of the provincial heritage resources authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.

(3) The provincial heritage resources authority may at its discretion, by notice in the *Provincial Gazette*, make an exemption from the requirements of subsection (1) within a defined geographical area, or for certain defined categories of site within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and are adequately provided for in terms of the provisions of Part 1 of this Chapter. 15

(4) Should the provincial heritage resources authority believe it to be necessary it may, following a three-month notice period published in the *Provincial Gazette*, withdraw or amend a notice under subsection (3). 20

### Archaeology, palaeontology and meteorites

35. (1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA. 25

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects. 30

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority. 35

(4) No person may, without a permit issued by the responsible heritage resources authority— 40

(a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;

(b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;

(c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or 45

(d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites. 50

(5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and no heritage resources management procedure in terms of section 38 has been followed, it may— 55

- (a) serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
  - (b) carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary; 5
  - (c) if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
  - (d) recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served. 10
- (6) The responsible heritage resources authority may, after consultation with the owner of the land on which an archaeological or palaeontological site or a meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite. 15
- (7) (a) Within a period of two years from the commencement of this Act, any person in possession of any archaeological or palaeontological material or object or any meteorite which was acquired other than in terms of a permit issued in terms of this Act, equivalent provincial legislation or the National Monuments Act, 1969 (Act No. 28 of 1969), must lodge with the responsible heritage resources authority lists of such objects and other information prescribed by that authority. Any such object which is not listed within the prescribed period shall be deemed to have been recovered after the date on which this Act came into effect. 20 25
- (b) Paragraph (a) does not apply to any public museum or university.
- (c) The responsible authority may at its discretion, by notice in the *Gazette* or the *Provincial Gazette*, as the case may be, exempt any institution from the requirements of paragraph (a) subject to such conditions as may be specified in the notice, and may by similar notice withdraw or amend such exemption. 30
- (8) An object or collection listed under subsection (7)—
- (a) remains in the ownership of the possessor for the duration of his or her lifetime, and SAHRA must be notified who the successor is; and
  - (b) must be regularly monitored in accordance with regulations by the responsible heritage authority. 35

### **Burial grounds and graves**

- 36.** (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.
- (2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials. 40
- (3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—
- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves; 45
  - (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or 50
  - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- (4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant 55

and in accordance with any regulations made by the responsible heritage resources authority.

(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority— 5

- (a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
- (b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

(6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority— 10 15

- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
- (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit. 20

(7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or *agents provocateur* and which, after a process of public consultation, it believes should be included among those protected under this section. 25

(b) The Minister must publish such lists as he or she approves in the *Gazette*.

(8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section. 30

(9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic. 35

### **Public monuments and memorials**

37. Public monuments and memorials must, without the need to publish a notice to this effect, be protected in the same manner as places which are entered in a heritage register referred to in section 30.

### **Heritage resources management** 40

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50 m in length; 45
- (c) any development or other activity which will change the character of a site—
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or 50
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, 55



must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1)— 5

- (a) if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or 10
- (b) notify the person concerned that this section does not apply.

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included: 15

- (a) The identification and mapping of all heritage resources in the area affected;
- (b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
- (c) an assessment of the impact of the development on such heritage resources;
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development; 20
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources; 25
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

(4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide— 30

- (a) whether or not the development may proceed;
- (b) any limitations or conditions to be applied to the development;
- (c) what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources; 35
- (d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of the development; and
- (e) whether the appointment of specialists is required as a condition of approval of the proposal. 40

(5) A provincial heritage resources authority shall not make any decision under subsection (4) with respect to any development which impacts on a heritage resource protected at national level unless it has consulted SAHRA.

(6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who— 45

- (a) must consider the views of both parties; and
- (b) may at his or her discretion—
  - (i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage authority; and 50
  - (ii) consult SAHRA; and
- (c) must uphold, amend or overturn such decision.

(7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise. 55

(8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent. 5 10

(9) The provincial heritage resources authority, with the approval of the MEC, may, by notice in the *Provincial Gazette*, exempt from the requirements of this section any place specified in the notice.

(10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this Part, but any existing heritage agreements made in terms of section 42 must continue to apply. 15

### ***Part 3: Management***

#### **Inventory of national estate** 20

**39.** (1) For the purposes of the consolidation and co-ordination of information on heritage resources, SAHRA must compile and maintain an inventory of the national estate, which must be in the form of a data base of information on heritage resources which it considers to be worthy of conservation, including—

- (a) all places and objects with which it and its predecessors have been involved; 25
- (b) all places and objects protected through the publication of notices in the *Gazette* or *Provincial Gazette*, whether in terms of this Act or provincial legislation;
- (c) places and objects subject to general protections in terms of this Act or provincial legislation for the management of heritage resources; and 30
- (d) any other place and object which it considers to be of interest,

and for this purpose it must co-ordinate, and may prescribe, national standards for the recording of information by provincial heritage authorities.

(2) Heritage resources must be listed in the inventory in the format and under the categories prescribed by SAHRA. 35

(3) SAHRA may from time to time, after consultation with the relevant provincial heritage resources authority and the local authority concerned, make, amend or delete entries in the inventory: Provided that—

- (a) all places listed in any heritage register must be entered in the inventory; 40
- (b) a local authority must inform SAHRA on the destruction of a place listed in a heritage register, whereupon SAHRA must record such destruction in the inventory.

(4) A provincial heritage resources authority must, within 30 days of the listing of a heritage resource in a heritage register or the amendment or deletion of an entry, notify SAHRA and provide details of the listing, amendment or deletion. 45

(5) A provincial heritage resources authority must, at regular intervals in the manner prescribed by SAHRA, provide SAHRA with any information about heritage resources in the province which would increase the volume and detail of information held in the inventory.

(6) Any person has access to the inventory at the offices of SAHRA: Provided that information may be withheld if its disclosure may impact negatively on the privacy or economic interests of the owner or any person with an interest in a property, or a potential investor, or on the continued conservation of a heritage resource. 50

(7) SAHRA must at regular intervals, publish a summary and analysis of the inventory of the national estate. 55

#### **National heritage resources assistance programme**

**40.** (1) Subject to section 21, SAHRA may provide financial assistance in the form of

a grant or a loan to an approved body or an individual for any project which contributes to the purpose, and is in accordance with the principles as prescribed.

(2) SAHRA must prescribe the procedures for applications for approval and granting of financial assistance and the criteria for the assessment of projects.

(3) A loan may be approved in such amount and subject to such terms and conditions as SAHRA determines: Provided that a loan must be— 5

(a) at the rate of interest for the time being fixed by the Minister, in consultation with the Minister of Finance; or

(b) if the Minister, in consultation with the Minister of Finance, so approves—

(i) at the rate of interest fixed by the Minister in respect of that loan; or 10

(ii) without interest.

(4) Any financial assistance in terms of this section is to be provided out of a fund reserved by SAHRA for this purpose, which shall be called the National Heritage Resources Fund.

### **Restitution of heritage objects** 15

41. (1) When a community or body with a *bona fide* interest makes a claim for the restitution of a movable heritage resource which is part of the national estate and is held by or curated in a publicly funded institution, the institution concerned must enter into a process of negotiation with the claimants regarding the future of the resource.

(2) The Minister may make regulations regarding the establishment of *bona fide* interest in terms of subsection (1) and the conditions under which such claims may be made. 20

(3) In the absence of an agreement on a heritage resource which is the subject of negotiations in terms of subsection (1), the claimants or the institution concerned may appeal to the Minister, who must, with due regard to subsection 5(4) and in a spirit of compromise— 25

(a) mediate between the parties concerned with the aim of finding a mutually satisfactory solution; and

(b) in the absence of agreement between the parties concerned, make a final decision on the future of the resource, including any conditions necessary to ensure its safety, the conditions of access of the claimants or the institution or any other interested party to the resource, or any other appropriate conditions. 30

### **Heritage agreements**

42. (1) (a) SAHRA, or a provincial heritage resources authority may negotiate and agree with a provincial authority, local authority, conservation body, person, or community for the execution of a heritage agreement to provide for the conservation, improvement or presentation of a clearly defined heritage resource: Provided that the consent of the owner of such resource must be given. 35

(b) Such a heritage agreement must be in the form of a binding contract.

(2) A heritage agreement may include such terms and conditions as the parties think fit, including provision for public access, and provision for financial or other assistance from the heritage authority concerned. 40

(3) Without limiting subsection (2), a heritage agreement may be expressed to have effect in perpetuity or for any specified term, or to terminate upon the happening of a specific event. 45

(4) A heritage agreement may, with the consent of the owner of the resource concerned, be varied or cancelled by agreement between the parties.

(5) The consent of the owner of the resource concerned to the heritage agreement or any variation of the heritage agreement may be given, subject to the inclusion in the heritage agreement of any additional provisions or modified provisions, or to the deletion of such provisions, as the owner giving the consent considers necessary. 50

(6) Nothing in this Act requires a heritage resources authority to negotiate or agree with any person or authority to enter into or execute any heritage agreement.

(7) A heritage agreement in respect of a place attached to the land is binding on the owner of the place, as at the date of execution of the agreement while the agreement remains in force. 55

- (8) The owner of a national heritage site, a provincial heritage site or a place listed in a heritage register may, by a heritage agreement entered into with the heritage resources authority or local authority responsible for the protection of such place, or any person or body approved by such authority, appoint the heritage resources authority or the local authority or the person or body concerned, the guardian of the place. 5
- (9) The heritage agreement referred to in subsection (7) or (8) may provide for—
- (a) the maintenance and management of the place;
  - (b) the custody of the place and the duties of any person who may be employed in connection therewith;
  - (c) the occupation or use of the place by the owner or otherwise; 10
  - (d) the restriction of the right of the owner or occupier to do certain acts or things on or near the place;
  - (e) the facilities of access to be permitted to the public and to persons deputed by the guardian to inspect or maintain the place;
  - (f) the presentation of the place; 15
  - (g) the notice to be given to the guardian in case the owner intends to offer the land on which the place is situated for sale, lease or other disposal, and the right to be reserved to the guardian to have first refusal of such sale, lease or other disposal;
  - (h) the payment of any expenses incurred by the owner or by the guardian in connection with the maintenance of the place; 20
  - (i) any other matter connected with the protection or management of the place which is agreed to by the owner and the guardian;
  - (j) the duration of the agreement, with provision for the earlier termination thereof by any party thereto; and 25
  - (k) the procedure for the resolution of any dispute arising out of the agreement.
- (10) The owner of a place which is under guardianship shall, except as expressly provided by this Act, continue to have the same estate, right, title and interest in and to the place as before.
- (11) Every heritage agreement has effect according to its tenor but subject to the provisions of this Act: Provided that— 30
- (a) the execution of a heritage resources agreement in respect of a heritage resource must not prevent the heritage authority responsible for its protection from exercising any powers in this Act in relation to that resources; and
  - (b) nothing in terms of any heritage agreement shall permit or allow any person to carry out any act contrary to this Act. 35

### **Incentives**

**43.** (1) On advice from SAHRA the Minister, in concurrence with the Minister of Finance, may publish regulations on financial incentives for the conservation of heritage resources which form part of the national estate, or otherwise promote the purpose of this Act. 40

(2) An MEC or a local authority may in planning schemes or in by-laws under this Act or by any other means provide incentives for the conservation of heritage resources as provided for in subsection (1).

### **Presentation of protected resources** 45

**44.** (1) Heritage resources authorities and local authorities must, wherever appropriate, co-ordinate and promote the presentation and use of places of cultural significance and heritage resources which form part of the national estate and for which they are responsible in terms of section 5 for public enjoyment, education, research and tourism, including— 50

- (a) the erection of explanatory plaques and interpretive facilities, including interpretive centres and visitor facilities;
- (b) the training and provision of guides;
- (c) the mounting of exhibitions;
- (d) the erection of memorials; and 55

(e) any other means necessary for the effective presentation of the national estate.

(2) Where a heritage resource which is formally protected in terms of Part 1 of this Chapter is to be presented, the person wishing to undertake such presentation must, at least 60 days prior to the institution of interpretive measures or manufacture of associated material, consult with the heritage resources authority which is responsible for the protection of such heritage resource regarding the contents of interpretive material or programmes. 5

(3) A person may only erect a plaque or other permanent display or structure associated with such presentation in the vicinity of a place protected in terms of this Act in consultation with the heritage resources authority responsible for the protection of the place. 10

### **Compulsory repair order**

**45.** (1) When the heritage resources authority responsible for the protection of a heritage site considers that such site—

(a) has been allowed to fall into disrepair for the purpose of— 15

(i) effecting or enabling its destruction or demolition;

(ii) enabling the development of the designated land; or

(iii) enabling the development of any land adjoining the designated land; or

(b) is neglected to such an extent that it will lose its potential for conservation, the heritage resources authority may serve on the owner an order to repair or maintain such site, to the satisfaction of the heritage resources authority, within a reasonable period of time as specified in the order: Provided that the heritage resources authority must specify only such work as, in its opinion, is necessary to prevent any further deterioration in the condition of the place. 20

(2) Subject to subsection (3), upon failure of the owner to comply with the terms of an order under subsection (1) within the specified time, the authority which served the order may itself take such steps as may be necessary for the repair or maintenance thereof and recover the costs from the owner. 25

(3) If the owner can show good cause, he or she may, within 21 days of the service of a repair order under subsection (1)— 30

(a) apply to the heritage resources authority which served the repair order for the extension of the time specified in the order; or

(b) appeal to the Minister, in the manner prescribed under section 49.

### **Expropriation**

**46.** (1) The Minister may, on the advice of SAHRA and after consultation with the Minister of Finance, purchase or, subject to compensation, expropriate any property for conservation or any other purpose under this Act if that purpose is a public purpose or is in the public interest. 35

(2) The Expropriation Act, 1975 (Act No. 63 of 1975), applies to all expropriations under this Act, and any reference to the Minister of Public Works in that Act must be read as a reference to the Minister for the purposes of such expropriation. 40

(3) Notwithstanding the provisions of subsection (2), the amount of compensation and the time and manner of payment must be determined in accordance with section 25(3) of the Constitution, and the owner of the property in question must be given a hearing before any property is expropriated. 45

### **General policy**

**47.** (1) SAHRA and a provincial heritage resources authority—

(a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and 50

(b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and

(c) must review any such statement within 10 years after its adoption.

(2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage 55

conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.

(3) A conservation management plan may at the discretion of the heritage resources authority concerned and for a period not exceeding 10 years, be operated either solely by the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine. 5

(4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned. 10

(5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan. 15

(6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.

### CHAPTER III

#### GENERAL PROVISIONS 20

##### *Part 1: Enforcement, appeals, offences and penalties*

#### Permits

48. (1) A heritage resources authority may prescribe the manner in which an application is made to it for any permit in terms of this Act and other requirements for permit applications, including— 25

- (a) any particulars or information to be furnished in the application and any documents, drawings, plans, photographs and fees which should accompany the application;
- (b) minimum qualifications and standards of practice required of persons making application for a permit to perform specified actions in relation to particular categories of protected heritage resources; 30
- (c) standards and conditions for the excavation and curation of archaeological and palaeontological objects and material and meteorites recovered by authority of a permit;
- (d) the conditions under which, before a permit is issued, a financial deposit must be lodged and held in trust for the duration of the permit or such period as the heritage resources authority may specify, and conditions of forfeiture of such deposit; 35
- (e) conditions for the temporary export and return of objects protected under section 32 or section 35; 40
- (f) the submission of reports on work done under authority of a permit; and
- (g) the responsibilities of the heritage resources authority regarding monitoring of work done under authority of a permit.

(2) On application by any person in the manner prescribed under subsection (1), a heritage resources authority may in its discretion issue to such person a permit to perform such actions at such time and subject to such terms, conditions and restrictions or directions as may be specified in the permit, including a condition— 45

- (a) that the applicant give security in such form and such amount determined by the heritage resources authority concerned, having regard to the nature and extent of the work referred to in the permit, to ensure the satisfactory completion of such work or the curation of objects and material recovered during the course of the work; or 50
- (b) providing for the recycling or deposit in a materials bank of historical building materials; or
- (c) stipulating that design proposals be revised; or 55
- (d) regarding the qualifications and expertise required to perform the actions for which the permit is issued.

(3) A heritage resources authority may at its discretion, in respect of any heritage resource protected by it in terms of the provisions of Chapter II, by notice in the *Gazette* or the *Provincial Gazette*, as the case may be, grant an exemption from the requirement to obtain a permit from it for such activities or class of activities by such persons or class of persons in such circumstances as are specified in the notice. 5

### Appeals

49. (1) Regulations by the Minister and the MEC must provide for a system of appeal to the SAHRA Council or a provincial heritage resources council against a decision of a committee or other delegated representative of SAHRA or a provincial heritage resources authority. 10

(2) Anybody wishing to appeal against a decision of the SAHRA Council or the council of a provincial heritage resources authority must notify the Minister or MEC in writing within 30 days. The Minister or MEC shall then appoint an independent tribunal, consisting of three experts, having expertise regarding the matter.

(3) The tribunal contemplated in subsection (2), in considering the appeal referred to it by the Minister or the MEC, must have due regard to— 15

- (a) the cultural significance of the heritage resources in question;
- (b) heritage conservation principles; and
- (c) any other relevant factor which is brought to its attention by the appellant or the heritage resources authority. 20

### Appointment and powers of heritage inspectors

50. (1) SAHRA or a provincial heritage resources authority may, in writing, appoint heritage inspectors: Provided that if a heritage inspector is a staff member of a government department or supported body, such appointment must only be made by agreement with the Minister or other person in charge of the administration of such department or body. 25

(2) By force of this section, each member of the South African Police Services and each customs and excise officer is deemed to be a heritage inspector.

(3) The heritage resources authority must issue to each heritage inspector, other than a person referred to in subsection (2), an identity card containing a photograph and the signature of the heritage inspector. 30

(4) For the purposes of this section, a reference to an identity card in relation to a person referred to in subsection (2), is a reference to written evidence of the fact that he or she is a member of the bodies referred to in subsection (2).

(5) A person who ceases to be a heritage inspector must forthwith return his or her identity card to the heritage authority concerned. 35

(6) A heritage inspector, other than a customs and excise officer or a member of the South African Police Services in uniform, may not exercise his or her powers in terms of this Act in relation to another person unless the heritage inspector first produces the identity card for inspection by the other person: Provided that if the production of the identity card would endanger the health or safety of the heritage inspector, he or she must produce it as soon as is practicable to do so. 40

(7) Subject to the provisions of any other law, a heritage inspector or any person authorised by a heritage resources authority in writing, may at all reasonable times enter upon any land or premises for the purpose of inspecting any heritage resource protected in terms of the provisions of this Act, or any other property in respect of which the heritage resources authority is exercising its functions and powers in terms of this Act, and may take photographs, make measurements and sketches and use any other means of recording information necessary for the purposes of this Act. 45

(8) A heritage inspector may at any time inspect work being done under a permit issued in terms of this Act and may for that purpose at all reasonable times enter any place protected in terms of this Act. 50

(9) Where a heritage inspector has reasonable grounds to suspect that an offence in terms of this Act has been, is being, or is about to be committed, the heritage inspector may with such assistance as he or she thinks necessary— 55

- (a) enter and search any place, premises, vehicle, vessel or craft, and for that purpose stop and detain any vehicle, vessel or craft, in or on which the heritage inspector believes, on reasonable grounds, there is evidence related to that offence;

- (b) confiscate and detain any heritage resource or evidence concerned with the commission of the offence pending any further order from the responsible heritage resources authority; and
- (c) take such action as is reasonably necessary to prevent the commission of an offence in terms of this Act. 5

(10) A heritage inspector may, if there is reason to believe that any work is being done or any action is being taken in contravention of this Act or the conditions of a permit issued in terms of this Act, order the immediate cessation of such work or action pending any further order from the responsible heritage resources authority.

(11) A heritage inspector may require any person who he or she has reason to believe has committed an offence in terms of this Act to supply his or her name and address and reasonable evidence of his or her identity, and may arrest a person who refuses to comply with those requirements. 10

(12) A person—

- (a) must comply with a request or requirement lawfully made in terms of this section to the extent that the person is capable of complying with it; 15
- (b) may not knowingly furnish information that is false or misleading; and
- (c) may not hinder or obstruct any heritage inspector in the exercise of his or her powers in terms of this section.

### **Offences and penalties** 20

**51.** (1) Notwithstanding the provisions of any other law, any person who contravenes—

- (a) sections 27(18), 29(10), 32(13) or 32(19) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 1 of the Schedule; 25
- (b) sections 33(2), 35(4) or 36(3) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 2 of the Schedule;
- (c) sections 28(3) or 34(1) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 3 of the Schedule; 30
- (d) sections 27(22), 32(15), 33(1), 35(6) or 44(3) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 4 of the Schedule;
- (e) sections 27(23)(b), 32(17), 35(3), 36(3) or 51(8) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 5 of the Schedule; 35
- (f) sections 32(13), 32(16), 32(20), 35(7)(a), 44(2), 50(5) or 50(12) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 6 of the Schedule. 40

(2) The Minister, with the concurrence of the relevant MEC, may prescribe a penalty of a fine or of imprisonment for a period not exceeding six months for any contravention or failure to comply with regulations by heritage resources authorities or by-laws by local authorities.

(3) The Minister or the MEC, as the case may be, may make regulations in terms of which the magistrate of the district concerned may— 45

- (a) levy admission of guilt fines up to a maximum amount of R10 000 for infringement of the terms of this Act for which such heritage resources authority is responsible; and
- (b) serve a notice upon a person who is contravening a specified provision of this Act or has not complied with the terms of a permit issued by such authority, imposing a daily fine of R50 for the duration of the contravention, subject to a maximum period of 365 days. 50

(4) The Minister may from time to time by regulation adjust the amounts referred to in subsection (3) in order to account for the effect of inflation. 55

(5) Any person who—

- (a) fails to provide any information that is required to be given, whether or not on the request of a heritage resources authority, in terms of this Act;
- (b) for the purpose of obtaining, whether for himself or herself or for any other person, any permit, consent or authority in terms of this Act, makes any statement or representation knowing it to be false or not knowing or believing it to be true; 60



- (c) fails to comply with or performs any act contrary to the terms, conditions, restrictions or directions subject to which any permit, consent or authority has been issued to him or her in terms of this Act;
- (d) obstructs the holder of a permit in terms of this Act in exercising a right granted to him or her by means of such a permit; 5
- (e) damages, takes or removes, or causes to be damaged, taken or removed from a place protected in terms of this Act any badge or sign erected by a heritage authority or a local authority under section 25(2)(j) or section 27(17), any interpretive display or any other property or thing;
- (f) receives any badge, emblem or any other property or thing unlawfully taken or removed from a place protected in terms of this Act; and 10
- (g) within the terms of this Act, commits or attempts to commit any other unlawful act, violates any prohibition or fails to perform any obligation imposed upon him or her by its terms, or who counsels, procures, solicits or employs any other person to do so, 15

shall be guilty of an offence and upon conviction shall be liable to such maximum penalties, in the form of a fine or imprisonment or both such fine and such imprisonment, as shall be specified in the regulations under subsection (3).

(6) Any person who believes that there has been an infringement of any provision of this Act, may lay a charge with the South African Police Services or notify a heritage resources authority. 20

(7) A magistrate's court shall, notwithstanding the provisions of any other law, be competent to impose any penalty under this Act.

(8) When any person has been convicted of any contravention of this Act which has resulted in damage to or alteration of a protected heritage resource the court may— 25

- (a) order such person to put right the result of the act of which he or she was found guilty, in the manner so specified and within such period as may be so specified, and upon failure of such person to comply with the terms of such order, order such person to pay to the heritage resources authority responsible for the protection of such resource a sum equivalent to the cost of making good; or 30
- (b) when it is of the opinion that such person is not in a position to make good damage done to a heritage resource by virtue of the offender not being the owner or occupier of a heritage resource or for any other reason, or when it is advised by the heritage resources authority responsible for the protection of such resource that it is unrealistic or undesirable to require that the results of the act be made good, order such person to pay to the heritage resources authority a sum equivalent to the cost of making good. 35

(9) In addition to other penalties, if the owner of a place has been convicted of an offence in terms of this Act involving the destruction of, or damage to, the place, the Minister on the advice of SAHRA or the MEC on the advice of a provincial heritage resources authority, may serve on the owner an order that no development of such place may be undertaken, except making good the damage and maintaining the cultural value of the place, for a period not exceeding 10 years specified in the order. 40

(10) Before making the order, the local authority and any person with a registered interest in the land must be given a reasonable period to make submissions on whether the order should be made and for how long. 45

(11) An order of no development under subsection (9) attaches to the land and is binding not only on the owner as at the date of the order, but also on any person who becomes an owner of the place while the order remains in force. 50

(12) The Minister on the advice of SAHRA, may reconsider an order of no development and may in writing amend or repeal such order.

(13) In any case involving vandalism, and whenever else a court deems it appropriate, community service involving conservation of heritage resources may be substituted for, or instituted in addition to, a fine or imprisonment. 55

(14) Where a court convicts a person of an offence in terms of this Act, it may order

the forfeiture to SAHRA or the provincial heritage resources authority concerned, as the case may be, of a vehicle, craft, equipment or any other thing used or otherwise involved in the committing of the offence.

(15) A vehicle, craft, equipment or other thing forfeited under subsection (14) may be sold or otherwise disposed of as the heritage resources authority concerned deems fit. 5

## *Part 2: Miscellaneous*

### **Notices**

**52.** (1) SAHRA may, by publication of a further notice, amend or withdraw any notice which it has published in the *Gazette*.

(2) A provincial heritage resources authority may by publication of a further notice amend or withdraw any notice which it has published in the *Provincial Gazette*. 10

(3) SAHRA or a provincial heritage resources authority may prescribe the manner in which legally enforceable property descriptions may be published in notices in the *Gazette* or in the *Provincial Gazette*, as the case may be, in terms of the provisions of this Act including— 15

- (a) methods of technology permissible in measuring areas; and
- (b) methods to be used in compensating for margins of error in measurement.

### **Delegation of powers by Minister or MEC**

**53.** (1) The Minister may delegate any power, duty or function conferred or imposed upon him or her under this Act to the Deputy Minister or the incumbent of a designated post in the Department. 20

(2) The Minister may delegate any power, duty or function conferred or imposed upon him or her under this Act to the incumbent of a designated post in the provincial department responsible for culture.

### **By-laws by local authorities** 25

**54.** (1) A local authority may, with the approval of the provincial heritage resources authority, make by-laws—

- (a) regulating the admission of the public to any place protected under this Act to which the public is allowed access and which is under its control, and the fees payable for such admission; 30
- (b) regulating the conditions of use of any place protected under this Act which is under its control;
- (c) for the protection and management of a protected area;
- (d) for the protection and management of places in a heritage register;
- (e) for the protection and management of heritage areas; and 35
- (f) providing incentives for the conservation of any place protected under this Act within its area of jurisdiction.

(2) Any by-laws made under this section may prescribe fines for contravention thereof or failure to comply therewith, not exceeding an amount prescribed by the Minister under section 51(2). 40

### **Limitation of liability**

**55.** No person is liable in respect of anything done in terms of this Act in good faith and without negligence.

### **Exercise of powers outside Republic**

**56.** (1) A heritage resources authority may assist and co-operate with heritage bodies outside the Republic. 45

(2) If agreed upon between the Government of South Africa and the government of any other state, SAHRA has power, with the concurrence of the Minister, to perform in that state any functions which a heritage resources authority would be capable of performing in South Africa in terms of this Act. 50

(3) The Minister may make regulations concerning the application of any international convention, treaty or agreement relating to the protection of heritage resources which, in accordance with sections 231 to 233 of the Constitution of the

Republic of South Africa, 1996 (Act No. 108 of 1996), forms part of the law of the Republic.

### **Applicability of provincial legislation**

57. Without prejudice to the provisions of this Act, in any province which has enacted legislation for the establishment of a provincial heritage resources authority and the management of heritage resources at provincial level, the provisions of such legislation must, as far as they relate to provincial areas of competence, take precedence over the equivalent provisions of this Act. 5

### **Transitional provisions and consequential amendments**

58. (1) For the purposes of this section, “the previous Act” means the National Monuments Act, 1969 (Act No. 28 of 1969). 10

(2) The National Monuments Council established by section 2 of the previous Act is hereby abolished and all its assets, rights, liabilities and obligations shall devolve upon SAHRA without formal transfer and without payment of any duties, taxes, fees or other charges. The officer in charge of registration of deeds registry must, on submission of the title deed and on application by the authority concerned, endorse such a title deed with regard to such development. 15

(3) Any person who was in the employment of the Council referred to in subsection (2), is regarded to have been appointed under this Act.

(4) The remuneration and other conditions of service of an employee contemplated in subsection (3) may not be less favourable than the remuneration and other conditions of service to which that employee was entitled to before. 20

(5) If a person appointed under subsection (3) or a person regarded to be so appointed, is dismissed, that person may within 14 days after the date of notification of the dismissal, appeal in writing against the dismissal to the Minister, who may confirm, vary or set aside the dismissal. 25

(6) The National Monuments Council library shall become part of the national heritage resources library established under section 13(2)(b).

(7) The committees established by section 3A of the previous Act are hereby abolished and all their assets, rights, liabilities and obligations shall devolve upon SAHRA without formal transfer and without payment of any duties, taxes, fees or other charges. 30

(8) Unless it would in any particular case obviously be inappropriate, any reference in any law, document or register, to the National Monuments Council must be construed as a reference to SAHRA and any such reference to an officer or employee of the National Monuments Council must be construed as a reference to an employee of SAHRA performing functions or exercising powers similar to those of the first-mentioned officer or employee. 35

(9) All trust funds for which the National Monuments Council acted as trustee, including the War Graves Trust Fund referred to in section 9A of the previous Act, shall on the date of commencement of this Act become vested in SAHRA as part of the National Heritage Resources Fund referred to in section 40, and SAHRA must act as trustee on the same terms and conditions as existed prior to the commencement of this Act. 40

(10) On the establishment of a provincial heritage resources authority, arrangements must be made for the transfer of such assets, rights, liabilities and obligations of SAHRA in that province to the provincial heritage resources authority as the Minister and the MEC deem fit. 45

(11) Sites and objects which prior to the commencement of this Act were protected by notices in the *Gazette* in terms of the previous Act, shall, subject to the provisions of any provincial legislation for heritage resources conservation and any agreement in that regard, and without the need for the publication of notices in the *Gazette*, continue to be protected in terms of the following provisions of this Act: 50

- (a) Immovable national monuments in terms of section 10 of the previous Act shall be provincial heritage resources sites: Provided that within five years of the commencement of this Act, the provincial heritage resources authorities in consultation with SAHRA, must assess the significance of such sites in accordance with the heritage assessment criteria set out in section 3(3) and prescribed under section 7(1) and SAHRA must declare any place which fulfils the criteria for Grade I status a national heritage site; 55  
60

- (b) immovable properties entered in the register in terms of section 5(1) of the previous Act must be entered in the heritage register for the province in which they are situated and in the inventory of the national estate;
  - (c) conservation areas in terms of section 5(9) of the previous Act shall be heritage areas: Provided that where no provision has been made for the protection of such areas in by-laws under the previous Act or in a town or regional planning scheme—
    - (i) sections 31(7)(a), (b) and (c) of this Act automatically apply to such heritage areas; and
    - (ii) the local or other planning authority concerned must provide for the protection of such area in accordance with the provisions of section 31 within three years of the commencement of this Act;
  - (d) provisionally declared immovable properties in terms of section 5(1)(c) of the previous Act are provisionally protected for such remaining period as specified in the notice of provisional declaration;
  - (e) national gardens of remembrance in terms of section 9C of the previous Act are provincial heritage sites;
  - (f) cultural treasures in terms of section 5(c) and movable national monuments in terms of section 10 of the previous Act are heritage objects.
- (12) A notice under section 10(3)(a) or 5(5)(b) of the previous Act which was served within six months prior to the commencement of this Act shall be deemed to be a notice served by a provincial heritage resources authority in terms of section 27(8) or section 29(1) and (2) of this Act, as the case may be.
- (13) A permit issued under the previous Act shall be deemed to be a permit issued by the responsible heritage authority under the relevant section of this Act.

### Regulations

- 59.** The Minister may, by notice in the *Gazette* make regulations regarding—
- (a) any matter which may or shall be prescribed in terms of this Act;
  - (b) any other matter which may be necessary or expedient in order to achieve the objects of this Act.

### Repeal

**60.** The National Monuments Act, 1969 (Act No. 28 of 1969), and section 41(2) of the Environment Conservation Act, 1989 (Act No. 73 of 1989), are hereby repealed.

### Short title and commencement

**61.** This Act shall be called the National Heritage Resources Act, 1999, and shall come into operation on a date to be fixed by the President by proclamation in the *Gazette*.

**SCHEDULE**

**PENALTIES FOR NATIONAL HERITAGE ACT**

**(Section 51)**

1. A fine or imprisonment for a period not exceeding five years or to both such fine and imprisonment.
2. A fine or imprisonment for a period not exceeding three years or to both such fine and imprisonment.
3. A fine or imprisonment for a period not exceeding two years or to both such fine and imprisonment.
4. A fine or imprisonment for a period not exceeding one year or to both such fine and imprisonment.
5. A fine or imprisonment for a period not exceeding six months or to both such fine and imprisonment.
6. A fine or imprisonment for a period not exceeding three months or to both such fine and imprisonment.

REPUBLIC OF SOUTH AFRICA

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**NATIONAL WATER ACT**

**Act No 36 of 1998**

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*(English text signed by the President)  
(Assented to 20 August 1998)*

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**ACT**

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**To provide for fundamental reform of the law relating to water resources; to repeal certain laws; and to provide for matters connected therewith.**

**PREAMBLE**

Recognising that water is a scarce and unevenly distributed national resource which occurs in many different forms which are all part of a unitary, interdependent cycle;

Recognising that while water is a natural resource that belongs to all people, the discriminatory laws and practices of the past have prevented equal access to water, and use of water resources;

Acknowledging the National Government's overall responsibility for and authority over the nation's water resources and their use, including the equitable allocation of water for beneficial use, the redistribution of water, and international water matters;

Recognising that the ultimate aim of water resource management is to achieve the sustainable use of water for the benefit of all users;

Recognising that the protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interests of all water users; and

Recognising the need for the integrated management of all aspects of water resources and, where appropriate, the delegation of management functions to a regional or catchment level so as to enable everyone to participate;

BE IT ENACTED by the Parliament of the Republic of South Africa, as follows: -

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## **CHAPTER 1**

### **INTERPRETATION AND FUNDAMENTAL PRINCIPLES**

*This Chapter sets out the fundamental principles of the Act. Sustainability and equity are identified as central guiding principles in the protection, use, development, conservation, management and control of water resources. These guiding principles recognise the basic human needs of present and future generations, the need to protect water resources, the need to share some water resources with other countries, the need to promote social and economic development through the use of water and the need to establish suitable institutions in order to achieve the purpose of the Act. National Government, acting through the Minister, is responsible for the achievement of these fundamental principles in accordance with the Constitutional mandate for water reform. Being empowered to act on behalf of the nation, the Minister has the ultimate responsibility to fulfil certain obligations relating to the use, allocation and protection of and access to water resources.*

*This Chapter also contains definitions explaining the meaning of certain words used in the Act as well as provisions regarding the interpretation of the Act.*

## **Definitions and interpretation**

1.(1) In this Act, unless the context shows that another meaning is intended -

- (i) "aquifer" means a geological formation which has structures or textures that hold water or permit appreciable water movement through them;
- (ii) "borehole" includes a well, excavation or any artificially constructed or improved underground cavity which can be used for the purpose of -
  - (a) intercepting, collecting or storing water in or removing water from an aquifer;
  - (b) observing and collecting data and information on water in an aquifer; or
  - (c) recharging an aquifer;
- (iii) "catchment", in relation to a watercourse or watercourses or part of a watercourse, means the area from which any rainfall will drain into the watercourse or watercourses or part of a watercourse, through surface flow to a common point or common points;
- (iv) "charge" includes a fee, price or tariff imposed under this Act;
- (v) "conservation" in relation to a water resource means the efficient use and saving of water, achieved through measures such as water saving devices, water-efficient processes, water demand management and water rationing;
- (vi) "Department" means the Department of Water Affairs and Forestry;
- (vii) "Director-General" means the Director-General of the Department;
- (viii) "entitlement" means a right to use water in terms of any provision of this Act or in terms of an instrument issued under this Act;
- (ix) "estuary" means a partially or fully enclosed body of water -
  - (a) which is open to the sea permanently or periodically; and
  - (b) within which the sea water can be diluted, to an extent that is measurable, with fresh water drained from land;
- (x) "government waterwork" means a waterwork owned or controlled by the Minister and includes the land on which it is situated;
- (xi) "instream habitat" includes the physical structure of a watercourse and the associated vegetation in relation to the bed of the watercourse;
- (xii) "Minister" means the Minister of Water Affairs and Forestry;
- (xiii) "organ of state" has the meaning set out in section 239 of the Constitution;
- (xiv) "person" includes a natural person, a juristic person, an unincorporated body, an association, an organ of state and the Minister;
- (xv) "pollution" means the direct or indirect alteration of the physical, chemical or biological properties of a water resource so as to make it -
  - (a) less fit for any beneficial purpose for which it may reasonably be expected to be used; or
  - (b) harmful or potentially harmful -
    - (aa) to the welfare, health or safety of human beings;
    - (bb) to any aquatic or non-aquatic organisms;
    - (cc) to the resource quality; or
    - (dd) to property;
- (xvi) "prescribe" means prescribe by regulation;
- (xvii) "protection", in relation to a water resource, means -
  - (a) maintenance of the quality of the water resource to the extent that the water resource may be used in an ecologically sustainable way;
  - (b) prevention of the degradation of the water resource; and
  - (c) the rehabilitation of the water resource;
- (xviii) "Reserve" means the quantity and quality of water required -
  - (a) to satisfy basic human needs by securing a basic water supply, as prescribed under the Water Services Act, 1997 (Act No. 108 of 1997), for people who are now or who will, in the reasonably near future, be -
    - (i) relying upon;
    - (ii) taking water from; or

- (iii) being supplied from,
    - the relevant water resource; and
    - (b) to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource;
  - (xix) "resource quality" means the quality of all the aspects of a water resource including -
    - (a) the quantity, pattern, timing, water level and assurance of instream flow;
    - (b) the water quality, including the physical, chemical and biological characteristics of the water;
    - (c) the character and condition of the instream and riparian habitat; and
    - (d) the characteristics, condition and distribution of the aquatic biota;
  - (xx) "responsible authority", in relation to a specific power or duty in respect of water uses, means -
    - (a) if that power or duty has been assigned by the Minister to a catchment management agency, that catchment management agency; or
    - (b) if that power or duty has not been so assigned, the Minister;
  - (xxi) "riparian habitat" includes the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterised by alluvial soils, and which are inundated or flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas;
  - (xxii) "this Act" includes any regulations made under this Act;
  - (xxiii) "waste" includes any solid material or material that is suspended, dissolved or transported in water (including sediment) and which is spilled or deposited on land or into a water resource in such volume, composition or manner as to cause, or to be reasonably likely to cause, the water resource to be polluted;
  - (xxiv) "watercourse" means -
    - (a) a river or spring;
    - (b) a natural channel in which water flows regularly or intermittently;
    - (c) a wetland, lake or dam into which, or from which, water flows; and
    - (d) any collection of water which the Minister may, by notice in the *Gazette*, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks;
  - (xxv) "water management area" is an area established as a management unit in the national water resource strategy within which a catchment management agency will conduct the protection, use, development, conservation, management and control of water resources;
  - (xxvi) "water management institution" means a catchment management agency, a water user association, a body responsible for international water management or any person who fulfils the functions of a water management institution in terms of this Act;
  - (xxvii) "water resource" includes a watercourse, surface water, estuary, or aquifer;
  - (xxviii) "waterwork" includes any borehole, structure, earthwork or equipment installed or used for or in connection with water use;
  - (xxix) "wetland" means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.
- (2) In this Act, where a word or expression is given a particular meaning, other parts of speech and grammatical forms of that word or expression have, unless the contrary intention appears from the relevant provisions, corresponding meanings.

(3) When interpreting a provision of this Act, any reasonable interpretation which is consistent with the purpose of this Act as stated in section 2, must be preferred over any alternative interpretation which is inconsistent with that purpose.

(4) Explanatory notes, printed in bold italics, at the commencement of Chapters and Parts must not be used in the interpretation of any provision of this Act.

(5) Any directive or notice given in terms of this Act must be in writing, unless otherwise specified in this Act.

## **Purpose of Act**

2. The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors -

- (a) meeting the basic human needs of present and future generations;
- (b) promoting equitable access to water;
- (c) redressing the results of past racial and gender discrimination;

- (d) promoting the efficient, sustainable and beneficial use of water in the public interest;
- (e) facilitating social and economic development;
- (f) providing for growing demand for water use;
- (g) protecting aquatic and associated ecosystems and their biological diversity;
- (h) reducing and preventing pollution and degradation of water resources;
- (i) meeting international obligations;
- (j) promoting dam safety;
- (k) managing floods and droughts,

and for achieving this purpose, to establish suitable institutions and to ensure that they have appropriate community, racial and gender representation.

### **Public trusteeship of nation's water resources**

3. (1) As the public trustee of the nation's water resources the National Government, acting through the Minister, must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its constitutional mandate.

(2) Without limiting subsection (1), the Minister is ultimately responsible to ensure that water is allocated equitably and used beneficially in the public interest, while promoting environmental values.

(3) The National Government, acting through the Minister, has the power to regulate the use, flow and control of all water in the Republic.

### **Entitlement to water use**

4. (1) A person may use water in or from a water resource for purposes such as reasonable domestic use, domestic gardening, animal watering, fire fighting and recreational use, as set out in Schedule 1.

(2) A person may continue with an existing lawful water use in accordance with section 34.

(3) A person may use water in terms of a general authorisation or licence under this Act.

(4) Any entitlement granted to a person by or under this Act replaces any right to use water which that person might otherwise have been able to enjoy or enforce under any other law -

- (a) to take or use water;
- (b) to obstruct or divert a flow of water;
- (c) to affect the quality of any water;
- (d) to receive any particular flow of water;
- (e) to receive a flow of water of any particular quality; or
- (f) to construct, operate or maintain any waterwork.

## **CHAPTER 2**

### **WATER MANAGEMENT STRATEGIES**

*This Chapter deals with the development of strategies to facilitate the proper management of water resources.*

#### *Part 1 : National water resource strategy*

*Part 1 requires the progressive development, by the Minister, after consultation with society at large, of a national water resource strategy. The national water resource strategy provides the framework for the protection, use, development, conservation, management and control of water resources for the country as a whole. It also provides the framework within which water will be managed at regional or catchment level, in defined water management areas. The national water resource strategy, which must be formally reviewed from time to time, is binding on all authorities and institutions exercising powers or performing duties under this Act.*

### **Establishment of national water resource strategy**

5. (1) Subject to subsection (4), the Minister must, as soon as reasonably practicable, by notice in the *Gazette*, establish a national water resource strategy.

(2) The notice must state the address where the strategy may be inspected.

(3) The water resources of the Republic must be protected, used, developed, conserved, managed and controlled in accordance with the national water resource strategy.

(4) A national water resource strategy -

(a) may be established in a phased and progressive manner and in separate components over time; and

(b) must be reviewed at intervals of not more than five years.

(5) Before establishing a national water resource strategy or any component of that strategy in terms of subsection (1), the Minister must -

(a) publish a notice in the *Gazette* -

(i) setting out a summary of the proposed strategy or the component in question;

(ii) stating the address where the proposed strategy or the component in question is available for inspection; and

(iii) inviting written comments to be submitted on the proposed strategy or the component in question, specifying an address to which and a date before which comments must be submitted, which date may not be earlier than 90 days after publication of the notice;

(b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and

(c) consider all comments received on or before the date specified in paragraph (a)(iii).

### **Contents of national water resource strategy**

6. (1) The national water resource strategy must, subject to section 5(4)(a) -

(a) set out the strategies, objectives, plans, guidelines and procedures of the Minister and institutional arrangements relating to the protection, use, development, conservation, management and control of water resources within the framework of existing relevant government policy in order to achieve -

(i) the purpose of this Act; and

(ii) any compulsory national standards prescribed under section 9(1) of the Water Services Act, 1997 (Act No. 108 of 1997);

(b) provide for at least -

(i) the requirements of the Reserve and identify, where appropriate, water resources from which particular requirements must be met;

(ii) international rights and obligations;

(iii) actions to be taken to meet projected future water needs; and

(iv) water use of strategic importance;

(c) establish water management areas and determine their boundaries;

(d) contain estimates of present and future water requirements;

(e) state the total quantity of water available within each water management area;

(f) state water management area surpluses or deficits;

(g) provide for inter-catchment water transfers between surplus water management areas and deficit water management areas;

(h) set out principles relating to water conservation and water demand management;

(i) state the objectives in respect of water quality to be achieved through the classification system for water resources provided for in this Act;

(j) contain objectives for the establishment of institutions to undertake water resource management;

(k) determine the inter-relationship between institutions involved in water resource management; and

(l) promote the management of catchments within a water management area in a holistic and integrated manner.

(2) In determining a water management area in terms of subsection (1)(c), the Minister must take into account -

(a) watercourse catchment boundaries;

(b) social and economic development patterns;

(c) efficiency considerations; and

(d) communal interests within the area in question.

### **Giving effect to national water resource strategy**

7. The Minister, the Director-General, an organ of state and a water management institution must give effect to the national water resource strategy when exercising any power or performing any duty in terms of this Act.



## *Part 2: Catchment management strategies*

*Part 2 requires every catchment management agency to progressively develop a catchment management strategy for the water resources within its water management area. Catchment management strategies must be in harmony with the national water resource strategy. In the process of developing this strategy, a catchment management agency must seek co-operation and agreement on water-related matters from the various stakeholders and interested persons. The catchment management strategy, which must be reviewed from time to time, will include a water allocation plan. A catchment management strategy must set principles for allocating water to existing and prospective users, taking into account all matters relevant to the protection, use, development, conservation, management and control of water resources.*

### **Establishment of catchment management strategies**

8. (1) A catchment management agency contemplated in Chapter 7 must, by notice in the *Gazette*, establish a catchment management strategy for the protection, use, development, conservation, management and control of water resources within its water management area.

(2) The notice must state the address where the strategy may be inspected.

(3) A catchment management strategy -

(a) may be established in a phased and progressive manner and in separate components over time; and

(b) must be reviewed at intervals of not more than five years.

(4) A catchment management strategy or any component of that strategy may only be established with the written consent of the Minister.

(5) Before establishing a catchment management strategy or any component of that strategy in terms of subsection (1), a catchment management agency must -

(a) publish a notice in the *Gazette* -

(i) setting out a summary of the proposed catchment management strategy or the component in question;

(ii) stating the address where the proposed strategy or the component in question is available for inspection; and

(iii) inviting written comments to be submitted on the proposed strategy or the component in question, specifying an address to which and a date before which comments must be submitted, which date may not be earlier than 90 days after publication of the notice;

(b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the catchment management agency considers to be appropriate; and

(c) consider all comments received on or before the date specified in paragraph (a)(iii).

### **Contents of catchment management strategy**

9. A catchment management strategy must -

(a) take into account the class of water resources and resource quality objectives contemplated in Chapter 3, the requirements of the Reserve and, where applicable, international obligations;

(b) not be in conflict with the national water resource strategy;

(c) set out the strategies, objectives, plans, guidelines and procedures of the catchment management agency for the protection, use, development, conservation, management and control of water resources within its water management area;

(d) take into account the geology, demography, land use, climate, vegetation and waterworks within its water management area;

(e) contain water allocation plans which are subject to section 23, and which must set out principles for allocating water, taking into account the factors mentioned in section 27(1);

(f) take account of any relevant national or regional plans prepared in terms of any other law, including any development plan adopted in terms of the Water Services Act, 1997 (Act No. 108 of 1997);

(g) enable the public to participate in managing the water resources within its water management area;

(h) take into account the needs and expectations of existing and potential water users; and

(i) set out the institutions to be established.

## **Guidelines for and consultation on catchment management strategies**

- 10.** (1) The Minister may establish guidelines for the preparation of catchment management strategies.
- (2) In developing a catchment management strategy, a catchment management agency must consult with -
- (a) the Minister;
  - (b) any organ of state which has an interest in the content, effect or implementation of the catchment management strategy; and
  - (c) any persons, or their representative organisations -
    - (i) whose activities affect or might affect water resources within its water management area; and
    - (ii) who have an interest in the content, effect or implementation of the catchment management strategy.
- (3) A catchment management agency must, before the publication of a notice in terms of section 8(5)(a), refer to the Minister for consideration and determination, any proposed component of a catchment management strategy which in the opinion of the catchment management agency -
- (a) raises a material question of policy; or
  - (b) raises a question concerning -
    - (i) the relationship between the Department and other organs of state; or
    - (ii) the relationship between organs of state and their respective roles in developing or implementing a catchment management strategy.

## **Giving effect to catchment management strategies**

11. The Minister and the catchment management agency concerned must give effect to any catchment management strategy established under this Part when exercising any power or performing any duty in terms of this Act.

## **CHAPTER 3**

### **PROTECTION OF WATER RESOURCES**

*The protection of water resources is fundamentally related to their use, development, conservation, management and control. Parts 1, 2 and 3 of this Chapter lay down a series of measures which are together intended to ensure the comprehensive protection of all water resources. These measures are to be developed progressively within the contexts of the national water resource strategy and the catchment management strategies provided for in Chapter 2. Parts 4 and 5 deal with measures to prevent the pollution of water resources and measures to remedy the effects of pollution of water resources.*

#### *Part 1: Classification system for water resources*

*Part 1 provides for the first stage in the protection process, which is the development by the Minister of a system to classify the nation's water resources. The system provides guidelines and procedures for determining different classes of water resources.*

## **Prescription of classification system**

- 12.** (1) As soon as is reasonably practicable, the Minister must prescribe a system for classifying water resources.
- (2) The system for classifying water resources may -
- (a) establish guidelines and procedures for determining different classes of water resources;
  - (b) in respect of each class of water resource -
    - (i) establish procedures for determining the Reserve;
    - (ii) establish procedures which are designed to satisfy the water quality requirements of water users as far as is reasonably possible, without significantly altering the natural water quality characteristics of the resource;
    - (iii) set out water uses for instream or land-based activities which activities must be regulated or prohibited in order to protect the water resource; and

- (c) provide for such other matters relating to the protection, use, development, conservation, management and control of water resources, as the Minister considers necessary.

### ***Part 2: Classification of water resources and resource quality objectives***

***Under Part 2 the Minister is required to use the classification system established in Part 1 to determine the class and resource quality objectives of all or part of water resources considered to be significant. The purpose of the resource quality objectives is to establish clear goals relating to the quality of the relevant water resources. In determining resource quality objectives a balance must be sought between the need to protect and sustain water resources on the one hand, and the need to develop and use them on the other. Provision is made for preliminary determinations of the class and resource quality objectives of water resources before the formal classification system is established. Once the class of a water resource and the resource quality objectives have been determined they are binding on all authorities and institutions when exercising any power or performing any duty under this Act.***

#### **Determination of class of water resources and resource quality objectives**

**13.** (1) As soon as reasonably practicable after the Minister has prescribed a system for classifying water resources the Minister must, subject to subsection (4), by notice in the *Gazette*, determine for all or part of every significant water resource -

- (a) a class in accordance with the prescribed classification system; and
- (b) resource quality objectives based on the class determined in terms of paragraph (a).

(2) A notice in terms of subsection (1) must state the geographical area in respect of which the resource quality objectives will apply, the requirements for achieving the objectives, and the dates from which the objectives will apply.

(3) The objectives determined in terms of subsection (1) may relate to -

- (a) the Reserve;
- (b) the instream flow;
- (c) the water level;
- (d) the presence and concentration of particular substances in the water;
- (e) the characteristics and quality of the water resource and the instream and riparian habitat;
- (f) the characteristics and distribution of aquatic biota;
- (g) the regulation or prohibition of instream or land-based activities which may affect the quantity of water in or quality of the water resource; and
- (h) any other characteristic,

of the water resource in question.

(4) Before determining a class or the resource quality objectives in terms of subsection (1), the Minister must in respect of each water resource -

(a) publish a notice in the *Gazette* -

(i) setting out -

- (aa) the proposed class;
- (bb) the proposed resource quality objectives;
- (cc) the geographical area in respect of which the objectives will apply;
- (dd) the dates from which specific objectives will apply; and
- (ee) the requirements for complying with the objectives; and

(ii) inviting written comments to be submitted on the proposed class or proposed resource quality objectives (as the case may be), specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;

- (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
- (c) consider all comments received on or before the date specified in paragraph (a)(ii).

#### **Preliminary determination of class or resource quality objectives**

**14.** (1) Until -

- (a) a system for classifying water resources has been prescribed; or

- (b) a class of a water resource or resource quality objectives has been determined, the Minister may, for all or part of a water resource make a preliminary determination of the class or resource quality objectives.
- (2) A determination in terms of section 13 supersedes a preliminary determination.

### **Giving effect to determination of class of water resource and resource quality objectives**

**15.** *The Minister, the Director-General, an organ of state and a water management institution, when exercising any power or performing any duty in terms of this Act, must give effect to any determination of a class of a water resource and the resource quality objectives as determined in terms of this Part and any requirements for complying with the resource quality objectives.*

### ***Part 3: The Reserve***

*Part 3 deals with the Reserve, which consists of two parts - the basic human needs reserve and the ecological reserve. The basic human needs reserve provides for the essential needs of individuals served by the water resource in question and includes water for drinking, for food preparation and for personal hygiene. The ecological reserve relates to the water required to protect the aquatic ecosystems of the water resource. The Reserve refers to both the quantity and quality of the water in the resource, and will vary depending on the class of the resource. The Minister is required to determine the Reserve for all or part of any significant water resource. If a resource has not yet been classified, a preliminary determination of the Reserve may be made and later superseded by a new one. Once the Reserve is determined for a water resource it is binding in the same way as the class and the resource quality objectives.*

### **Determination of Reserve**

- 16.** (1) As soon as reasonably practicable after the class of all or part of a water resource has been determined, the Minister must, by notice in the *Gazette*, determine the Reserve for all or part of that water resource.
- (2) A determination of the Reserve must -
- (a) be in accordance with the class of the water resource as determined in terms of section 13; and
  - (b) ensure that adequate allowance is made for each component of the Reserve.
- (3) Before determining the Reserve in terms of subsection (1), the Minister must -
- (a) publish a notice in the *Gazette* -
    - (i) setting out the proposed Reserve; and
    - (ii) inviting written comments to be submitted on the proposed Reserve, specifying an address to which and a date before which comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
  - (c) consider all comments received on or before the date specified in paragraph (a)(ii).

### **Preliminary determinations of Reserve**

- 17.** (1) Until a system for classifying water resources has been prescribed or a class of a water resource has been determined, the Minister -
- (a) may, for all or part of a water resource; and
  - (b) must, before authorising the use of water under section 22(5), make a preliminary determination of the Reserve.
- (2) A determination in terms of section 16(1) supersedes a preliminary determination.

### **Giving effect to Reserve**

**18.** The Minister, the Director-General, an organ of state and a water management institution, must give effect to the Reserve as determined in terms of this Part when exercising any power or performing any duty in terms of this Act.

### ***Part 4: Pollution prevention***

*Part 4 deals with pollution prevention, and in particular the situation where pollution of a water resource occurs or might occur as a result of activities on land. The person who owns, controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources. If these measures are not taken, the catchment management agency concerned may itself do whatever is necessary to prevent the pollution or to remedy its effects, and to recover all reasonable costs from the persons responsible for the pollution.*

#### **Prevention and remedying effects of pollution**

19. (1) An owner of land, a person in control of land or a person who occupies or uses the land on which -
- (a) any activity or process is or was performed or undertaken; or
  - (b) any other situation exists, which causes, has caused or is likely to cause pollution of a water resource,

must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.

- (2) The measures referred to in subsection (1) may include measures to -

- (a) cease, modify or control any act or process causing the pollution;
- (b) comply with any prescribed waste standard or management practice;
- (c) contain or prevent the movement of pollutants;
- (d) eliminate any source of the pollution;
- (e) remedy the effects of the pollution; and
- (f) remedy the effects of any disturbance to the bed and banks of a watercourse.

- (3) A catchment management agency may direct any person who fails to take the measures required under subsection (1) to -

- (a) commence taking specific measures before a given date;
- (b) diligently continue with those measures; and
- (c) complete them before a given date.

(4) Should a person fail to comply, or comply inadequately with a directive given under subsection (3), the catchment management agency may take the measures it considers necessary to remedy the situation.

(5) Subject to subsection (6), a catchment management agency may recover all costs incurred as a result of it acting under subsection (4) jointly and severally from the following persons:

- (a) Any person who is or was responsible for, or who directly or indirectly contributed to, the pollution or the potential pollution;
- (b) the owner of the land at the time when the pollution or the potential for pollution occurred, or that owner's successor-in-title;
- (c) the person in control of the land or any person who has a right to use the land at the time when -
  - (i) the activity or the process is or was performed or undertaken; or
  - (ii) the situation came about; or
- (d) any person who negligently failed to prevent -
  - (i) the activity or the process being performed or undertaken; or
  - (ii) the situation from coming about.

(6) The catchment management agency may in respect of the recovery of costs under subsection (5), claim from any other person who, in the opinion of the catchment management agency, benefitted from the measures undertaken under subsection (4), to the extent of such benefit.

(7) The costs claimed under subsection (5) must be reasonable and may include, without being limited to, labour, administrative and overhead costs.

(8) If more than one person is liable in terms of subsection (5), the catchment management agency must, at the request of any of those persons, and after giving the others an opportunity to be heard, apportion the liability, but such apportionment does not relieve any of them of their joint and several liability for the full amount of the costs.

#### **Part 5: Emergency incidents**

*Part 5 deals with pollution of water resources following an emergency incident, such as an accident involving the spilling of a harmful substance that finds or may find its way into a water resource. The responsibility for remedying the situation rests with the person responsible for the incident or the substance involved. If there is a failure to act, the relevant catchment management agency may take the necessary steps and recover the costs from every responsible person.*

## **Control of emergency incidents**

20. (1) In this section "incident" includes any incident or accident in which a substance -
- (a) pollutes or has the potential to pollute a water resource; or
  - (b) has, or is likely to have, a detrimental effect on a water resource.
- (2) In this section, "responsible person" includes any person who -
- (a) is responsible for the incident;
  - (b) owns the substance involved in the incident; or
  - (c) was in control of the substance involved in the incident at the time of the incident.
- (3) The responsible person, any other person involved in the incident or any other person with knowledge of the incident must, as soon as reasonably practicable after obtaining knowledge of the incident, report to -
- (a) the Department;
  - (b) the South African Police Service or the relevant fire department; or
  - (c) the relevant catchment management agency.
- (4) A responsible person must -
- (a) take all reasonable measures to contain and minimise the effects of the incident;
  - (b) undertake clean-up procedures;
  - (c) remedy the effects of the incident; and
  - (d) take such measures as the catchment management agency may either verbally or in writing direct within the time specified by such institution.
- (5) A verbal directive must be confirmed in writing within 14 days, failing which it will be deemed to have been withdrawn.
- (6) Should -
- (a) the responsible person fail to comply, or inadequately comply with a directive; or
  - (b) it not be possible to give the directive to the responsible person timeously,
- the catchment management agency may take the measures it considers necessary to -
- (i) contain and minimise the effects of the incident;
  - (ii) undertake clean-up procedures; and
  - (iii) remedy the effects of the incident.
- (7) The catchment management agency may recover all reasonable costs incurred by it from every responsible person jointly and severally.
- (8) The costs claimed under subsection (7) may include, without being limited to, labour, administration and overhead costs.
- (9) If more than one person is liable in terms of subsection (7), the catchment management agency must, at the request of any of those persons, and after giving the others an opportunity to be heard, apportion the liability, but such apportionment does not relieve any of them of their joint and several liability for the full amount of the costs.

## **CHAPTER 4**

### **USE OF WATER**

*As this Act is founded on the principle that National Government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest, a person can only be entitled to use water if the use is permissible under the Act. This Chapter is therefore of central significance to the Act, as it lays the basis for regulating water use. The various types of licensed and unlicensed entitlements to use water are dealt with in detail.*

#### ***Part 1: General Principles***

*This Part sets out general principles for regulating water use. Water use is defined broadly, and includes taking and storing water, activities which reduce stream flow, waste discharges and disposals, controlled activities (activities which impact detrimentally on a water resource), altering a watercourse, removing water found underground for certain purposes, and recreation. In general a water use must be licensed unless it is listed in Schedule I, is an existing lawful use, is permissible under a general authorisation, or if a responsible authority waives the need for a licence. The Minister may limit the amount of water which a responsible authority may*

*allocate. In making regulations the Minister may differentiate between different water resources, classes of water resources and geographical areas.*

## **Water use**

**21.** For the purposes of this Act, water use includes -

- (a) taking water from a water resource;
- (b) storing water;
- (c) impeding or diverting the flow of water in a watercourse;
- (d) engaging in a stream flow reduction activity contemplated in section 36;
- (e) engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);
- (f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
- (g) disposing of waste in a manner which may detrimentally impact on a water resource;
- (h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
- (i) altering the bed, banks, course or characteristics of a watercourse;
- (j) removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and
- (k) using water for recreational purposes.

## **Permissible water use**

**22.** (1) A person may only use water -

- (a) without a licence -
  - (i) if that water use is permissible under Schedule 1;
  - (ii) if that water use is permissible as a continuation of an existing lawful use; or
  - (iii) if that water use is permissible in terms of a general authorisation issued under section 39;
- (b) if the water use is authorised by a licence under this Act; or
- (c) if the responsible authority has dispensed with a licence requirement under subsection (3).

(2) A person who uses water as contemplated in subsection (1) -

- (a) must use the water subject to any condition of the relevant authorisation for that use;
- (b) is subject to any limitation, restriction or prohibition in terms of this Act or any other applicable law;
- (c) in the case of the discharge or disposal of waste or water containing waste contemplated in section 21(f), (g), (h) or (j), must comply with any applicable waste standards or management practices prescribed under section 26(1)(h) and (i), unless the conditions of the relevant authorisation provide otherwise;
- (d) may not waste that water; and
- (e) must return any seepage, run-off or water containing waste which emanates from that use, to the water resource from which the water was taken, unless the responsible authority directs otherwise or the relevant authorisation provides otherwise.

(3) A responsible authority may dispense with the requirement for a licence for water use if it is satisfied that the purpose of this Act will be met by the grant of a licence, permit or other authorisation under any other law.

(4) In the interests of co-operative governance, a responsible authority may promote arrangements with other organs of state to combine their respective licence requirements into a single licence requirement.

(5) A responsible authority may, subject to section 17, authorise the use of water before -

- (a) a national water resource strategy has been established;
- (b) a catchment management strategy in respect of the water resource in question has been established;
- (c) a classification system for water resources has been established;
- (d) the class and resource quality objectives for the water resource in question have been determined; or
- (e) the Reserve for the water resource in question has been finally determined.

(6) Any person who has applied for a licence in terms of section 43 in respect of an existing lawful water use as contemplated in section 32, and whose application has been refused or who has been granted a licence for a lesser use than the existing lawful water use, resulting in severe prejudice to the economic viability of an undertaking in respect of which the water was beneficially used, may, subject to subsections (7) and (8), claim compensation for any financial loss suffered in consequence.

(7) The amount of any compensation payable must be determined -

- (a) in accordance with section 25(3) of the Constitution; and
- (b) by disregarding any reduction in the existing lawful water use made in order to -
  - (i) provide for the Reserve;
  - (ii) rectify an over-allocation of water use from the resource in question; or
  - (iii) rectify an unfair or disproportionate water use.

(8) A claim for compensation must be lodged with the Water Tribunal within six months of the relevant decision of the responsible authority.

(9) The Water Tribunal has jurisdiction to determine liability for compensation and the amount of compensation payable in terms of this section.

(10) After the Water Tribunal has decided that compensation is payable and determined the amount of compensation, the responsible authority may enter into negotiations with the claimant and, within 30 days after the decision of the Water Tribunal, offer an allocation of water instead of compensation.

### **Determination of quantity of water which may be allocated by responsible authority**

**23.** (1) Subject to the national water resource strategy the Minister may determine the quantity of water in respect of which a responsible authority may issue a general authorisation and a licence from water resources in its water management area.

(2) Until a national water resource strategy has been established, the Minister may make a preliminary determination of the quantity of water in respect of which a responsible authority may issue a general authorisation and licence.

(3) A preliminary determination must be replaced by a determination under subsection (1) once the national water resource strategy has been established.

(4) A responsible authority must comply with any determination made under subsection (1) or (2).

(5) In making a determination under subsections (1) and (2) the Minister must take account of the water available in the resource.

### **Licences for use of water found underground on property of another person**

**24.** A licence may be granted to use water found underground on land not owned by the applicant if the owner of the land consents or if there is good reason to do so.

### **Transfer of water use authorisations**

**25.** (1) A water management institution may, at the request of a person authorised to use water for irrigation under this Act, allow that person on a temporary basis and on such conditions as the water management institution may determine, to use some or all of that water for a different purpose, or to allow the use of some or all of that water on another property in the same vicinity for the same or a similar purpose.

(2) A person holding an entitlement to use water from a water resource in respect of any land may surrender that entitlement or part of that entitlement -

(a) in order to facilitate a particular licence application under section 41 for the use of water from the same resource in respect of other land; and

(b) on condition that the surrender only becomes effective if and when such application is granted.

(3) The annual report of a water management institution or a responsible authority, as the case may be, must, in addition to any other information required under this Act, contain details in respect of every permission granted under subsection (1) or every application granted under subsection (2).

### **Regulations on use of water**

**26.** (1) Subject to subsection (4), the Minister may make regulations -

(a) limiting or restricting the purpose, manner or extent of water use;

(b) requiring that the use of water from a water resource be monitored, measured and recorded;

(c) requiring that any water use be registered with the responsible authority;

(d) prescribing the outcome or effect which must be achieved by the installation and operation of any waterwork;



- (e) regulating the design, construction, installation, operation and maintenance of any waterwork, where it is necessary or desirable to monitor any water use or to protect a water resource;
  - (f) requiring qualifications for and registration of persons authorised to design, construct, install, operate and maintain any waterwork, in order to protect the public and to safeguard human life and property;
  - (g) regulating or prohibiting any activity in order to protect a water resource or instream or riparian habitat;
  - (h) prescribing waste standards which specify the quantity, quality and temperature of waste which may be discharged or deposited into or allowed to enter a water resource;
  - (i) prescribing the outcome or effect which must be achieved through management practices for the treatment of waste, or any class of waste, before it is discharged or deposited into or allowed to enter a water resource;
  - (j) requiring that waste discharged or deposited into or allowed to enter a water resource be monitored and analysed, and prescribing methods for such monitoring and analysis;
  - (k) prescribing procedural requirements for licence applications;
  - (l) relating to transactions in respect of authorisations to use water, including but not limited to -
    - (i) the circumstances under which a transaction may be permitted;
    - (ii) the conditions subject to which a transaction may take place; and
    - (iii) the procedure to deal with a transaction;
  - (m) prescribing methods for making a volumetric determination of water to be ascribed to a stream flow reduction activity for purposes of water use allocation and the imposition of charges;
  - (n) prescribing procedures for the allocation of water by means of public tender or auction; and
  - (o) prescribing -
    - (i) procedures for obtaining; and
    - (ii) the required contents of, assessments of the likely effect which any proposed licence may have on the quality of the water resource in question.
- (2) Regulations made under subsection (1) may -
- (a) differentiate between different water resources and different classes of water resources;
  - (b) differentiate between different geographical areas; and
  - (c) create offences and prescribe penalties.
- (3) Regulations made under subsection (1)(h), (i) and (j) may contain -
- (a) general provisions applicable to all waste; and
  - (b) specific provisions applicable to waste with specific characteristics.
- (4) When making regulations, the Minister must take into account all relevant considerations, including the need to -
- (a) promote the economic and sustainable use of water;
  - (b) conserve and protect water resources or, instream and riparian habitat;
  - (c) prevent wasteful water use;
  - (d) facilitate the management of water use and waterworks;
  - (e) facilitate the monitoring of water use and water resources; and
  - (f) facilitate the imposition and recovery of charges.

## ***Part 2: Considerations, conditions and essential requirements of general authorisations and licences***

***This Part deals with matters relevant to all general authorisations and licences issued under the Act. It guides responsible authorities in the exercise of their discretion to issue and to attach conditions to general authorisations and licences. It also sets out the essential features of licences, such as effective periods, purposes and places for which they may be issued, and the nature of conditions that may be attached to them. The granting of a licence does not imply any guarantee regarding the availability or quality of water which it covers.***

### **Considerations for issue of general authorisations and licences**

**27.** (1) In issuing a general authorisation or licence a responsible authority must take into account all relevant factors, including -

- (a) existing lawful water uses;
- (b) the need to redress the results of past racial and gender discrimination;
- (c) efficient and beneficial use of water in the public interest;
- (d) the socio-economic impact -
  - (i) of the water use or uses if authorised; or
  - (ii) of the failure to authorise the water use or uses;
- (e) any catchment management strategy applicable to the relevant water resource;
- (f) the likely effect of the water use to be authorised on the water resource and on other water users;
- (g) the class and the resource quality objectives of the water resource;
- (h) investments already made and to be made by the water user in respect of the water use in question;
- (i) the strategic importance of the water use to be authorised;
- (j) the quality of water in the water resource which may be required for the Reserve and for meeting international obligations; and
- (k) the probable duration of any undertaking for which a water use is to be authorised.

(2) A responsible authority may not issue a licence to itself without the written approval of the Minister.

### **Essential requirements of licences**

**28.** (1) A licence contemplated in this Chapter must specify -

- (a) the water use or uses for which it is issued;
- (b) the property or area in respect of which it is issued;
- (c) the person to whom it is issued;
- (d) the conditions subject to which it is issued;
- (e) the licence period, which may not exceed forty years; and
- (f) the review periods during which the licence may be reviewed under section 49, which must be at intervals of not more than five years.

(2) Subject to subsection (3), restriction, suspension or termination in terms of this Act and review under section 49, a licence remains in force until the end of the licence period, when it expires.

(3) Subject to subsection (4) and notwithstanding section 49(2), a responsible authority may extend the licence period of a licence if this is done as part of a general review of licences carried out in terms of section 49.

(4) An extension of a licence period contemplated in subsection (3) may only be made after the responsible authority has considered the factors specified in section 49(2) and all other relevant factors, including new applications for water use and has concluded that there are no substantial grounds not to grant an extension.

(5) An extension of a licence period in terms of subsection (3) may only be given for a single review period at a time as stipulated in subsection (1)(f).

(6) If the licence period of a licence is extended in terms of subsection (3), the licence may, in respect of the period for which it is extended, be issued subject to different conditions which may include a lesser permitted water use.

### **Conditions for issue of general authorisations and licences**

**29.** (1) A responsible authority may attach conditions to every general authorisation or licence -

- (a) relating to the protection of -
  - (i) the water resource in question;
  - (ii) the stream flow regime; and
  - (iii) other existing and potential water users;
- (b) relating to water management by -
  - (i) specifying management practices and general requirements for any water use, including water conservation measures;
  - (ii) requiring the monitoring and analysis of and reporting on every water use and imposing a duty to measure and record aspects of water use, specifying measuring and recording devices to be used;
  - (iii) requiring the preparation and approval of and adherence to, a water management plan;
  - (iv) requiring the payment of charges for water use as provided for in Chapter 5;

- (v) requiring the licensee to provide or make water available to a person specified in the licence; and
- (vi) in the case of a general authorisation, requiring the registration of the water use with the responsible authority and the payment of a registration fee as a pre-condition of that use;
- (c) relating to return flow and discharge or disposal of waste, by -
  - (i) specifying a water resource to which it must be returned or other manner in which it must be disposed of;
  - (ii) specifying permissible levels for some or all of its chemical and physical components;
  - (iii) specifying treatment to which it must be subjected, before it is discharged; and
  - (iv) specifying the volume which may be returned;
- (d) in the case of a controlled activity -
  - (i) specifying the waste treatment, pollution control and monitoring equipment to be installed, maintained and operated; and
  - (ii) specifying the management practices to be followed to prevent the pollution of any water resource;
- (e) in the case of taking or storage of water -
  - (i) setting out the specific quantity of water or percentage of flow which may be taken;
  - (ii) setting out the rate of abstraction;
  - (iii) specifying the method of construction of a borehole and the method of abstraction from the borehole;
  - (iv) specifying the place from where water may be taken;
  - (v) specifying the times when water may be taken;
  - (vi) identifying or limiting the area of land on which any water taken from a resource may be used;
  - (vii) limiting the quantity of water which may be stored;
  - (viii) specifying locations where water may be stored; and
  - (ix) requiring the licensee to become a member of a water user association before water may be taken;
- (f) in the case of a stream flow reduction activity -
  - (i) specifying practices to be followed to limit stream flow reduction and other detrimental impacts on the water resource; and
  - (ii) setting or prescribing a method for determining the extent of the stream flow reduction caused by the authorised activity;
- (g) which are necessary or desirable to achieve the purpose for which the licence was issued;
- (h) which are necessary or desirable to ensure compliance with the provisions of this Act; and
- (i) in the case of a licence -
  - (i) specifying times when water may or may not be used;
  - (ii) containing provisions for its termination if an authorised use of water is not implemented or not fully implemented;
  - (iii) designating water for future or contingent use; or
  - (iv) which have been agreed to by the licensee.

(2) If a licensee has agreed to pay compensation to another person in terms of any arrangement to use water, the responsible authority may make the obligation to pay compensation a condition of the licence.

### **Security by applicant**

**30.** (1) A responsible authority may, if it is necessary for the protection of the water resource or property, require the applicant to give security in respect of any obligation or potential obligation arising from a licence to be issued under this Act.

(2) The security referred to in subsection (1) may include any of the following:

- (i) A letter of credit from a bank;
- (ii) a surety or a bank guarantee;
- (iii) a bond;
- (iv) an insurance policy; or
- (v) any other appropriate form of security.

(3) The responsible authority must determine the type, extent and duration of any security required.

(4) The duration of the security may extend beyond the time period specified in the licence in question.

(5) If the responsible authority requires security in the form of an insurance policy, it may require that it be jointly insured under or be a beneficiary of the insurance policy and where appropriate, the responsible authority must be regarded as having an insurable interest in the subject matter of the insurance policy.

(6) A person may apply in writing to the responsible authority to have any security given by that person in terms of this section amended or discharged at any time, which application may not be unreasonably refused.

### **Issue of licence no guarantee of supply**

- 31.** The issue of a licence to use water does not imply a guarantee relating to -
- (a) the statistical probability of supply;
  - (b) the availability of water; or
  - (c) the quality of water.

### ***Part 3: Existing lawful water uses***

*This Part permits the continuation under certain conditions of an existing water use derived from a law repealed by this Act. An existing lawful water use, with any conditions attached, is recognised but may continue only to the extent that it is not limited, prohibited or terminated by this Act. No licence is required to continue with an existing lawful water use until a responsible authority requires a person claiming such an entitlement to apply for a licence. If a licence is issued it becomes the source of authority for the water use. If a licence is not granted the use is no longer permissible.*

### **Definition of existing lawful water use**

- 32.** (1) An existing lawful water use means a water use -
- (a) which has taken place at any time during a period of two years immediately before the date of commencement of this Act; or
  - (b) which has been declared an existing lawful water use under section 33, and which -
    - (i) was authorised by or under any law which was in force immediately before the date of commencement of this Act;
    - (ii) is identified as a stream flow reduction activity in section 36(1); or
    - (iii) is identified as a controlled activity in section 37(1).
- (2) In the case of -
- (a) a stream flow reduction activity declared under section 36(1); or
  - (b) a controlled activity declared under section 38, existing lawful water use means a water use which has taken place at any time during a period of two years immediately before the date of the declaration.

### **Declaration of water use as existing lawful water use**

- 33.** (1) A person may apply to a responsible authority to have a water use which is not one contemplated in section 32(1)(b)(i), (ii) or (iii), declared to be an existing lawful water use.
- (2) A responsible authority may, on its own initiative, declare a water use which is not one contemplated in section 32(1)(b)(i), (ii) or (iii), to be an existing lawful water use.
- (3) A responsible authority may only make a declaration under subsections (1) and (2) if it is satisfied that the water use -
- (a) took place more than two years before the date of commencement of this Act and was discontinued for good reason; or
  - (b) had not yet taken place at any time before the date of commencement of this Act but -
    - (i) would have been lawful had it so taken place; and
    - (ii) steps towards effecting the use had been taken in good faith before the date of commencement of this Act.
- (4) Section 41 applies to an application in terms of this section as if the application had been made in terms of that section.

### **Authority to continue with existing lawful water use**

- 34.** (1) A person, or that person's successor-in-title, may continue with an existing lawful water use, subject to -
- (a) any existing conditions or obligations attaching to that use;

- (b) its replacement by a licence in terms of this Act; or
- (c) any other limitation or prohibition by or under this Act.

(2) A responsible authority may, subject to any regulation made under section 26(1)(c), require the registration of an existing lawful water use.

### **Verification of existing water uses**

**35.** (1) The responsible authority may, in order to verify the lawfulness or extent of an existing water use, by written notice require any person claiming an entitlement to that water use to apply for a verification of that use.

(2) A notice under subsection (1) must -

- (a) have a suitable application form annexed to it;
- (b) specify a date before which the application must be submitted;
- (c) inform the person concerned that any entitlement to continue with the water use may lapse if an application is not made on or before the specified date; and
- (d) be delivered personally or sent by registered mail to the person concerned.

(3) A responsible authority -

- (a) may require the applicant, at the applicant's expense, to obtain and provide it with other information, in addition to the information contained in the application;
- (b) may conduct its own investigation into the veracity and the lawfulness of the water use in question;
- (c) may invite written comments from any person who has an interest in the matter; and
- (d) must afford the applicant an opportunity to make representations on any aspect of the application.

(4) A responsible authority may determine the extent and lawfulness of a water use pursuant to an application under this section, and such determination limits the extent of any existing lawful water use contemplated in section 32(1).

(5) No person who has been required to apply for verification under subsection (1) in respect of an existing lawful water use may exercise that water use -

- (a) after the closing date specified in the notice, if that person has not applied for verification; or
- (b) after the verification application has been refused, if that person applied for verification.

(6) A responsible authority may, for good reason, condone a late application and charge a reasonable additional fee for processing the late application.

### ***Part 4: Stream flow reduction activities***

***This Part allows the Minister, after public consultation, to regulate land-based activities which reduce stream flow, by declaring such activities to be stream flow reduction activities. Whether or not an activity is declared to be a stream flow reduction activity depends on various factors, such as the extent of stream flow reduction, its duration, and its impact on any relevant water resource and on other water users. The control of forestry for its impact on water resources, currently exercised in terms of the Forest Act, is now exercised under this Part.***

### **Declaration of stream flow reduction activities**

**36.** (1) The following are stream flow reduction activities:

- (a) the use of land for afforestation which has been or is being established for commercial purposes; and
- (b) an activity which has been declared as such under subsection (2).

(2) The Minister may, by notice in the *Gazette*, in relation to a particular area specified in that notice, declare any activity (including the cultivation of any particular crop or other vegetation) to be a stream flow reduction activity if that activity is likely to reduce the availability of water in a watercourse to the Reserve, to meet international obligations, or to other water users significantly.

(3) In making a declaration under subsection (2), the Minister must consider -

- (a) the extent to which the activity significantly reduces the water availability in the watercourse;
- (b) the effect of the stream flow reduction on the water resource in terms of its class and the Reserve;
- (c) the probable duration of the activity;
- (d) any national water resource strategy established under section 5; and
- (e) any catchment management strategy established under section 8.

- (4) Before making a declaration under subsection (2), the Minister must -
- (a) publish a notice in the *Gazette* -
    - (i) setting out the activity proposed to be declared a stream flow reduction activity; and
    - (ii) inviting written comments to be submitted on the proposed declaration, specifying an address to which and a date before which comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
  - (c) consider all comments received on or before the date specified in paragraph (a)(ii).
- (5) Every notice published in terms of subsection (4)(a) must contain a schedule in which must be listed all stream flow reduction activities set out in subsection (1) and those which have, up to the date of the notice, been declared to be stream flow reduction activities under subsection (2).

### ***Part 5: Controlled activities***

*This Part allows the Minister to regulate activities having a detrimental impact on water resources by declaring them to be controlled activities. Four such activities - irrigation using waste or water containing waste from certain sources, modification of atmospheric precipitation, altering the flow regime of a water resource as a result of power generation, and aquifer recharge using waste or water containing waste - are identified in the Act as controlled activities. Provision is made for the Minister to declare other controlled activities as the need arises, but in these cases public consultation is required. Following the identification or declaration of a controlled activity an authorisation for that particular category of activity is required under this Act.*

#### **Controlled activity**

37. (1) The following are controlled activities:
- (a) irrigation of any land with waste or water containing waste generated through any industrial activity or by a waterwork;
  - (b) an activity aimed at the modification of atmospheric precipitation;
  - (c) a power generation activity which alters the flow regime of a water resource;
  - (d) intentional recharging of an aquifer with any waste or water containing waste; and
  - (e) an activity which has been declared as such under section 38.
- (2) No person may undertake a controlled activity unless such person is authorised to do so by or under this Act.

#### **Declaration of certain activities as controlled activities**

38. (1) The Minister may, by notice in the *Gazette*, in general or specifically, declare an activity to be a controlled activity.
- (2) Before declaring an activity to be a controlled activity the Minister must be satisfied that the activity in question is likely to impact detrimentally on a water resource.
- (3) Before making a declaration under subsection (1) the Minister -
- (a) must publish a notice in the *Gazette* -
    - (i) setting out the activity or category of activities proposed to be declared; and
    - (ii) inviting written comments to be submitted on the proposed declaration, specifying an address to which and a date before which comments are to be submitted, which date may not be earlier than 60 days after publication of the notice; and
  - (b) may, in the case of a specific activity on a specific site, make the notice known by delivering or sending a copy to the owner or the person in control of the site in question, and to every organ of state which, and every person who, has an interest in the matter;
  - (c) must consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
  - (d) must consider all comments received on or before the date specified in paragraph(a)(ii).
- (4) Every notice published in terms of subsection (1) must contain a schedule on which must be listed all controlled activities set out in section 37(1)(a) to (d) and those which have, up to the date of the notice, been declared to be controlled activities under subsection (1).

## ***Part 6: General authorisations***

*This Part establishes a procedure to enable a responsible authority, after public consultation, to permit the use of water by publishing general authorisations in the Gazette. A general authorisation may be restricted to a particular water resource, a particular category of persons, a defined geographical area or a period of time, and requires conformity with other relevant laws. The use of water under a general authorisation does not require a licence until the general authorisation is revoked, in which case licensing will be necessary. A general authorisation does not replace or limit an entitlement to use water, such as an existing lawful water use or a licence, which a person may otherwise have under this Act.*

### **General authorisations to use water**

**39.** (1) A responsible authority may, subject to Schedule 1, by notice in the *Gazette* -

- (a) generally;
- (b) in relation to a specific water resource; or
- (c) within an area specified in the notice,

authorise all or any category of persons to use water, subject to any regulation made under section 26 and any conditions imposed under section 29.

(2) The notice must state the geographical area in respect of which the general authorisation will apply, and the date upon which the general authorisation will come into force, and may state the date on which the general authorisation will lapse.

(3) A water use may be authorised under subsection (1) on condition that the user obtains any permission or authority required by any other specified law.

(4) Before issuing a general authorisation, the responsible authority must -

- (a) publish a notice in the *Gazette* -
  - (i) setting out the proposed general authorisation; and
  - (ii) inviting written comments to be submitted on the proposed general authorisation, specifying an address to which and a date before which comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
- (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the responsible authority considers to be appropriate; and
- (c) consider all comments received on or before the date specified in paragraph (a)(ii).

(5) An authorisation to use water under this section does not replace or limit any entitlement to use water which a person may otherwise have under this Act.

## ***Part 7: Individual applications for licences***

*This Part sets out the procedures which apply in all cases where a licence is required to use water, but where no general invitation to apply for licences has been issued under Part 8. Water users who are not required to license their use, but who wish to convert the use to licensed use, may also use the procedure set out in this Part, but the responsible authority may decline to grant a licence when the applicant is entitled to the use of water under an existing lawful use or by a general authorisation. In considering an application a responsible authority may require additional information from the applicant, and may also require the applicant to undertake an environmental or other assessment, which assessments may be subject to independent review.*

### **Application for licence**

**40.** (1) A person who is required or wishes to obtain a licence to use water must apply to the relevant responsible authority for a licence.

(2) Where a person has made an application for an authorisation to use water under another Act, and that application has not been finalised when this Act takes effect, the application must be regarded as being an application for a water use under this Act.

(3) A responsible authority may charge a reasonable fee for processing a licence application, which may be waived in deserving cases.

(4) A responsible authority may decline to consider a licence application for the use of water to which the applicant is already entitled by way of an existing lawful water use or under a general authorisation.

### **Procedure for licence applications**

**41.** (1) An application for a licence for water use must -

- (a) be made in the form;
- (b) contain the information; and
- (c) be accompanied by the processing fee,

determined by the responsible authority.

(2) A responsible authority -

- (a) may, to the extent that it is reasonable to do so, require the applicant, at the applicant's expense, to obtain and provide it by a given date with -
  - (i) other information, in addition to the information contained in the application;
  - (ii) an assessment by a competent person of the likely effect of the proposed licence on the resource quality; and
  - (iii) an independent review of the assessment furnished in terms of subparagraph (ii), by a person acceptable to the responsible authority;
- (b) may conduct its own investigation on the likely effect of the proposed licence on the protection, use, development, conservation, management and control of the water resource;
- (c) may invite written comments from any organ of state which or person who has an interest in the matter; and
- (d) must afford the applicant an opportunity to make representations on any aspect of the licence application.

(3) A responsible authority may direct that any assessment under subsection (2)(a)(ii) must comply with the requirements contained in regulations made under section 26 of the Environment Conservation Act, 1989 (Act No. 73 of 1989).

(4) A responsible authority may, at any stage of the application process, require the applicant -

- (a) to give suitable notice in newspapers and other media -
  - (i) describing the licence applied for;
  - (ii) stating that written objections may be lodged against the application before a specified date, which must be not less than 60 days after the last publication of the notice;
  - (iii) giving an address where written objections must be lodged; and
  - (iv) containing such other particulars as the responsible authority may require;
- (b) to take such other steps as it may direct to bring the application to the attention of relevant organs of state, interested persons and the general public; and
- (c) to satisfy the responsible authority that the interests of any other person having an interest in the land will not be adversely affected.

### **Reasons for decisions**

**42.** After a responsible authority has reached a decision on a licence application, it must promptly -

- (a) notify the applicant and any person who has objected to the application; and
- (b) at the request of any person contemplated in paragraph (a), give written reasons for its decision.

### ***Part 8: Compulsory licences for water use in respect of specific resource***

*This Part establishes a procedure for a responsible authority to undertake compulsory licensing of any aspect of water use in respect of one or more water resources within a specific geographic area. It includes requirements for a responsible authority to prepare schedules for allocating quantities of water to existing and new users. The procedure is intended to be used in areas which are, or are soon likely to be, under "water stress" (for example, where the demands for water are approaching or exceed the available supply, where water quality problems are imminent or already exist, or where the water resource quality is under threat), or where it is necessary to review prevailing water use to achieve equity of access to water.*

*In such cases the responsible authority must publish a notice in the Gazette and other appropriate media, requiring people to apply for licences in the designated area. Applicants may be required to submit additional*



*information, and may also be required to undertake an environmental or other assessment, which assessment may be subject to independent review.*

*In determining the quantities of water to be allocated to users, the responsible authority must consider all applications received, and draw up a schedule detailing how the available water will be allocated among the applicants. In drawing up an allocation schedule the responsible authority must comply with the plans, strategies and criteria set out elsewhere in the Act and must give special consideration to certain categories of applicants. A responsible authority need not allocate all the available water in a water resource, and may reserve some of the water for future needs. Provision is also made for any water still available after the requirements of the Reserve, international obligations and corrective action have been met to be allocated on the basis of public auction or tender. A system of objections and appeals in relation to proposed and preliminary allocation schedules ensures that licences may be issued only after the allocation schedule has been finalised. Licences issued under this Part replace previous entitlements to any existing lawful water use by the applicant.*

### **Compulsory licence applications**

**43.** (1) If it is desirable that water use in respect of one or more water resources within a specific geographic area be licensed -

- (a) to achieve a fair allocation of water from a water resource in accordance with section 45 -
  - (i) which is under water stress; or
  - (ii) when it is necessary to review prevailing water use to achieve equity in allocations;
- (b) to promote beneficial use of water in the public interest;
- (c) to facilitate efficient management of the water resource; or
- (d) to protect water resource quality,

the responsible authority may issue a notice requiring persons to apply for licences for one or more types of water use contemplated in section 21.

(2) A notice in terms of subsection (1) must -

- (a) identify the water resource and the water use in question;
- (b) state where licence application forms may be obtained;
- (c) state the address to which licence applications must be submitted;
- (d) state the closing date for licence applications;
- (e) state the application fee; and
- (f) contain such other information as the responsible authority considers appropriate.

(3) A notice in terms of subsection (1) must be made known by publishing the notice in the *Gazette* at least 60 days before the closing date, giving suitable notice in newspapers and other media and taking other steps to bring the notice to the attention of interested persons.

(4) Section 41 applies to an application in terms of this section as if the application had been made in terms of that section.

### **Late applications**

**44.** A responsible authority may, for good reason, condone a late application and charge a reasonable additional fee for processing the late application.

### **Proposed allocation schedules**

**45.** (1) A responsible authority must, after considering -

- (a) all applications received in response to the publication of a notice in terms of section 43(1);
- (b) any further information or assessment obtained; and
- (c) the factors contemplated in section 27, prepare a proposed allocation schedule specifying how water from the water resource in question will be allocated.

(2) A proposed allocation schedule must, subject to subsection (3), reflect the quantity of water to be -

- (a) assigned to the Reserve and any relevant international obligations;
- (b) assigned to meet the requirements of existing licences;
- (c) allocated to each of the applicants to whom licences ought to be issued in order to redress the results of past racial and gender discrimination in accordance with the constitutional mandate for water reform;

- (d) allocated to each of the applicants exercising existing lawful water uses to whom the licensing authority determines that licences should be issued;
  - (e) allocated to each of the applicants, taking into account the factors set out in section 27; and
  - (f) allocated to every other applicant by public tender or auction, subject to any regulation made under section 26(1)(n).
- (3) A responsible authority is under no obligation to allocate all available water.
- (4) After completing a proposed allocation schedule the responsible authority must publish a notice in the *Gazette* -
- (a) containing a copy of the proposed schedule, or stating the address where it may be inspected;
  - (b) inviting written objections to be submitted on the proposed schedule, specifying an address to which the objections are to be submitted and specifying a date before which the objections are to be submitted, which date must be not less than 60 days after the date of publication of the notice; and
  - (c) must consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the responsible authority considers to be appropriate.

### **Preliminary allocation schedules**

- 46.** (1) After considering all objections received on the proposed allocation schedule on or before the date specified in the notice contemplated in section 45(4), the responsible authority must prepare a preliminary allocation schedule and publish a notice in the *Gazette* -
- (a) containing a copy of the preliminary allocation schedule, or stating the address where it may be inspected; and
  - (b) stating that an appeal in respect of any unsuccessful objection to the preliminary allocation schedule may be made in accordance with Chapter 15.
- (2) If an appeal under subsection (1)(b) succeeds, the responsible authority must amend the preliminary allocation schedule as directed by the Water Tribunal.

### **Final allocation schedule**

- 47.** (1) A preliminary allocation schedule becomes a final allocation schedule -
- (a) (i) if no appeal is lodged within the time limit;
  - (ii) if it has been amended following every successful appeal; or
  - (iii) if every appeal lodged is dismissed; and
  - (b) on publication by the responsible authority of a notice in the *Gazette* -
    - (i) stating that a preliminary allocation schedule has become final; and
    - (ii) containing a copy of the final allocation schedule, or stating the address where it may be inspected.
- (2) A responsible authority must, as soon as reasonably practicable after a preliminary allocation schedule becomes final, issue licences according to the allocations provided for in it.

### **Licences replace previous entitlements**

- 48.** (1) Any licence issued pursuant to an application contemplated in section 43(1) replaces any existing lawful water use entitlement of that person in respect of the water use in question.
- (2) Notwithstanding the provisions of section 4, no person to whom a general notice to apply for a licence has been directed in terms of section 43 in respect of an existing lawful water use may exercise that water use -
- (a) after the closing date stated in the notice if that person did not apply for a licence; or
  - (b) after the licence application has been finally disposed of, if that person did apply for a licence.

## ***Part 9: Review and renewal of licences, and amendment and substitution of conditions of licences***

*This Part deals with the review and renewal of licences, and the amendment and substitution of their conditions. Review of a licence is by the relevant responsible authority, at periods stipulated in the licence as part of a general review process.*

*A review of a licence may lead to the amendment or substitution of its conditions, but only if certain requirements are satisfied. If the amendment or substitution of conditions severely prejudices the economic viability of any undertaking in respect of which the licence was issued there is a claim for compensation. Minor amendments to licences (for instance, to correct clerical mistakes, or changes in format), and those agreed to by the licensee may be made outside of the review process. In addition, a licensee may apply to the responsible authority for the renewal or amendment of a licence before it expires. In considering such applications the responsible authority must again consider the matters dealt with in the initial application, and there are limitations to the new conditions to which the licence may be subjected.*

### **Review and amendment of licences**

**49.** (1) A responsible authority may review a licence only at the time periods stipulated for that purpose in the licence.

(2) On reviewing a licence, a responsible authority may amend any condition of the licence, other than the period thereof, if -

- (a) it is necessary or desirable to prevent deterioration or further deterioration of the quality of the water resource;
- (b) there is insufficient water in the water resource to accommodate all authorised water uses after allowing for the Reserve and international obligations; or
- (c) it is necessary or desirable to accommodate demands brought about by changes in socio-economic circumstances, and it is in the public interest to meet those demands.

(3) An amendment contemplated in subsection (2) may only be made if the conditions of other licences for similar water use from the same water resource in the same vicinity, all as determined by the responsible authority, have also been amended in an equitable manner through a general review process.

(4) If an amendment of a licence condition on review severely prejudices the economic viability of any undertaking in respect of which the licence was issued, the provisions of section 22(6) to (10) apply.

(5) A responsible authority must afford the licensee an opportunity to be heard before amending any licence condition on review.

### **Formal amendment of licences**

**50.** (1) A responsible authority may amend or substitute a licence condition -

- (a) if the licensee or successor-in-title has consented to or requested the amendment or substitution;
- (b) to reflect one or more successors-in-title as new licensees; and
- (c) to change the description of the property to which the licence applies, if the property described in the licence has been subdivided or consolidated with other property.

(2) The responsible authority may require the licensee -

- (a) to obtain the written consent of any affected person before amending or substituting the licence; or
- (b) to make a formal application for the amendment or substitution in terms of section 52;

(3) A responsible authority may only amend or substitute a licence condition under this section if it is satisfied that -

- (a) the amendment or substitution will not have a significant detrimental impact on the water resource; and
- (b) the interests of any other person are not adversely affected, unless that person has consented thereto.

### **Successors-in-title**

**51.** (1) A responsible authority may, after giving all parties an opportunity to be heard, adjudicate upon conflicting claims between a licensee and a successor-in-title, or between different successors-in-title, in respect of claims for the amendment or substitution of licence conditions.

(2) A successor-in-title of any person to whom a licence to use water has been issued -

- (a) may, subject to the conditions of the relevant licence and paragraph (b), continue with the water use; and
- (b) must promptly inform the responsible authority of the succession, for the substitution of the name of the licensee, for the remainder of the term.

### **Procedure for earlier renewal or amendment of licences**

- 52.** (1) A licensee may, before the expiry date of a licence, apply to the responsible authority for the renewal or amendment of the licence.
- (2) Unless an application for the renewal or amendment of a licence is made in terms of section 50, it must -
- (a) be made in such form, contain such information and be accompanied by such processing fee as may be determined by the responsible authority; and
  - (b) be dealt with according to the procedure as set out in section 41.
- (3) In considering an application to amend or renew a licence, the responsible authority must have regard to the same matters which it was required to consider when deciding the initial application for that licence.
- (4) A responsible authority may amend any condition of a licence by agreement with the licensee.

### ***Part 10: Contravention of or failure to comply with authorisations***

*This Part deals with the consequences of contraventions of licence conditions. These range from the responsible authority requiring the licensee to take remedial action, failing which it may take the necessary action and recover reasonable costs from that person, to the suspension or withdrawal of a licence. Where a licensee offers to surrender a licence the responsible authority is obliged to accept the surrender and cancel the licence unless there is good reason for refusal.*

### **Rectification of contraventions**

- 53.** (1) A responsible authority may, by notice in writing to a person who contravenes -
- (a) any provision of this Chapter;
  - (b) a requirement set or directive given by the responsible authority under this Chapter; or
  - (c) a condition which applies to any authority to use water,
- direct that person, or the owner of the property in relation to which the contravention occurs, to take any action specified in the notice to rectify the contravention, within the time (being not less than two working days) specified in the notice or any other longer time allowed by the responsible authority.
- (2) If the action is not taken within the time specified in the notice, or any longer time allowed, the responsible authority may -
- (a) carry out any works and take any other action necessary to rectify the contravention and recover its reasonable costs from the person on whom the notice was served; or
  - (b) apply to a competent court for appropriate relief.

### **Suspension or withdrawal of entitlements to use water**

- 54.** (1) Subject to subsections (3) and (4), a responsible authority may by notice to any person entitled to use water under this Act suspend or withdraw the entitlement if the person fails -
- (a) to comply with any condition of the entitlement;
  - (b) to comply with this Act; or
  - (c) to pay a charge which is payable in terms of Chapter 5.
- (2) An entitlement may be suspended under subsection (1) -
- (a) for the period specified in the notice of suspension; or
  - (b) until the responsible authority is satisfied that the person concerned has rectified the failure which led to the suspension.
- (3) A responsible authority may only suspend or withdraw an entitlement under subsection (1) if the responsible authority has directed the person concerned to take specified steps to rectify the failure within a specified period, and the person concerned has failed to do so to the satisfaction of the responsible authority.
- (4) The person concerned must be given an opportunity to make representations, within a reasonable period, on any proposed suspension or withdrawal of an entitlement to use water.
- (5) A responsible authority may, for good reason, reinstate an entitlement withdrawn under subsection (1).

## **Surrender of licence**

**55.** (1) A licensee may offer to surrender any licence issued to that licensee under this Chapter, whereupon, unless there is good reason not to do so, the responsible authority must accept the surrender and cancel the licence.

(2) A responsible authority may refund to a licensee any charge or part of any charge paid in respect of a licence surrendered under subsection (1).

## **CHAPTER 5**

### **FINANCIAL PROVISIONS**

*This Chapter deals with the measures to finance the provision of water resource management services as well as financial and economic measures to support the implementation of strategies aimed at water resource protection, conservation of water and the beneficial use of water.*

#### *Part 1 : Water use charges*

*In terms of Part 1 the Minister may from time to time, after public consultation, establish a pricing strategy which may differentiate among geographical areas, categories of water users or individual water users. The achievement of social equity is one of the considerations in setting differentiated charges. Water use charges are to be used to fund the direct and related costs of water resource management, development and use, and may also be used to achieve an equitable and efficient allocation of water. In addition, they may also be used to ensure compliance with prescribed standards and water management practices according to the user pays and polluter pays principles. Water use charges will be used as a means of encouraging reduction in waste, and provision is made for incentives for effective and efficient water use. Non-payment of water use charges will attract penalties, including the possible restriction or suspension of water supply from a waterwork or of an authorisation to use water.*

#### **Pricing strategy for water use charges**

**56.** (1) The Minister may, with the concurrence of the Ministry of Finance, from time to time by notice in the *Gazette*, establish a pricing strategy for charges for any water use within the framework of existing relevant government policy.

(2) The pricing strategy may contain a strategy for setting water use charges -

(a) for funding water resource management, including the related costs of -

(i) gathering information;

(ii) monitoring water resources and their use;

(iii) controlling water resources;

(iv) water resource protection, including the discharge of waste and the protection of the Reserve; and

(v) water conservation;

(b) for funding water resource development and use of waterworks, including -

(i) the costs of investigation and planning;

(ii) the costs of design and construction;

(iii) pre-financing of development;

(iv) the costs of operation and maintenance of waterworks;

(v) a return on assets; and

(vi) the costs of water distribution; and

(c) for achieving the equitable and efficient allocation of water.

(3) The pricing strategy may -

(a) differentiate on an equitable basis between -

(i) different types of geographic areas;

(ii) different categories of water use; and

(iii) different water users;

(b) provide for charges to be paid by either -

(i) an appropriate water management institution; or

- (ii) consumers directly;
  - (c) provide for the basis of establishing charges;
  - (d) provide for a rebate for water returned to a water resource; and
  - (e) provide on an equitable basis for some elements of the charges to be waived in respect of specific users for a specified period of time.
- (4) The pricing strategy may differentiate under subsection (3)(a) -
- (a) in respect of different geographic areas, on the basis of -
    - (i) socio-economic aspects within the area in question;
    - (ii) the physical attributes of each area; and
    - (iii) the demographic attributes of each area;
  - (b) in respect of different types of water uses, on the basis of -
    - (i) the manner in which the water is taken, supplied, discharged or disposed of;
    - (ii) whether the use is consumptive or non-consumptive;
    - (iii) the assurance and reliability of supply and water quality;
    - (iv) the effect of return flows on a water resource;
    - (v) the extent of the benefit to be derived from the development of a new water resource;
    - (vi) the class and resource quality objectives of the water resource in question; and
    - (vii) the required quality of the water to be used; and
  - (c) in respect of different water users, on the basis of -
    - (i) the extent of their water use;
    - (ii) the quantity of water returned by them to a water resource;
    - (iii) their economic circumstances; and
    - (iv) the statistical probability of the supply of water to them.
- (5) The pricing strategy may provide for a differential rate for waste discharges, taking into account -
- (a) the characteristics of the waste discharged;
  - (b) the amount and quality of the waste discharged;
  - (c) the nature and extent of the impact on a water resource caused by the waste discharged;
  - (d) the extent of permitted deviation from prescribed waste standards or management practices; and
  - (e) the required extent and nature of monitoring the water use.
- (6) In setting a pricing strategy for water use charges, the Minister -
- (a) must consider the class and resource quality objectives for different water resources;
  - (b) may consider incentives and disincentives -
    - (i) to promote the efficient use and beneficial use of water;
    - (ii) to reduce detrimental impacts on water resources; and
    - (iii) to prevent the waste of water; and
  - (c) must consider measures necessary to support the establishment of tariffs by water services authorities in terms of section 10 of the Water Services Act, 1997 (Act No. 108 of 1997), and the use of lifeline tariffs and progressive block tariffs.
- (7) Before setting a pricing strategy for water use charges under subsection (1), the Minister must -
- (a) publish a notice in the *Gazette* -
    - (i) setting out the proposed pricing strategy; and
    - (ii) inviting written comments to be submitted on the proposed strategy, specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 90 days after publication of the notice;
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
  - (c) consider all comments received on or before the date specified in the notice.

### **Application of pricing strategy**

- 57.** (1) Water use charges -
- (a) may be made -
    - (i) within a specific water management area; or
    - (ii) on a national or regional basis; and
  - (b) must be made in accordance with the pricing strategy for water use charges set by the Minister.

(2) Charges made within a specific water management area may be made by and are payable to the relevant water management institution.

(3) Charges made on a national or regional basis -

(a) may be made by the Minister and are payable to the state; and

(b) may be apportioned between different water management areas according to the extent of the specific

benefits which each water management area derives or will derive from the water uses for which the charges are made.

(4) Any person liable to pay water charges to a water services institution as defined in the Water Services Act, 1997 (Act No. 108 of 1997), for water supply services or sanitation services may not be charged for those services in terms of this Act.

(5) No charge made under this Act may be of such a nature as to constitute the imposition of a tax, levy or duty.

### **Recovery of water use charges**

**58.** (1) The Minister may direct any water management institution to recover any charges for water use made by the Minister under section 57(1)(a) from water users within its water management area or area of operation, as the case may be.

(2) A water management institution which has been directed to recover any such charges may retain such portion of all charges recovered in order to recompense it for expenses and losses, as the Minister may allow.

(3) A water management institution which has been directed to recover any such charges -

(a) is jointly and severally liable to the state with the water users concerned; and

(b) may recover any amounts paid by it in terms of paragraph (a) from the water users concerned.

### **Liability for water use charges**

**59.** (1) Water use charges contemplated in this Chapter -

(a) may only be made in respect of a water use to which a person is voluntarily committed; and

(b) must bear a direct relationship to the water use in question.

(2) Any person registered in terms of a regulation under section 26 or holding a licence to use water must pay all charges imposed under section 57 in respect of that water use.

(3) If a water use charge is not paid -

(a) interest is payable during the period of default at a rate determined from time to time by the Minister, with the concurrence of the Minister of Finance, by notice in the *Gazette*; and

(b) the supply of water to the water user from a waterwork or the authorisation to use water may be restricted or suspended until the charges, together with interest, have been paid.

(4) A person must be given an opportunity to make representations within a reasonable period on any proposed restriction or suspension before the restriction or suspension is imposed.

(5) Where there is a fixed charge, a restriction or suspension does not relieve a person of the obligation to pay the charges due for the period of the restriction or suspension.

(6) A person whose water use is restricted or suspended for any lawful reason may not later claim the water to which that person would otherwise have been entitled during the period of restriction or suspension.

### **Water use charges are charges on land**

**60.** (1) A charge made in terms of section 57(1), including any interest, is a charge on the land to which the water use relates and is recoverable from the current owner of the land without releasing any other person who may be liable for the charge.

(2) The Minister or relevant water management institution must -

(a) on written application by any person; and

(b) within 30 days of the application, issue a certificate stating the amount of any unpaid water charges and any interest due in respect of any land.

(3) If a certificate is not issued within the period of 30 days, the provisions of subsection (1) cease to apply to that property, notwithstanding section 66.

## ***Part 2: Financial assistance***

***Part 2 deals with financial assistance, which may be granted once certain considerations are taken into account.***

### **Financial assistance by Minister**

**61.** (1) The Minister may, subject to a regulation made under section 62, give financial assistance to any person for the purposes of this Act, including assistance for making licence applications, in the form of grants, loans or subsidies, which may be made subject to such conditions as the Minister may determine.

(2) The financial assistance must be from funds -

(a) appropriated by Parliament; or

(b) which may under this Act or otherwise lawfully be used for the purposes in question.

(3) Before giving any financial assistance, the Minister must take into account all relevant considerations, including -

(a) the need for equity;

(b) the need for transparency;

(c) the need for redressing the results of past racial and gender discrimination;

(d) the purpose of the financial assistance;

(e) the financial position of the recipient; and

(f) the need for water resource protection.

(4) A person who wilfully fails to comply with any obligations imposed by this Act is not eligible for financial assistance under this Act.

### **Regulations on financial assistance**

**62.** The Minister may make regulations concerning -

(a) the eligibility for financial assistance;

(b) the manner in which financial assistance must be applied for; and

(c) terms and conditions applicable to any financial assistance granted.

## **CHAPTER 6**

### **GENERAL POWERS AND DUTIES OF MINISTER AND DIRECTOR-GENERAL**

#### ***Part 1: Delegations, directives, expropriation, condonation and additional powers***

***Part 1 of this Chapter sets out various powers and duties of the Minister which are of a general nature, such as the powers of delegation and expropriation, and intervention in litigation. More specific powers and duties are dealt with elsewhere in the Act.***

#### ***Delegation of powers and duties by Minister***

**63.** (1) The Minister may, in writing and subject to conditions, delegate a power and duty vested in the Minister in terms of this Act to -

(a) an official of the Department by name;

(b) the holder of an office in the Department;

(c) a water management institution;

(d) an advisory committee established under section 99; or

(e) a water board as defined in section 1 of the Water Services Act, 1997 (Act No 108 of 1997).

(2) The Minister may not delegate the power -

(a) to make a regulation;

(b) to authorise a water management institution to expropriate under section 64(1);

(c) to appoint a member of the governing board of a catchment management agency; or

(d) to appoint a member of the Water Tribunal.



(3) The Minister may, in writing and subject to conditions, permit a person to whom a power or duty has been delegated to delegate that function to another person.

(4) The Minister may give a directive to the Director-General in relation to the exercise of any of the Director-General's powers or performance of any of the Director-General's duties, including any power delegated to the Director-General.

(5) The Director-General must give effect to a directive in terms of subsection (4).

### **Expropriation of property**

**64.** (1) The Minister, or a water management institution authorised by the Minister in writing, may expropriate any property for any purpose contemplated in this Act, if that purpose is a public purpose or is in the public interest.

(2) Subject to this Act, the Expropriation Act, 1975 (Act No. 63 of 1975), applies to all expropriations in terms of this Act.

(3) Where the Minister expropriates any property under this Act, any reference to "Minister" in the Expropriation Act, 1975, must be construed as being a reference to the Minister.

(4) Where any water management institution expropriates property under this Act, any reference to "Minister" and "State" in the Expropriation Act, 1975, must be regarded as being a reference to that water management institution.

### **Expropriation for rehabilitation and other remedial work**

**65.** (1) If a person who is required under this Act to undertake rehabilitation or other remedial work on the land of another, reasonably requires access to that land in order to effect the rehabilitation or remedial work, but is unable to acquire access on reasonable terms, the Minister may -

(a) expropriate the necessary rights in respect of that land for the benefit of the person undertaking the rehabilitation or remedial work, who will then be vested with the expropriated rights; and

(b) recover all costs incurred in connection with the expropriation, including any compensation payable, from the person for whose benefit the expropriation was effected.

(2) Where a servitude of abutment, aqueduct or submersion is expropriated under this section, the Minister or water management institution responsible for the expropriation has the same rights as those vesting in the holder of a servitude under section 128.

### **Condonation of failure to comply with time period**

**66.** The Minister may, in exceptional circumstances and for a good reason, extend a time period or condone a failure to comply with a time period.

### **Dispensing with certain requirements of Act**

**67.** (1) In an emergency situation, or in cases of extreme urgency involving the safety of humans or property or the protection of a water resource or the environment, the Minister may -

(a) dispense with the requirements of this Act relating to prior publication or to obtaining and considering public comment before any instrument contemplated in section 158(1) is made or issued;

(b) dispense with notice periods or time limits required by or under this Act;

(c) authorise a water management institution to dispense with -

(i) the requirements of this Act relating to prior publication or to obtaining and considering public comment before any instrument is made or issued; and

(ii) notice periods or time limits required by or under this Act.

(2) Anything done under subsection (1) -

(a) must be withdrawn or repealed within a maximum period of two years after the emergency situation or the urgency ceases to exist; and

(b) must be mentioned in the Minister's annual report to Parliament.

### **Intervention in litigation**

68. The Minister may intervene in litigation before a court or in a hearing before the Water Tribunal with regard to any matter contemplated in this Act.

### *Part 2: General provisions regarding regulations*

*Part 2 requires the Minister to consult with the public when making regulations under this Act, and also to submit regulations for scrutiny by the National Assembly and by the National Council of Provinces. If the National Assembly rejects a regulation it must be repealed or amended.*

#### **Making of regulations**

69. (1) The Minister must, before making any regulations under this Act -

- (a) publish a notice in the *Gazette* -
  - (i) setting out the draft regulations; and
  - (ii) inviting written comments to be submitted on the proposed regulations, specifying an address to which and a date before which the comments must be submitted, which date may not be earlier than 60 days after publication of the notice;
- (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
- (c) consider all comments received on or before the date specified in paragraph (a)(ii); and
- (d) on request by the National Assembly or the National Council of Provinces or a committee of the National Assembly or the National Council of Provinces report the extent to which a specific comment has been taken into account, or if a comment was not taken into account, provide the reason why it was not taken into account.

(2) Any regulation made under this Act may provide that a contravention of or failure to comply with a regulation is an offence and that any person found guilty of the offence is liable to a fine or to imprisonment for a period not exceeding 5 years.

#### **Consideration of regulations**

70. (1) The Minister must, within 30 days after making any regulations under this Act, table the regulations in the National Assembly and the National Council of Provinces for consideration.

(2) In considering regulations -

- (a) tabled in the National Assembly, a committee of the National Assembly must consider and report to the National Assembly; and
- (b) tabled in the National Council of Provinces, a committee of the National Council of Provinces must consider and report to the National Council of Provinces, whether the regulations -
  - (i) are consistent with the purposes of this Act;
  - (ii) are within the powers conferred by this Act;
  - (iii) are consistent with the Constitution; and
  - (iv) require clarification.

(3) The National Council of Provinces may reject regulations tabled before the National Council of Provinces in terms of subsection (1) within 14 days after the date on which the regulations were so tabled, and should the National Council of Provinces reject any regulation, the rejection must be referred to the National Assembly for consideration.

(4) The National Assembly may, not later than the twentieth sitting day of the National Assembly after the date on which the regulations were tabled and after considering any rejection of a regulation by the National Council of Provinces, reject those regulations.

(5) If the National Assembly or the National Council of Provinces rejects any regulations, it must state its reasons.

#### **Rejected regulations**

71. (1) The Minister must, within 30 days after being informed in writing that the National Assembly has rejected any regulations, repeal or amend those regulations so as to address the matters raised by the National Assembly.

(2) Any regulations rejected by the National Assembly remain in force until repealed or amended.

### ***Part 3: Powers relating to catchment management agencies***

***The Minister has the responsibility to manage and authorise the use of the nation's water resources. This means that the Minister fulfils the functions of a catchment management agency in a water management area for which no catchment management agency is established, or where such an agency has been established but is not functional. The Minister may dispense with certain requirements of this Act for as long as is necessary to deal with an urgent situation or an emergency.***

#### **Powers and duties of catchment management agencies vest in Minister in certain circumstances**

**72.** (1) In areas for which a catchment management agency is not established or, if established, is not functional, all powers and duties of a catchment management agency, including those powers and duties described in sections 79 and 80 and in Schedule 3, vest in the Minister.

(2) In areas for which a catchment management agency is established, those powers and duties described in Schedule 3 which have not been assigned by the Minister to the catchment management agency, vest in the Minister.

#### **Assignment of powers and duties to catchment management agencies**

**73.** (1) The Minister may, after consultation with the catchment management agency concerned, by notice in the *Gazette*, assign to that catchment management agency -

- (a) a power or duty of a responsible authority; and
- (b) any power or duty listed in Schedule 3.

(2) In assigning any power or duty under subsection (1), the Minister may -

- (a) limit the area within which an assigned power may be exercised or duty may be performed; and
- (b) attach conditions to that assignment.

(3) Before assigning a power or duty to a catchment management agency under subsection (1), the Minister must consider -

- (a) the capacity of the catchment management agency to exercise the power or perform the duty; and
- (b) the desirability of assigning that power or duty.

(4) The Minister must promote the management of water resources at the catchment management level by assigning powers and duties to catchment management agencies when it is desirable to do so.

#### **Directives to water management institutions**

**74.** (1) The Minister may give a directive to a water management institution in relation to the exercise of any of the institution's powers or the performance of any of the institution's duties, including any power or duty assigned or delegated to that institution.

(2) The Minister must give a water management institution not less than 14 days' notice of the Minister's intention to give a directive under subsection (1) if it relates to any assigned power or duty, and must allow the institution an opportunity to comment.

(3) Every directive, or a summary thereof, given to a water management institution by the Minister and which relates to an assigned power or duty -

- (a) must be published by the Minister in the *Gazette*; and
- (b) must be included in the annual report of the institution.

(4) A failure to comply with subsection (3) does not affect the validity of the directive.

(5) A water management institution must give effect to a directive given to it by the Minister under subsection (1).

### ***Part 4: Powers of Director-General***

#### **Delegation of powers by Director-General**

75. The Director-General may, for the purposes of this Act, in writing and subject to conditions, delegate a power, including a power granted or delegated to the Director-General under this Act, to -

- (a) an official of the Department by name;
- (b) the holder of an office in the Department; or
- (c) a water management institution.

#### **Appointment of persons on contract**

76. (1) The Director-General may, when necessary, appoint employees on contract outside the provisions of the Public Service Act, 1994 (Proclamation No. 103 of 1994).

(2) Appointments made under subsection (1) must be limited to persons to perform duties at sites where the Department -

- (a) is engaged in actual construction or investigatory work; or
- (b) is associated with specific projects relating to actual construction or investigatory work.

(3) The Director-General must, from time to time, and after consultation with the Department of Public Service and Administration, determine the conditions of employment of such employees.

(4) Such employees shall be remunerated from money appropriated for that purpose by Parliament.

### **CHAPTER 7**

#### **CATCHMENT MANAGEMENT AGENCIES**

*This Chapter provides for the progressive establishment by the Minister of catchment management agencies. The purpose of establishing these agencies is to delegate water resource management to the regional or catchment level and to involve local communities, within the framework of the national water resource strategy established in terms of Chapter 2. Whilst the ultimate aim is to establish catchment management agencies for all water management areas, the Minister acts as the catchment management agency where one has not been established. Where the necessary capacity does not exist to establish a catchment management agency, an advisory committee may be appointed under Chapter 9 to develop the necessary capacity as a first step towards establishing an agency.*

##### *Part 1: Establishment and powers of catchment management agencies*

*Under Part 1 a catchment management agency may be established for a specific water management area, after public consultation, on the initiative of the community and stakeholders concerned. In the absence of such a proposal the Minister may establish a catchment management agency on the Minister's own initiative. The provisions of Schedule 4, on institutional and management planning, apply to a catchment management agency.*

#### **Proposal for establishment of catchment management agency**

77. (1) A proposal to establish a catchment management agency must contain at least -

- (a) a proposed name and a description of the proposed water management area of the agency;
- (b) a description of the significant water resources in the proposed water management area, and information about the existing protection, use, development, conservation, management and control of those resources;
- (c) the proposed functions of the catchment management agency, including functions to be assigned and delegated to it;
- (d) how the proposed catchment management agency will be funded;
- (e) the feasibility of the proposed catchment management agency in respect of technical, financial and administrative matters; and
- (f) an indication whether there has been consultation in developing the proposal and the results of the consultation.

(2) The Director-General may assist a person to develop such a proposal.

### **Procedure for establishment of catchment management agencies**

**78.** (1) The Minister may, subject to section 6(1)(c), on his or her own initiative or after receiving a proposal containing the information required in terms of section 77(1), by notice in the *Gazette* -

- (a) establish a catchment management agency, give it a name and identify and determine its water management area; or
- (b) amend the name or water management area of an established catchment management agency.

(2) The Minister may -

- (a) require a person who has submitted a proposal contemplated in subsection (1), to provide the Minister with information additional to that required by section 77(1); and
- (b) instruct the Director-General to conduct an investigation regarding -
  - (i) the establishment of a catchment management agency; or
  - (ii) a proposal submitted in terms of subsection (1).

(3) Before the establishment of a catchment management agency the Minister must -

- (a) publish a notice in the *Gazette* -
  - (i) setting out the proposed establishment of the catchment management agency, the proposed name and the proposed water management area; and
  - (ii) inviting written comments to be submitted on the proposal specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
- (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
- (c) consider all comments received on or before the date specified in paragraph (a)(ii).

(4) If the Minister wants to amend the name of a catchment management agency or the water management area of a catchment management agency, the procedure set out in subsection (3) must be followed with any necessary changes: Provided that where an amendment does not affect the rights of any person the procedure set out in subsection (3) need not be followed.

### **General powers and duties of catchment management agencies**

**79.** (1) A catchment management agency is a body corporate, and has the powers of a natural person of full capacity, except those powers which -

- (a) by nature can only attach to natural persons; or
- (b) are inconsistent with this Act.

(2) Schedule 4 applies to a catchment management agency, its governing board and committees and the members of the board and committees.

(3) A catchment management agency may perform -

- (a) any of its functions; or
- (b) any function which is reasonably incidental to any of its functions, outside its water management area, if this does not -
  - (i) limit its capacity to perform its functions in its water management area; or
  - (ii) detrimentally affect another water management institution.

(4) In performing its functions a catchment management agency must -

- (a) be mindful of the constitutional imperative to redress the results of past racial and gender discrimination and to achieve equitable access for all to the water resources under its control;
- (b) strive towards achieving co-operation and consensus in managing the water resources under its control; and
- (c) act prudently in financial matters.

### **Initial functions of catchment management agencies**

**80.** Subject to Chapter 2 and section 79, upon the establishment of a catchment management agency, the initial functions of a catchment management agency are -

- (a) to investigate and advise interested persons on the protection, use, development,

- conservation, management and control of the water resources in its water management area;
- (b) to develop a catchment management strategy;
- (c) to co-ordinate the related activities of water users and of the water management institutions within its water management area;
- (d) to promote the co-ordination of its implementation with the implementation of any applicable development plan established in terms of the Water Services Act, 1997 (Act No. 108 of 1997);
- and
- (e) to promote community participation in the protection, use, development, conservation, management and control of the water resources in its water management area.

### ***Part 2: Governing board of catchment management agencies***

***Part 2 describes the appointment of members of the governing board of a catchment management agency. The board of a catchment management agency will be constituted in such a way that interests of the various stakeholders are represented or reflected in a balanced manner, and the necessary expertise to operate effectively is provided. Members of the governing board can be elected or nominated by the different water user groups for appointment by the Minister, and the Minister may of his or her own accord appoint further members. The Minister may also remove board members for good reason.***

#### **Appointment of governing board of catchment management agency**

- 81.** (1) The members of a governing board of a catchment management agency must be appointed by the Minister who, in making such appointment, must do so with the object of achieving a balance among the interests of water users, potential water users, local and provincial government and environmental interest groups.
- (2) Notwithstanding subsections (3) to (9) the Minister must, from time to time, determine the extent to which relevant local governments should be represented on the governing board of each catchment management agency.
- (3) Before appointing members to the governing board, the Minister must establish an advisory committee contemplated in Chapter 9, to recommend to the Minister -
- (a) which organs of state and bodies representing different sectors and other interests within the water management area of the catchment management agency should be represented or reflected on the governing board; and
  - (b) the number of persons which each of them should be invited to nominate.
- (4) The committee must consult with the relevant organs of state and interest groups before making its recommendations.
- (5) After receiving the committee's recommendations, the Minister must decide which organs of state and bodies will be invited to nominate representatives for appointment to the governing board, and the number of representatives each may nominate.
- (6) The Minister's decision must be communicated to the organs of state and bodies concerned and the Minister must take the necessary steps to obtain nominations from them by a date specified by the Minister.
- (7) The Minister must appoint the persons nominated by the organs of state and the bodies concerned in accordance with the invitation, unless -
- (a) any such person is not a fit and proper person to serve on the governing board; or
  - (b) any such organ of state or body has not followed its own internal procedures in making the nomination.
- (8) If the Minister does not appoint a nominee, the Minister must -
- (a) inform the organ of state or body concerned and state the reasons for not appointing that nominee; and
  - (b) invite a further nomination from that organ of state or body.
- (9) If one or more nominations are still outstanding on the date specified under subsection (6), the Minister may appoint members of the board and fill any vacancy later.
- (10) After appointing members to the board the Minister may appoint additional members selected by the Minister in order to -
- (a) represent or reflect the interests identified by the advisory committee;
  - (b) achieve sufficient gender representation;
  - (c) achieve sufficient demographic representation;

- (d) achieve representation of the Department;
- (e) achieve representation of disadvantaged persons or communities which have been prejudiced by past racial and gender discrimination in relation to access to water; and
- (f) obtain the expertise necessary for the efficient exercise of the board's, powers and performance of its duties.

(11) A member must be appointed for a specified term of office.

(12) The Minister may extend the term of office of a member.

(13) If the term of office of a member expires before the first meeting of a new board takes place, the existing member remains in office until that first meeting takes place.

(14) A member nominated for appointment to the board by an organ of state or body is accountable to that organ of state or body.

### **Chairperson, deputy chairperson, chief executive officer and committees of catchment management agency**

**82.** (1) The Minister must convene the first meeting of the governing board of a catchment management agency, which must be chaired by an official of the Department or a member of the committee.

(2) At the first meeting of the governing board, the members may recommend one of them for appointment as chairperson and another as deputy chairperson.

(3) The Minister must -

(a) with due regard to any recommendation made by the governing board at its first meeting, appoint one of the members as chairperson; and

(b) appoint any other member as deputy chairperson.

(4) The chief executive officer provided for in Schedule 4 may be a member of the governing board, but may not be its chairperson or deputy chairperson.

(5) A catchment management agency may establish committees, including an executive committee and consultative bodies, to perform any of its functions within a particular area or generally or to advise it, and must determine how they must function.

### **Removal of members from governing board**

**83.** (1) The Minister may remove a member from a governing board, or remove the chairperson or deputy chairperson from office, if -

(a) there is good reason for doing so;

(b) the person concerned has had an opportunity of making representations to the Minister; and

(c) the Minister has consulted with the governing board.

(2) The Minister must remove a member nominated by an organ of state or body from a governing board if that organ of state or body requests the Minister to do so.

(3) If a person ceases for any reason to be a member of a governing board before that person's term of office expires, the Minister may, for the remainder of the term of office -

(a) if that person was nominated by any organ of state or body, appoint another person nominated by that organ or body; or

(b) if that person was selected by the Minister, appoint another person.

### ***Part 3: Operation of catchment management agencies***

*Part 3 deals with the functions and operation of catchment management agencies. Initial functions, dealt with in Part 2, include the investigation of and advice on water resources, the co-ordination of the related activities of other water management institutions within its water management area, the development of a catchment management strategy and the promotion of community participation in water resource management within its water management area. Additional powers and duties described in Schedule 3 may be assigned or delegated to agencies such as to establish water use rules and management systems, to direct users to terminate illegal uses of water, and to temporarily limit the use of water during periods of shortage. A catchment management agency may be financed by the state from water use charges made in its water management area or from any other source.*

### **Funding of catchment management agencies**

**84.** (1) A catchment management agency may raise any funds required by it for the purpose of exercising any of its powers and carrying out any of its duties in terms of this Act.

(2) A catchment management agency must be funded by -

- (a) money appropriated by Parliament;
- (b) water use charges; and
- (c) money obtained from any other lawful source for the purpose of exercising its powers and carrying out its duties in terms of this Act.

#### **Documents relating to litigation**

**85.** A catchment management agency must provide the Director-General with copies of all pleadings, affidavits and other documents in the possession of the catchment management agency relating to any proceedings instituted against that catchment management agency.

#### **Delegation of powers by catchment management agency**

**86.** (1) Subject to subsections (2) and (3), a catchment management agency may delegate any power to -

- (a) a member of its governing board;
- (b) an employee of any water management institution (including itself), by name, or to the holder of an office in that institution; or
- (c) any committee established by the catchment management agency which consists only of members of the governing board or employees of the catchment management agency; and
- (d) any other person or body only with the written consent of the Minister.

(2) A catchment management agency may not delegate -

- (a) the power of delegation; or
- (b) any power to make water use charges.

(3) A catchment management agency may only delegate a power to authorise the use of water, if this power is delegated to a committee consisting of three or more members of its governing board.

#### ***Part 4: Intervention, disestablishment or change of water management areas of catchment management agencies***

***Part 4 enables the Minister to disestablish a catchment management agency or make changes to its water management area, for reasons which include the need to reorganise water management institutions for more effective water resource management. An agency may also be disestablished if it does not operate effectively.***

#### **Intervention by Minister**

**87.** (1) If a catchment management agency -

- (a) is in financial difficulties or is being otherwise mismanaged;
- (b) has acted unfairly or in a discriminatory or inequitable way towards any person within its water management area;
- (c) has failed to comply with any directive given by the Minister under this Act;
- (d) has obstructed the Minister or any other water management institution in exercising a power or performing a duty in terms of this Act;
- (e) is unable to exercise its powers or perform its duties effectively due to dissension among the members of the board or water users within its water management area;
- (f) has failed to comply with this Act; or
- (g) has become redundant or ineffective, the Minister may -
  - (i) direct the catchment management agency to take any action specified by the Minister; and
  - (ii) withhold any financial assistance which might otherwise be available to the catchment management agency, until the catchment management agency has



complied with such directive.

- (2) A directive contemplated in subsection (1)(i) must state -
  - (a) the nature of the deficiency;
  - (b) the steps which must be taken to remedy the situation; and
  - (c) a reasonable period within which those steps must be taken.
- (3) If the catchment management agency fails to remedy the situation within the given period, the Minister may -
  - (a) after having given that catchment management agency a reasonable opportunity to be heard; and
  - (b) after having afforded the catchment management agency a hearing on any submissions received, take over the relevant power or duty of the catchment management agency.
- (4) If the Minister takes over a power or duty of a catchment management agency -
  - (a) the Minister may do anything which the catchment management agency might otherwise be empowered or required to do by or under this Act, to the exclusion of the catchment management agency;
  - (b) the board of the catchment management agency may not, while the Minister is responsible for that power or duty, exercise any of its powers or perform any of its duties relating to that power or duty;
  - (c) an employee or a contractor of the catchment management agency must comply with a directive given by the Minister;
  - (d) as soon as the Minister is satisfied that the catchment management agency is once more able to exercise its powers or perform its duties effectively, the Minister must cease exercising any such powers and performing any such duties; and
  - (e) the Minister may recover from the catchment management agency all reasonable costs incurred, including any losses suffered as a result of lawful and reasonable action taken under this section, except to the extent that the loss is caused or contributed to by the negligence of the Minister, or any person under the control of the Minister.

#### **Disestablishment of catchment management agency**

- 88.** (1) The Minister may, by notice in the *Gazette*, disestablish a catchment management agency if it is desirable -
  - (a) for purposes of re-organising water management institutions in that area in the interests of effective water resource management;
  - (b) because the catchment management agency cannot or does not operate effectively; or
  - (c) because there is no longer a need for the catchment management agency.
- (2) Before disestablishing a catchment management agency the Minister must -
  - (a) publish a notice in the *Gazette* -
    - (i) stating the intention to disestablish the catchment management agency and the reasons therefor; and
    - (ii) inviting written comments on the proposed disestablishment and giving a specified address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
  - (c) consider all comments received on or before the specified date.

#### **Transfer of assets and liabilities after change of water management area or disestablishment**

- 89.** (1) If the Minister changes the water management area of a catchment management agency under section 78 or disestablishes a catchment management agency under section 88, the Minister may direct the catchment management agency to transfer some or all of its assets and liabilities to another water management institution.
- (2) A catchment management agency must do everything in its power to give effect to a directive under subsection (1).
- (3) In issuing a directive under subsection (1) the Minister must consider -
  - (a) the interests of creditors and users of water; and
  - (b) any financial contributions directly or indirectly made by the users of water resources towards the infrastructure of the catchment management agency.

(4) Where a catchment management agency is disestablished and its assets and liabilities are not transferred to another water management institution its assets and liabilities vest in the Minister and the Minister must wind up its affairs and assume the powers and duties of the catchment management agency for the period of winding up.

(5) No transfer duty, other tax or duty is payable in respect of the transfer of any assets in terms of this section.

### **Regulations on catchment management agencies**

**90.** (1) Subject to subsection (2), the Minister may make regulations -

- (a) prescribing a maximum and a minimum number of members of a governing board;
- (b) requiring the establishment of consultative forums and determining their composition and functions;
- (c) determining, in consultation with the Minister of Finance, the basis and extent of remuneration and payment of expenses of members of governing boards and committees; and
- (d) on any other matter which is necessary or desirable for the efficient functioning of catchment management agencies and their governing boards and committees.

(2) In making regulations, the Minister must take into account all relevant considerations, including the need to -

- (a) achieve adequate representation of and consultation with organs of state, bodies representing different sectors and other interests within the areas of jurisdiction of catchment management agencies; and
- (b) secure the efficient and cost effective functioning of catchment management agencies and their management structures.

## **CHAPTER 8**

### **WATER USER ASSOCIATIONS**

*This Chapter deals with the establishment, powers and disestablishment of water user associations. Although water user associations are water management institutions their primary purpose, unlike catchment management agencies, is not water management. They operate at a restricted localised level, and are in effect co-operative associations of individual water users who wish to undertake water-related activities for their mutual benefit. A water user association may exercise management powers and duties only if and to the extent these have been assigned or delegated to it. The Minister establishes and disestablishes water user associations according to procedures set out in the Chapter. A water user association for a particular purpose would usually be established following a proposal to the Minister by an interested person, but such an association may also be established on the Minister's initiative. The functions of a water user association depend on its approved constitution, which can be expected to conform to a large extent to the model constitution in Schedule 5. This Schedule also makes detailed provisions for the management and operation of water user associations. Although water user associations must operate within the framework of national policy and standards, particularly the national water resource strategy, the Minister may exercise control over them by giving them directives or by temporarily taking over their functions under particular circumstances.*

*Existing irrigation boards, subterranean water control boards and water boards established for stock watering purposes will continue in operation until they are restructured as water user associations.*

### **Proposal for establishment of water user association**

**91.** (1) A proposal to establish a water user association must contain at least -

- (a) the reasons for making the proposal;
- (b) a proposed name and area of operation for the association;
- (c) the proposed activities of the association;
- (d) a description of any existing or proposed waterwork within the proposed area of operation which is relevant to the proposed activities of the association;
- (e) a description of the water use licences or any other authorisations which the proposed members hold or intend applying for;
- (f) the proposed constitution of the association, together with an explanation for any provisions which differ from those of the model constitution contained in Schedule 5;
- (g) a list of the proposed members or categories of members of the association; and

(h) an indication whether there has been consultation in developing the proposal and the results of the consultation.

(2) The Director-General may assist a person to develop such a proposal.

### **Procedure for establishment of water user association**

**92.** (1) The Minister may on his or her own initiative or after receiving a proposal containing the information required in terms of section 91(1), by notice in the *Gazette* -

(a) establish a water user association, give it a name, determine its area of operation and approve its constitution subject to section 93(2); or

(b) amend the name, area of operation or approve an amendment to the constitution of an established water user association.

(2) The Minister may -

(a) require a person who has submitted a proposal in terms of subsection (1) to provide the Minister with additional information to that required by section 91(1); and

(b) instruct the Director-General to conduct an investigation regarding -

(i) the establishment of a water user association; or

(ii) a proposal submitted in terms of subsection (1).

(3) Before the establishment of a water user association the Minister must -

(a) publish a notice in the *Gazette* -

(i) setting out the proposed establishment of the water user association, the proposed name and the proposed area of operation; and

(ii) inviting written comments to be submitted on the proposals, specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;

(b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and

(c) consider any comments received on or before the date specified in paragraph (a)(ii).

(4) The Minister need not fulfil all the requirements of subsection (3), if there has been sufficient consultation on a proposal submitted in terms of section 91.

(5) The Minister may -

(a) recover the cost of complying with subsection (3) from the water user association once it has been established; or

(b) require the person proposing the establishment of the water user association to pay the costs in advance.

### **Constitution of water user association**

**93.** (1) Schedule 5 contains a model constitution which may be used as a basis for drawing up and proposing a constitution for a proposed water user association.

(2) The constitution of a water user association must contain at least -

(a) details of the principal and ancillary functions of the association;

(b) the procedures and requirements for admitting new members to the association;

(c) the voting powers of members;

(d) procedures for terminating membership;

(e) procedures for electing the management committee of the association;

(f) procedural requirements for appointment of employees of the association;

(g) procedural requirements for obtaining loans; and

(h) the financial obligations of members towards the association.

(3) A constitution must also incorporate such other provisions as the Minister may reasonably require and must be adopted by the members of the association and approved by the Minister before it can exercise any powers or perform any duties.

(4) A constitution adopted by a water user association is binding on all its members.

### **Powers of water user association**

**94.** (1) A water user association is a body corporate and has the powers of a natural person of full capacity, except those powers which -

- (a) by nature can only attach to natural persons; or
- (b) are inconsistent with this Act.

(2) Schedule 4 (excluding item 4(3) of Part 1 of that Schedule) applies to a water user association as if -

- (a) the water user association were an institution; and
- (b) a member of the management committee were a director, within the meaning of that Schedule, except to the extent that the Minister may otherwise direct.

### **Directives to water user association**

**95.** (1) The Minister may, after consulting with a water user association, direct that a person be admitted as a member of the association on such conditions as are fair and equitable.

(2) A water user association must comply with a directive given under subsection (1).

(3) If a water user association -

- (a) is in financial difficulties or is being otherwise mismanaged;
- (b) has acted unfairly or in a discriminatory or inequitable way towards any member of the association;
- (c) has failed to admit persons to membership unfairly or on discriminatory grounds;
- (d) has failed to comply with any directive given by the Minister under this Act;
- (e) has obstructed the Minister or any other water management institution in exercising a power or performing a duty in terms of this Act;
- (f) is unable to exercise its powers or perform its duties effectively due to dissension among the management committee or its members;
- (g) has failed to comply with its constitution or this Act; or
- (h) has become redundant or ineffective, the Minister may -
  - (i) direct the association to take any action specified by the Minister;
  - (ii) withhold any financial assistance which might otherwise be available to the water user association until the association has complied with such directive; or
  - (iii) by notice addressed to the association and the member concerned, terminate the office of that member of the management committee and arrange for the resulting vacancy on the management committee to be filled.

(4) A directive contemplated in subsection (3)(i) must state -

- (a) the nature of the deficiency;
- (b) the steps which must be taken to remedy the situation; and
- (c) a reasonable period within which those steps must be taken.

(5) If the water user association fails to remedy the situation within the given period, the Minister may -

- (a) after having given that association a reasonable opportunity to be heard; and
- (b) after having afforded the association a hearing on any submissions received, take over the relevant function of the association, or appoint a suitable person to take over the power or duty.

(6) If the Minister, or a person appointed by the Minister, takes over a power or duty of a water user association -

- (a) the Minister or the appointee may do anything which the association might otherwise be empowered or required to do in terms of its constitution or by or under this Act, to the exclusion of the association;
- (b) the management committee of the association may not, while the Minister or the appointee is responsible for that power or duty, exercise any of its powers or perform any of its duties

relating to that power or duty;

- (c) an employee or a contractor of the association must comply with a directive given by the Minister or the appointee;
- (d) as soon as the Minister is satisfied that the association is once more able to exercise its powers and perform its duties effectively, the Minister or the appointee, as the case may be, must cease exercising such powers and performing such duties; and
- (e) the Minister may recover from the association all reasonable costs incurred by the Minister or the appointee, including -
  - (i) the reasonable fees or disbursements of the appointee; and

(ii) any losses suffered as a result of lawful and reasonable action taken under this section, except to the extent that the loss is caused or contributed to by the negligence of the Minister or the appointee or any person under their control.

### **Disestablishment of water user association**

- 96.** (1) The Minister may, by notice in the *Gazette*, disestablish an association -
- (a) in circumstances provided for in the constitution of the association;
  - (b) if the functions of the association are, by agreement with another water management institution, to be combined with, or taken over by that water management institution;
  - (c) if it is in the best interests of the association or its members;
  - (d) if an investigation of its affairs or financial position reveals that disestablishment is appropriate;
  - (e) if the Minister has taken over a power or duty of the association as a result of dissensions among the management committee or its members; or
  - (f) if the association is no longer active or effective.
- (2) Before disestablishing a water user association the Minister must -
- (a) publish a notice in the *Gazette* -
    - (i) stating the intention to disestablish the water user association;
    - (ii) setting out the reasons for disestablishing the water user association; and
    - (iii) inviting written comments on the proposal, specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
  - (c) consider all comments received on or before the specified date.

### **Winding up affairs of disestablished water user association**

- 97.** (1) When a water user association is disestablished, its affairs must be wound up -
- (a) as provided for in its constitution; or
  - (b) by a person appointed by the Minister in accordance with directives given by the Minister if the constitution does not provide for winding up.
- (2) The costs of winding up a water user association are a cost against the estate of the association.
- (3) Creditors of a water user association must be paid according to the order of preference established by the Insolvency Act, 1936 (Act No. 24 of 1936).
- (4) If the affairs of a water user association are wound up, the Minister may direct that an amount equivalent to any financial contributions with interest made to the association from public funds be reimbursed, before assets are distributed among the members of the association.
- (5) No transfer duty, other tax or duty is payable in respect of the transfer of any assets under subsection (4).

### **Transitional provisions for certain existing organisations**

- 98.** (1) This section applies to -
- (a) any irrigation board or subterranean water control board established by or deemed to be an irrigation board in terms of any law in force immediately before the commencement of this Act;
  - (b) the Kalahari West Water Board, established by Government Notice No. 143 of 13 August 1982;
  - (c) the Karos-Geelkoppan Water Board, established by Government Notice No. 145 of 7 October 1983; and
  - (d) the Kalahari East Water Board, established by Government Notice No. 2233 of 4 November 1988. each of which is a board for the purposes of this section.

(2) A board continues to exist until it is declared to be a water user association in terms of subsection (6) or until it is disestablished in terms of the law by or under which it was established, which law must, for the purpose of such disestablishment, be regarded as not having been repealed by this Act.

(3) Subject to subsection (4) -

- (a) the name, area of operation, management, property, rights, liabilities, obligations, powers and duties of a board remain the same as immediately before the commencement of this Act;
- (b) this section does not affect the continuity, status, operation or effect of any act or omission of a board, or of any by-law made by a board, before the commencement of this Act;
- (c) any person holding office with a board when this Act commences continues in office for the term of that person's appointment; and
- (d) if a position becomes vacant prior to the declaration of the board as a water user association, the board may fill the vacancy according to the procedures laid down by or under the law which applied to that board immediately before the commencement of this Act.

(4) Within six months of the commencement of this Act, a board must prepare and submit to the Minister a proposal, prepared according to section 91, to transform the board into a water user association.

(5) The Minister may accept the proposal contemplated in subsection (4), with or without amendments, or reject it.

(6) If the Minister accepts the proposal, the Minister must by notice in the *Gazette* -

- (a) declare the board to be a water user association;
- (b) give it a name;
- (c) determine its area of operation; and
- (d) approve its constitution.

(7) Upon the publication of a notice under subsection (6), every property, right and liability of the board becomes a property, right and liability of the relevant water user association.

## CHAPTER 9

### ADVISORY COMMITTEES

*This Chapter empowers the Minister to establish advisory committees. Each advisory committee will be established for a particular purpose, and it is therefore possible for a variety of advisory committees to be established with different purposes and functions. Although primarily advisory in nature, such committees may exercise powers which are delegated to them. The Minister may amend the functions of an advisory committee, or disestablish it. Certain existing advisory committees will continue to function as though they were advisory committees established under this Act.*

#### Establishment of advisory committees

99. (1) The Minister may -

- (a) establish an advisory committee;
- (b) give it a name or change its name;
- (c) determine its purpose and functions or effect amendments thereto;
- (d) make appointments to the committee, including the chairperson and deputy chairperson;
- (e) remove persons from the committee; and
- (f) disestablish an advisory committee.

(2) Officials of the Department may be members of an advisory committee.

(3) A member of a committee may be remunerated as directed by the Minister, with the concurrence of the Minister of Finance.

(4) An act performed in good faith by a committee is valid, despite any failure to comply with a formal procedural requirement.

(5) The Department may supply administrative support services to a committee.

(6) An official of the Department who is not a member of the committee, if so directed by the Director-General, may attend a meeting of a committee, but may not vote at the meeting.

(7) The Minister in appointing a member of a committee, must consider -

- (a) the powers and duties of the committee;
- (b) the need for the committee to represent various relevant interests; and
- (c) the expertise necessary for the committee to exercise its powers and perform its duties effectively.

### **Regulations regarding advisory committees**

**100.** The Minister may by regulation establish terms of reference and any other rules concerning the membership, powers and duties and operation of a committee.

### **Transitional provisions relating to advisory committees**

**101.** (1) The National Water Advisory Council established by section 3A of the Water Act, 1956 (Act No. 54 of 1956), the Advisory Committee on Safety of Dams established by section 9C(5)(a)(i) of the Water Act, 1956, and any advisory committee established under section 68(1) of the Water Act, 1956, must be regarded as being an advisory committee contemplated in this Act.

(2) Subject to the Minister's powers under section 99 -

- (a) the name, powers and duties of a committee or body referred to in subsection (1) remain the same as they were immediately before the commencement of this Act;
- (b) any provision of the Water Act, 1956, or a regulation or notice issued under that Act regulating any matter contemplated in section 99, continues to apply as if it were a regulation made under section 100; and
- (c) any person holding office in a committee or body referred to in subsection (1) immediately before the commencement of this Act continues in office until the expiration of that person's term of appointment or until the committee or body is disestablished, whichever happens sooner.

## **CHAPTER 10**

### **INTERNATIONAL WATER MANAGEMENT**

*Under this Chapter the Minister may establish bodies to implement international agreements in respect of the management and development of water resources shared with neighbouring countries, and on regional co-operation over water resources. The governance, powers and duties of these bodies are determined by the Minister in accordance with the relevant international agreement, but they may also be given additional functions, and they may perform their functions outside the Republic. Certain existing international bodies are deemed to be bodies established under this Act.*

### **Establishment of bodies to implement international agreements**

**102.** The Minister may, in consultation with the Cabinet, by notice in the *Gazette*, establish a body to implement any international agreement entered into by the South African Government and a foreign government relating to -

- (a) investigating, managing, monitoring and protecting water resources;
- (b) regional co-operation on water resources;
- (c) acquiring, constructing, altering, operating or maintaining a waterwork; or
- (d) the allocation, use and supply of water.

### **Governance and functions of bodies**

**103.** (1) A notice contemplated in section 102 must, with due regard to the relevant international agreement, give details of -

- (a) the governance of the body;
- (b) the functions of the body;
- (c) the financing of the body;
- (d) mechanisms for controlling and supervising the affairs of the body;
- (e) which items of Schedule 4, if any, apply to the body;
- (f) the disestablishment of the body and the winding-up of the body's affairs; and

(g) any other matter necessary to give effect to the agreement.

(2) If the Minister is satisfied that it will not prejudice the capacity of a body to perform the functions for which it was established, the Minister may direct a body established under section 102 to perform additional functions which may include, but are not limited to, providing water management institutions with -

- (a) management services;
- (b) financial services;
- (c) training; and
- (d) other support services.

(3) The body may perform its functions outside the Republic.

### **Powers of bodies**

**104.** A body established under section 102 is a body corporate and has the powers of a natural person of full capacity, except those powers which -

- (a) by their nature can attach only to natural persons; or
- (b) are excluded by or are inconsistent with this Act or the relevant international agreement.

### **Bodies must manage different functions as separate units**

**105.** (1) If given additional functions under section 103(2), a body must manage each of its functions separately, and must account for them separately.

(2) A body must apply accounting practices consistent with generally accepted accounting practices.

### **Reports on performance of functions**

**106.** (1) Unless the international agreement provides otherwise, a body must report on the performance of its functions within three months after the end of its financial year.

(2) The report must -

- (a) be accompanied by the body's audited financial statements for that financial year; and
- (b) be submitted to the Minister and such other party as may be required by the international agreement.

(3) The report must contain sufficient information to allow the Minister to assess the performance of the body in respect of all its functions against the objectives set out in the relevant agreement.

(4) The Director-General must send a copy of the report to the Secretary to Parliament.

### **Investigation of affairs or financial position of bodies**

**107.** (1) The Minister may, with the consent of the other parties to the agreement, or if the agreement so provides, appoint a person to investigate the affairs or financial position of a body and that person may for this purpose attend any meeting of the body.

(2) A body must, subject to subsection (1), on request, provide the Minister's appointee with such -

- (a) information on the affairs and financial position of the body;
- (b) access to all books, accounts, documents and assets of the body; and
- (c) information and data on water resources,

as may be required by the Minister or the Minister's appointee.

(3) The Minister may recover from the body concerned the reasonable fees and disbursements of any person appointed under subsection (1).

### **Transitional provisions relating to existing bodies**

**108.** The Trans-Caledon Tunnel Authority established by Government Notice No. 2631 of 12 December 1986, the Komati Basin Water Authority established by an agreement dated 13 March 1992 with the Kingdom of Swaziland and the Violsdrift Noordoewer Joint Irrigation Authority established by an agreement dated 14 September 1992 with the Government of Namibia, must be regarded as being bodies contemplated in this Chapter until disestablished by the Minister by notice in the *Gazette*.



## CHAPTER 11

### GOVERNMENT WATERWORKS

*This Chapter gives the Minister the power to establish and operate government waterworks in the public interest out of funds allocated by Parliament or from other sources. Examples of such waterworks include water storage dams, water transfer schemes and flood attenuation works. The Minister must satisfy certain procedural requirements before constructing a government waterwork, including a duty to obtain an environmental impact assessment and invite public comment, except for emergency, temporary or insignificant waterworks. Water from a government waterwork may be made available for allocation to water users and charges fixed for this water. Water in a government waterwork may also be made available for recreational purposes, subject to controls determined by the Minister and regulations made by the Minister. Existing government waterworks are subject to this Chapter.*

#### **Acquisition, construction, alteration, repair, operation and control of government waterworks**

**109.** The Minister may acquire, construct, alter, repair, operate or control government waterworks in order to protect, use, develop, conserve, manage and control the nation's water resources in the public interest.

#### **Consultation and environmental impact assessment**

**110.** (1) Before constructing a waterwork, the Minister must -

- (a) prepare an environmental impact assessment relating to the proposed waterwork which must, where the Minister considers it appropriate, comply with the requirements contained in regulations made under section 26 of the Environment Conservation Act, 1989 (Act No. 73 of 1989);
- (b) publish a notice in the *Gazette* -
  - (i) setting out the proposal to construct the waterwork;
  - (ii) containing a summary of the environmental impact assessment; and
  - (iii) inviting written comments to be submitted, specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
- (c) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Minister considers to be appropriate; and
- (d) consider -
  - (i) all comments received on or before the date specified in paragraph(b)(iii); and
  - (ii) the environmental impact assessment.

(2) Subsection (1) does not apply -

- (a) to a waterwork which is constructed in emergency circumstances;
- (b) to a temporary waterwork in operation for a period of less than five years; or
- (c) if the waterwork is a minor one.

(3) Within two years after the completion of any waterwork contemplated in subsection (2)(a), the Minister must decide either -

- (a) to demolish the waterwork; or
- (b) after complying with subsection (1) to the appropriate extent, to retain the waterwork.

#### **Financing of government waterworks**

**111.** The Minister may finance the acquisition, construction, alteration, repair, operation and control of government waterworks from funds appropriated by Parliament or obtained from any other source.

#### **Water from government waterworks**

**112.** (1) The Minister may make water from a government waterwork available for allocation in accordance with Chapter 4.

(2) The Minister may in accordance with Chapter 5 fix a charge for water allocated from a government waterwork.

### **Access to and use of government waterworks for recreational purposes**

**113.** (1) The water of a government waterwork and the surrounding state-owned land may be made available for recreational purposes, either generally or for a specific purpose, on the conditions and to the persons determined by the Minister.

(2) The Minister may -

- (a) control or prohibit access to any government waterwork; and
- (b) subject to this Act, make reasonable charges for -
  - (i) the use of;
  - (ii) entry into; and
  - (iii) the use of any water surface or land associated with, any government waterwork for recreational purposes.

(3) Nothing done under this section exempts any person from complying with other provisions of this Act and with any other applicable law.

### **Government waterworks constructed before commencement of Act**

**114.** This Act also applies to government waterworks constructed before the commencement of this Act.

### **Disposal of government waterworks**

**115.** (1) The Minister may transfer, sell or otherwise dispose of any government waterworks to any person.

(2) No government waterwork referred to in subsection (1) may be transferred, sold or disposed of without the approval of the national executive, if its value exceeds an amount specified from time to time by the Minister in concurrence with the Minister of Finance.

(3) Where a government waterwork is disposed of or transferred to a water management institution, the Minister of Finance may direct that no transfer duty, other tax or duty is payable.

### **Regulations regarding government waterworks**

**116.** (1) The Minister may, with regard to a government waterwork, make regulations providing for -

- (a) the management of and control over government waterworks and surrounding state-owned land;
- (b) the use of the water of a government waterwork and the surrounding state-owned land; and
- (c) charges for -
  - (i) entrance to;
  - (ii) use of facilities at; and
  - (iii) the private development of, a government waterwork.

(2) In making the regulations, the Minister must take into account all relevant considerations, including -

- (a) the safety and protection of government waterworks;
- (b) the need for control of the use of government waterworks;
- (c) the safety and security of persons using government waterworks for recreational purposes; and
- (d) the cost of protecting and controlling government waterworks and the recovery of these costs.

## **CHAPTER 12**

### **SAFETY OF DAMS**

*This Chapter contains measures aimed at improving the safety of new and existing dams with a safety risk so as to reduce the potential for harm to the public, damage to property or to resource quality. To reduce the risk of a dam failure, control measures require an owner to comply with certain directives and regulations, such as to submit a report on the safety of a dam, to repair or alter a dam, or to appoint an approved professional person to*

*undertake these tasks. These measures are in addition to the owners' common law responsibility to ensure the safety of their dams. An approved professional person has a statutory duty of care towards the State and the general public and must fulfil, amongst other things, defined responsibilities when acting under this Chapter. Not all dams are subject to regulation under this Chapter, and the Minister may exempt certain persons from its requirements. Only dams of a defined size, dams which have been declared to be dams with a safety risk, or dams falling into a prescribed category are affected. All dams with a safety risk must be registered. Compliance with any directive or regulation under this Chapter does not exempt an owner from complying with any other provision of this Act, such as the requirement for a licence or other authorisation for water use in respect of the dam.*

## **Definitions**

**117.** In this Chapter -

- (a) "approved professional person" means a person registered in terms of the Engineering Profession of South Africa Act, 1990 (Act No. 114 of 1990), and approved by the Minister after consultation with the Engineering Council of South Africa (established by section 2 of that Act);
- (b) "dam" includes any existing or proposed structure which is capable of containing, storing or impounding water (including temporary impoundment or storage), whether that water contains any substance or not;
- (c) "dam with a safety risk" means any dam -
  - (i) which can contain, store or dam more than 50 000 cubic metres of water, whether that water contains any substance or not, and which has a wall of a vertical height of more than five metres, measured as the vertical difference between the lowest downstream ground elevation on the outside of the dam wall and the non-overspill crest level or the general top level of the dam wall;
  - (ii) belonging to a category of dams declared under section 118(2) to be dams with a safety risk; or
  - (iii) declared under section 118(3)(a) to be a dam with a safety risk;
- (d) "owner of a dam" or "owner of a dam with a safety risk" includes the person in control of that dam; and
- (e) "task" includes a task relating to designing, constructing, altering, repairing, impounding water in, operating, evaluating the safety of, maintaining, monitoring or abandoning a dam with a safety risk.

## **Control measures for dam with safety risk**

**118.** (1) The owner of a dam must -

- (a) within the period specified, provide the Minister with any information, drawings, specifications, design assumptions, calculations, documents and test results requested by the Minister; or
  - (b) give any person authorised by the Minister access to that dam, to enable the Minister to determine whether -
    - (i) that dam is a dam with a safety risk;
    - (ii) that dam should be declared to be a dam with a safety risk;
    - (iii) a directive should be issued for specific repairs or alterations to that dam; or
    - (iv) the owner has complied with any provisions of this Act applicable to that dam.
- (2) The Minister may by notice in the *Gazette* declare a category of dams to be dams with a safety risk.
- (3) The Minister may -
- (a) by written notice to the owner of a dam, declare that dam to be a dam with a safety risk;
  - (b) direct the owner of a dam with a safety risk to submit, at the owner's cost, and within a period specified by the Minister, a report by an approved professional person regarding the safety of that dam; or
  - (c) direct the owner of a dam with a safety risk to undertake, at the owner's cost, and within a period specified by the Minister, any specific repairs or alterations to that dam which are necessary to protect the public, property or the resource quality from a risk of failure of the dam.
- (4) If the owner of the dam fails to comply with the directive contemplated in subsection (3)(c) within the period specified, the Minister may undertake the repairs or alterations and recover the costs from the owner.

- (5) Before issuing a directive, the Minister must -
- (a) be satisfied that the repairs or alterations directed are necessary, adequate, effective and appropriate to reduce the risk to an acceptable level; and
  - (b) consider the impact on public safety, property, the resource quality and socio-economic aspects if the dam fails.

### **Responsibilities of approved professional persons**

**119.** (1) When carrying out a task in terms of this Chapter, an approved professional person also has a duty of care towards the State and the general public.

- (2) An approved professional person appointed to carry out a task on a dam must -
- (a) ensure that the task is carried out according to acceptable dam engineering practices;
  - (b) keep the prescribed records;
  - (c) compile the prescribed reports; and
  - (d) where the task includes constructing, altering or repairing a dam, issue a completion certificate to the owner of the dam to the effect that the task on that dam has been carried out according to the applicable design, drawings and specifications.
- (3) An approved professional person appointed to carry out a dam safety evaluation must -
- (a) consider whether the safety norms pertaining to the design, construction, monitoring, operation, performance and maintenance of the dam satisfy acceptable dam engineering practices; and
  - (b) compile a report on the matters contemplated in paragraph (a) according to the prescribed requirements and submit the signed and dated report to the owner of the dam within the prescribed period.

### **Registration of dam with safety risk**

**120.** (1) The owner of a dam with a safety risk must register that dam.

- (2) An application for registration must be made within 120 days -
- (a) after the date on which the dam with a safety risk becomes capable of containing, storing or impounding water;
  - (b) after the date on which an already completed dam is declared to be a dam with a safety risk; or
  - (c) after publication of a notice declaring a category of dams to be dams with a safety risk, as the case may be.

(3) A successor-in-title to an owner of a dam with a safety risk must promptly inform the Director-General of the succession, for the substitution of the name of the owner.

### **Factors to be considered in declaring dam or category of dams with safety risk**

**121.** In declaring a category of dams or a dam to be a category of dams or a dam with a safety risk, the Minister must consider -

- (a) the need to protect the public, property and the resource quality against the potential hazard posed by the dam or category of dams;
- (b) the extent of potential loss or harm involved;
- (c) the cost of any prescribed measures and whether they are reasonably achievable;
- (d) the socio-economic impact if such a dam fails; and
- (e) in the case of a particular dam, also -
  - (i) the manner in which that dam is designed, constructed, altered, repaired, operated, inspected, maintained or abandoned;
  - (ii) the person by whom that dam is designed, constructed, altered, repaired, operated, inspected, maintained or abandoned; and
  - (iii) the manner in which the water is contained, stored or impounded in that dam.

### **Exemptions**

**122.** (1) The Minister may exempt owners of dams belonging to certain categories, by notice in the *Gazette*, from compliance with any provision of this Chapter or any regulation made under this Chapter, on conditions determined by the Minister.

(2) The Minister may in writing exempt an owner of a dam belonging to a certain category from compliance with any provision of this Chapter on conditions determined by the Minister.

(3) The Minister may withdraw the exemption or impose further or new conditions in respect of the exemption.

(4) Before deciding on an exemption, the Minister must consider -

- (a) the degree of risk or potential risk posed by the dam or category of dams to public safety, property and the resource quality;
- (b) the manner of design, construction, alteration, repair, impoundment of water in, operation or abandonment of the dam or category of dams;
- (c) the supervision involved in the dam or category of dams;
- (d) alternative measures proposed for regulating the design, construction, alteration, repair, operation, maintenance, impoundment of water in, inspection or abandonment of the dam or category of dams and the effectiveness of these measures;
- (e) the knowledge and expertise of the persons involved in any task relating to the dam or category of dams;
- (f) the costs relating to the dam or category of dams;
- (g) any security provided or intended to be provided for any damage which could be caused by the dam or category of dams; and
- (h) whether the dam or category of dams are permitted in terms of a licence or any other authorisation issued by or under any other Act.

### **Regulations regarding dam safety**

**123.** (1) The Minister may make regulations -

- (a) for the establishment of a register of approved professional persons for dealing with dams with a safety risk -
  - (i) providing for -
    - (aa) different classes of approved professional persons;
    - (bb) the tasks or category of tasks which each class of approved professional persons may perform; and
    - (cc) the conditions under which each class of approved professional persons may perform any task or category of tasks;
  - (ii) concerning the requirements for admission to each class;
  - (iii) setting out, in respect of each class, the procedure for -
    - (aa) approval;
    - (bb) withdrawal of an approval; and
    - (cc) suspension of an approval; and
  - (iv) providing for a processing fee for an approval;
- (b) regulating the approval of a person as an approved professional person for a specific task -
  - (i) setting out the procedure for approval;
  - (ii) setting out the procedure for cancelling an approval;
  - (iii) requiring that the approved person be assisted in the task by another person or a group of persons with specific experience and qualifications; and
  - (iv) providing for a processing fee for an approval;
- (c) in respect of dams with a safety risk -
  - (i) classifying such dams into categories;
  - (ii) requiring the owner of a dam of a specific category to appoint an approved professional person to -
    - (aa) design that dam or any repair, alteration or abandonment of the dam;
    - (bb) ensure that a task is carried out according to the applicable design, drawings and specifications; and
    - (cc) carry out dam safety evaluations on the dam;
  - (iii) requiring that licences be issued by the Minister before any task relating to a specific category of dams may commence, and the conditions, requirements and procedure to obtain any specific licence;
  - (iv) laying down licence conditions and requirements that must be met when carrying out a task on a specific category of dams;
  - (v) requiring an approved professional person, appointed for a dam of a specific category, to keep records of information and drawings, and to compile reports;

- (vi).requiring -
    - (aa) an owner of a dam belonging to a specific category of dams; and
    - (bb) an approved professional person appointed for a specific task for a specific dam, to submit information, drawings, reports and manuals;
  - (vii) determining the duties of -
    - (aa) an owner of a dam belonging to a specific category of dams; and
    - (bb) an approved professional person appointed for a specific task for a specific dam;
  - (d) requiring the owner of a dam with a safety risk to accomplish regular monitoring of the dam, to the extent and manner prescribed;
  - (e) requiring the registration of a specific dam with a safety risk, and setting out the procedure and the processing fee payable for registration; and
  - (f) specifying time periods that must be complied with.
- (2) In making regulations under subsection (1)(a), the Minister must consider -
- (a) the expertise required for the effective design, construction, alteration, repair, operation, maintenance and abandonment of a dam in the category concerned; and
  - (b) the qualifications and experience needed to provide the expertise for a particular category of tasks.
- (3) Before making regulations under subsection (1), the Minister must consult the Engineering Council of South Africa, established by section 2 of the Engineering Profession of South Africa Act, 1990 (Act No. 114 of 1990), and any other appropriate statutory professional bodies.

## CHAPTER 13

### ACCESS TO AND RIGHTS OVER LAND

#### *Part 1: Entry and inspection*

*Part 1 of this Chapter allows authorised persons to enter and inspect property for a number of purposes associated with implementing this Act. The rights of property owners are protected in that only authorised persons may enter and inspect property; authorised persons must carry a certificate of authorisation and must produce that certificate on request; in certain circumstances notice of entry must be given and the consent of the person owning or occupying the property must be obtained before entry; and in certain circumstances a warrant must be obtained prior to entry.*

#### **Appointment of authorised persons**

**124.** (1) The Minister or a water management institution may, in writing, appoint any suitable person as an authorised person to perform the functions contemplated in section 125(1), (2) and (3).

(2) An authorised person must be provided with a certificate of appointment signed by or on behalf of the Minister or a water management institution in which the nature of the authorised person's functions is described.

#### **Powers and duties of authorised persons**

**125.** (1) An authorised person may, at any reasonable time and without prior notice, enter or cross a property with the necessary persons, vehicles, equipment and material in order to carry out routine inspections of the use of water under any authorisation.

(2) An authorised person may enter a property with the necessary persons, vehicles, equipment and material -

- (a) after giving reasonable notice to the owner or occupier of the property, which notice must state the purpose of the proposed entry; and
- (b) after obtaining the consent of the owner or occupier of that property, in order to -
  - (i) clean, repair, maintain, remove or demolish any government waterwork operated by any water management institution;
  - (ii) undertake any work necessary for cleaning, clearing, stabilising and repairing the water resource and protecting the resource quality;
  - (iii).establish the suitability of any water resource or site for constructing a waterwork;
  - (iv).undertake any work necessary to comply with an obligation imposed on any person under this Act, where that person has failed to fulfil that obligation;

(v).erect any structure and to install and operate any equipment on a temporary basis for monitoring and gathering information on water resources; or

(vi).bring heavy equipment on to a property or occupy a property for any length of time.

(3).An authorised person may, at any reasonable time and without prior notice, on the authority of a warrant, enter a property with the necessary persons, vehicles, equipment and material, and perform any action necessary to -

(a) investigate whether this Act, any condition attached to any authorised water use by or under this Act or any notice or directive is being contravened;

(b) investigate whether any information supplied in connection with the use of water is accurate; or

(c) carry out any of the activities referred to in subsection (2) where the consent of the owner or occupier of that property has been withheld.

(4).A warrant referred to in subsection (3) must be issued by a judge or a magistrate who has jurisdiction in the area where the property in question is situated, and must only be issued if it appears from information obtained on oath that -

(a) there are reasonable grounds for believing that this Act, any condition attached to any authorised water use by or under this Act or any notice or directive, is being contravened;

(b) there are reasonable grounds for believing that any information supplied in connection with the use of water is inaccurate; or

(c) it is necessary to carry out an activity mentioned in subsection (2) and access to that property has been denied.

(5) If a warrant is likely to be issued if applied for but the delay involved in obtaining a warrant is likely to defeat the object of an inspection in terms of subsection (3)(a) or (b), an authorised person may enter a property without a warrant.

(6) An authorised person entering property in terms of this section must, at the request of any person on that property, identify himself or herself and present a certificate of appointment contemplated in section 124(2).

(7) Notwithstanding any provision of this section an authorised person may not, under any circumstances, enter a dwelling without the consent of the occupier or without a warrant authorising entry.

## ***Part 2: Servitudes***

***Part 2 deals with servitudes. A servitude is a right that a person has over property belonging to another person. This Part allows a person who is authorised to use water under the Act to claim a servitude over another person's land where this is necessary to make that water use effective. For example it might be necessary to lead water over another person's land to take it from the source to the authorised water user's land, and a servitude would be necessary to do this. A servitude cannot be claimed unless the claimant is authorised to use water, and if the authorisation is withdrawn or otherwise terminated, the servitude will lapse. Servitudes are acquired by agreement between the authorised water user and the relevant land owner, either according to existing procedures laid down in the Deeds Registries Act or by way of an agreement which is made an order of court. Procedural details regarding the acquisition of servitudes and their registration are not set out in this Part but are contained in Schedule 2.***

### **Definitions**

**126.** In this Chapter -

(a) ``servitude of abutment" means the right to occupy, by means of a waterwork, the bed or banks of a stream or adjacent land belonging to another;

(b) ``servitude of aqueduct" means the right to occupy land belonging to another by means of a waterwork

for abstracting or leading water; and

(c) ``servitude of submersion" means the right to occupy land belonging to another by submerging it under water.

### **Acquisition of servitudes**

- 127.** (1) A person who is authorised under this Act to use water may -
- (a) claim a servitude of -
    - (i) abutment;
    - (ii) aqueduct; or
    - (iii) submersion; or
  - (b) obtain an amendment to any existing servitude of abutment, aqueduct or submersion, to the extent that this is necessary to give effect to that authorisation.
- (2) The servitude claimed under subsection (1)(a) may be -
- (a) a personal servitude in favour of the claimant; or
  - (b) a praedial servitude in favour of the claimant in the claimant's capacity as owner of property on which the claimant may use the water.
- (3) A servitude under this Chapter may also be claimed in respect of an existing waterwork.
- (4) A person who intends to claim a servitude under this section must follow the procedure set out in Schedule 2.

### **Rights and duties of servitude holders and landowners**

- 128.** (1) A holder of a servitude contemplated in this Chapter has a reasonable right of access to the land which is subject to the servitude for the purpose of constructing, altering, replacing, inspecting, maintaining, repairing or operating the relevant waterwork, or for any other purpose necessary for the effective enjoyment of that servitude.
- (2) The holder of a servitude contemplated in this Chapter may, in a reasonable manner and subject to any other applicable law -
- (a) take from the land subject to the servitude, any material or substance reasonably required for constructing, altering, replacing, maintaining or repairing any waterwork or part of a waterwork in respect of which the servitude has been acquired;
  - (b) remove and use vegetation or any other obstacle which is on the land subject to the servitude and which is detrimental to the reasonable enjoyment of the servitude;
  - (c) deposit on the land subject to the servitude any material or substance excavated or removed from the waterwork in the reasonable exercise of the servitude;
  - (d) occupy, during the period of construction of the waterwork in respect of which the servitude has been acquired, as much of the land subject to the servitude as may reasonably be required for -
    - (i) constructing camps or roads;
    - (ii) constructing houses, reservoirs or other buildings or structures; or
    - (iii) installing machinery or equipment, necessary for the construction of the waterwork;
  - (e) occupy, for the duration of the servitude, as much of the land subject to the servitude as is reasonably required for -
    - (i) accommodating people;
    - (ii) workshops; or
    - (iii) storage purposes, to the extent that this is necessary for the control, operation and maintenance of the relevant waterwork.
- (3) A holder of a servitude contemplated in this Chapter must, when requested in writing by the owner of the land subject to the servitude, at the holder's cost -
- (a) maintain the servitude area;
  - (b) repair and maintain waterworks relating to the servitude; and
  - (c) repair and maintain access roads associated with the servitude.
- (4) If the holder of a servitude fails to carry out the requested work, the owner of the land may arrange for the necessary work to be done and may recover any reasonable cost incurred from the servitude holder.
- (5) On termination of a servitude, the holder of the servitude must rehabilitate the land subject to the servitude to the extent that this is reasonably possible.

### **Procedure for acquisition and amendment of servitudes**



**129.** (1) A servitude contemplated in this Chapter may be acquired or an amendment or cancellation of a servitude obtained by -

(a) executing and registering an applicable deed in terms of the Deeds Registries Act, 1937 (Act No. 47 of 1937); or

(b) by means of an order of a High Court.

(2) A person claiming a servitude or an amendment of a servitude under this Chapter may, on reasonable notice to the landowner -

(a) enter;

(b) make any investigation; and

(c) undertake any operation,

on the land which will be subject to the servitude, where this is reasonable in the circumstances and necessary for determining the nature and extent of the servitude and for complying with item 3 of Schedule 2.

(3) A person acting under subsection (2) must -

(a) cause as little damage as possible to the land; and

(b) where any damage is caused -

(i) repair the damage where possible; or

(ii) pay compensation to the landowner in an agreed amount or an amount determined by a

competent

court.

(4) An owner of the land against which a servitude contemplated in this Chapter is claimed, may claim to share in the use of any proposed waterwork relating to the servitude if -

(a) the owner of the land is authorised to use water from a specific water resource;

(b) the use of the waterwork is compatible with the authorised water use; and

(c) the owner of the land agrees to be responsible for a proportionate share of the cost of constructing, repairing and maintaining the waterwork.

(5) A claim to share in the use of a waterwork under subsection (4) must be dealt with -

(a) in the agreement between the parties; or

(b) in a High Court order contemplated in section 130.

### **Powers of High Court in respect of claim for servitude**

**130.** On hearing a claim for a servitude or for an amendment to a servitude in terms of this Chapter, a High Court may -

(a) award the claim with or without modifications, on such terms as it considers just;

(b) award compensation or refuse to award compensation;

(c) determine whether a proportionate amount of compensation should be paid to the holder of a right of lease, mortgage, usufruct or similar right over the property, and order that such compensation be paid; or

(d) dismiss the claim.

### **Compensation payable for granting of servitudes**

**131.** (1) In determining just and equitable compensation a High Court must take into account all relevant factors including, in addition to the matters contemplated in section 25 of the Constitution -

(a) the nature of the servitude or amendment, including the nature and function of the waterwork relating to the servitude or amendment;

(b) whether any existing waterwork will be used to give effect to the servitude;

(c) the probable duration of the servitude;

(d) the extent of the deprivation of use of the land likely to be suffered as a result of the servitude or amendment;

(e) the rental value of the land affected by the servitude or amendment;

(f) the nature and extent of the actual inconvenience or loss likely to be suffered as a result of the exercise of the rights under the servitude or amendment;

(g) the extent to which the land can reasonably be rehabilitated on termination of the servitude;

(h) any advantage that the landowner, or other person with a compensatable interest in the land subject to the servitude, is likely to derive as a result of the servitude or amendment; and

(i) the public interest served by the waterwork relating to the servitude or amendment.

(2) A High Court may determine the time and manner of payment of the compensation.

### **Noting of servitude and amendment by endorsement against title deed**

**132.** (1) The acquisition, amendment or cancellation of a servitude by virtue of an order of the High Court takes effect when the order is noted in terms of the Deeds Registries Act, 1937, (Act No. 47 of 1937).

(2) Nothing in this section prevents a person from electing to register the acquisition, amendment or cancellation of a servitude in accordance with the Deeds Registries Act, 1937 (Act No. 47 of 1937).

### **Cancellation of servitude**

**133.** An owner of land subject to a servitude of abutment, aqueduct or submersion may -

(a) if the relevant authorisation associated with the servitude is terminated;

(b) if the rights and obligations in respect of the servitude have not been exercised on the land subject to the servitude for a continuous period of three years; or

(c) for any other lawful reason, apply to a High Court for the cancellation of that servitude.

### **Joint waterwork involving servitude**

**134.** Subject to Chapter 4, two or more persons who are authorised to use water may agree to -

(a) construct a joint waterwork; and

(b) create a servitude associated with that waterwork, to give effect to their authorised water use.

### ***Part 3: Waterworks and personal servitudes***

***Part 3 deals with ownership and restoration relating to waterworks placed on the land of another, and creates an exception to the general common law rule that personal servitudes are not transferable from the holder to another person. It allows transfers of personal servitudes that are held by the State and water management institutions.***

### **Ownership of waterworks on land belonging to another**

**135.** (1) A water management institution (including the State) -

(a) retains ownership of a waterwork placed in good faith on land belonging to another;

(b) may remove such a waterwork from the land; and

(c) may transfer the rights held in respect of improvement on such land to another person or authority.

(2) When a waterwork is removed under subsection (1)(b), the owner of the property -

(a) may require the Minister or the water management institution concerned to restore, as far as possible, any

physical damage to the land caused by the removal; and

(b) has no other claim against the Minister or the water management institution concerned.

(3) The rights of the State or a water management institution in respect of improvements on property not owned by the State or the institution may be transferred to another person or authority.

### **Transfer of personal servitudes**

**136.** (1) Despite any law to the contrary, a personal servitude, whether registered or not, held by the Minister or a water management institution may be transferred -

(a) from the Minister to a water management institution; or

(b) from a water management institution to the Minister or to another water management institution.

(2) The relevant Registrar of Deeds must register a notarially executed deed of cession to transfer a registered personal servitude in terms of subsection (1).

## CHAPTER 14

### MONITORING, ASSESSMENT AND INFORMATION

*Monitoring, recording, assessing and disseminating information on water resources is critically important for achieving the objects of the Act. Part 1 of this Chapter places a duty on the Minister, as soon as it is practicable to do so, to establish national monitoring systems. The purpose of the systems will be to facilitate the continued and co-ordinated monitoring of various aspects of water resources by collecting relevant information and data, through established procedures and mechanisms, from a variety of sources including organs of state, water management institutions and water users.*

#### *Part 1: National monitoring systems*

##### **Establishment of national monitoring systems**

**137.** (1) The Minister must establish national monitoring systems on water resources as soon as reasonably practicable.

(2) The systems must provide for the collection of appropriate data and information necessary to assess, among other matters -

- (a) the quantity of water in the various water resources;
- (b) the quality of water resources;
- (c) the use of water resources;
- (d) the rehabilitation of water resources;
- (e) compliance with resource quality objectives;
- (f) the health of aquatic ecosystems; and
- (g) atmospheric conditions which may influence water resources.

##### **Establishment of mechanisms to co-ordinate monitoring of water resources**

**138.** The Minister must, after consultation with relevant -

- (a) organs of state;
- (b) water management institutions; and
- (c) existing and potential users of water, establish mechanisms and procedures to co-ordinate the monitoring of water resources.

#### *Part 2: National information systems on water resources*

*Part 2 requires the Minister, as soon as it is practicable to do so, to establish national information systems, each covering a different aspect of water resources, such as a national register of water use authorisations, or an information system on the quantity and quality of all water resources. The Minister may require any person to provide the Department with information prescribed by the Minister in regulations. In addition to its use by the Department and water management institutions, and subject to any limitations imposed by law, information in the national systems should be generally accessible for use by water users and the general public.*

##### **Establishment of national information systems**

**139.** (1) The Minister must, as soon as reasonably practicable, establish national information systems regarding water resources.

(2) The information systems may include, among others -

- (a) a hydrological information system;
- (b) a water resource quality information system;
- (c) a groundwater information system; and
- (d) a register of water use authorisations.

##### **Objectives of national information systems**

- 140.** The objectives of national information systems are -
- (a) to store and provide data and information for the protection, sustainable use and management of water resources;
  - (b) to provide information for the development and implementation of the national water resource strategy; and
  - (c) to provide information to water management institutions, water users and the public -
    - (i) for research and development;
    - (ii) for planning and environment impact assessments;
    - (iii) for public safety and disaster management; and
    - (iv) on the status of water resources.

#### **Provision of information**

**141.** The Minister may require in writing that any person must, within a reasonable given time or on a regular basis, provide the Department with any data, information, documents, samples or materials reasonably required for -

- (a) the purposes of any national monitoring network or national information system; or
- (b) the management and protection of water resources.

#### **Access to information**

**142.** Information contained in any national information system established in terms of this Chapter must be made available by the Minister, subject to any limitations imposed by law, and the payment of a reasonable charge determined by the Minister.

#### **Regulations for monitoring, assessment and information**

- 143.** The Minister may make regulations prescribing -
- (a) guidelines, procedures, standards and methods for monitoring; and
  - (b) the nature, type, time period and format of data to be submitted in terms of this Chapter.

#### ***Part 3: Information on floodlines, floods and droughts***

***Part 3 requires certain information relating to floods, droughts and potential risks to be made available to the public. Township layout plans must indicate a specific floodline. Water management institutions must use the most appropriate means to inform the public about anticipated floods, droughts or risks posed by water quality, the failure of any dam or any other waterworks or any other related matter. The Minister may establish early warning systems to anticipate such events.***

#### **Floodlines on plans for establishment of townships**

**144.** For the purposes of ensuring that all persons who might be affected have access to information regarding potential flood hazards, no person may establish a township unless the layout plan shows, in a form acceptable to the local authority concerned, lines indicating the maximum level likely to be reached by floodwaters on average once in every 100 years.

#### **Duty to make information available to public**

- 145.** (1) A water management institution must, at its own expense, make information at its disposal available to the public in an appropriate manner, in respect of -
- (a) a flood which has occurred or which is likely to occur;
  - (b) a drought which has occurred or which is likely to occur;
  - (c) a waterwork which might fail or has failed, if the failure might endanger life or property;
  - (d) any risk posed by any dam;
  - (e) levels likely to be reached by floodwaters from time to time;

- (f) any risk posed by the quality of any water to life, health or property; and
  - (g) any matter connected with water or water resources, which the public needs to know.
- (2) The Minister may, where reasonably practicable, establish an early warning system in relation to the events contemplated in subsection (1).

## CHAPTER 15

### APPEALS AND DISPUTE RESOLUTION

*This Chapter establishes the Water Tribunal to hear appeals against certain decisions made by a responsible authority, catchment management agency or water management institution under this Act. The Tribunal is an independent body, whose members are appointed through an independent selection process, and which may conduct hearings throughout the Republic. A person may appeal to a High Court against a decision of the Tribunal on a question of law. This Chapter also provides for disputes to be resolved by mediation, if so directed by the Minister.*

#### **Establishment of Water Tribunal**

- 146.** (1) The Water Tribunal is hereby established.
- (2) The Tribunal is an independent body which -
- (a) has jurisdiction in all the provinces of the Republic; and
  - (b) may conduct hearings anywhere in the Republic.
- (3) The Tribunal consists of a chairperson, a deputy chairperson and as many additional members as the Minister considers necessary.
- (4) Members of the Tribunal must have knowledge in law, engineering, water resource management or related fields of knowledge.
- (5) The chairperson, the deputy chairperson and the additional members of the Tribunal are appointed by the Minister on the recommendation of the Judicial Service Commission contemplated in section 178 of the Constitution.
- (6) The chairperson and the deputy chairperson may be appointed in a full-time or part-time capacity while the additional members must be appointed in a part-time capacity.
- (7) The Minister must determine the employment conditions and the remuneration of the chairperson, the deputy chairperson and all other members of the Tribunal in consultation with the Minister of Finance.
- (8) The Minister may, after consultation with the Judicial Service Commission referred to in subsection (5), and after giving the member an opportunity to make representations and considering such representations, for good reason terminate the appointment of any member of the Tribunal.

#### **Operation of Water Tribunal**

- 147.** (1) Subject to section 146(4), after having considered the necessary field of knowledge for the purposes of hearing a particular matter, the chairperson may nominate one or more members of the Water Tribunal to hear a matter and a decision by such member or members constitutes a decision by the Tribunal.
- (2) Administrative support for the Tribunal must be provided by officials of the Department designated by the Director-General, subject to the laws pertaining to the secondment of officers in the Public Service.
- (3) The expenditure of the Tribunal must be defrayed out of money appropriated by Parliament for that purpose or from any other source.
- (4) Neither the Tribunal, the chairperson, the deputy chairperson nor any other member is liable for an act or omission committed in good faith while performing a function in terms of this Act.

#### **Appeals to Water Tribunal**

- 148.** (1) There is an appeal to the Water Tribunal -
- (a) against a directive issued by a catchment management agency under section 19(3) or 20(4)(d), by the recipient thereof;
  - (b) against a claim by a catchment management agency for the recovery of costs under

- section 19(5) or 20(7) by the person affected thereby;
  - (c) against the apportionment by a catchment management agency of a liability for costs under section 19(8) or 20(9), by a person affected thereby;
  - (d) against a decision of a water management institution on the temporary transfer of a water use authorisation under section 25(1), by a person affected thereby;
  - (e) against a decision of a responsible authority on the verification of a water use under section 35 by a person affected thereby;
  - (f) against a decision of a responsible authority on an application for a licence under section 41, or on any other application to which section 41 applies, by the applicant or by any other person who has timeously lodged a written objection against the application;
  - (g) against a preliminary allocation schedule published by a responsible authority under section 46(1), by any interested person;
  - (h) against the amendment of a condition of a licence by a responsible authority on review under section 49(2), by any person affected thereby;
  - (i) against a decision of a responsible authority on an adjudication of claims made under section 51(1), by any person affected thereby;
  - (j) against a directive issued by a responsible authority under section 53(1), by the recipient thereof;
  - (k) against a claim by a water management institution for the recovery of costs under section 53(2)(a), by the person against whom the claim is made;
  - (l) against a decision by a responsible authority on the suspension, withdrawal or reinstatement of an entitlement under section 54, or on the surrender of a licence under section 55, by the person entitled to use water or by the licensee; and
  - (m) against a declaration made by, directive given by or costs claimed by the Minister in respect of a dam with a safety risk under section 118(3) or (4).
- (2) An appeal under subsection (1) -
- (a) does not suspend a directive given under section 19(3), 20(4)(d) or 53(1); and
  - (b) suspends any other relevant decision, direction, requirement, limitation, prohibition or allocation pending the disposal of the appeal, unless the Minister directs otherwise.
- (3) An appeal must be commenced within 30 days after -
- (a) publication of the decision in the *Gazette*;
  - (b) notice of the decision is sent to the appellant; or
  - (c) reasons for the decision are given, whichever occurs last.
- (4) The procedure for lodging, hearing and deciding -
- (a) an appeal under subsection (1); and
  - (b) an application for the determination of compensation under section 22, is contained in Part 2 of Schedule 6.
- (5) The chairperson may make rules which -
- (a) govern the procedure of the Tribunal, including the procedure for lodging and opposing an appeal or an application and the hearing thereof by the Tribunal;
  - (b) may provide for application or appeal fees payable by a claimant or appellant; and
  - (c) must be approved and published in the *Gazette* by the Minister.

### **Appeals from decisions of Water Tribunal**

- 149.** (1) A party to a matter in which the Water Tribunal -
- (a) has given a decision on appeal under section 148, may, on a question of law, appeal to a High Court against that decision; or
  - (b) has determined the liability for compensation or the amount of compensation under section 22(9), may, on a question of law, appeal to a High Court against that determination.
- (2) The appeal must be noted in writing within 21 days of the date of the decision of the Tribunal.
- (3) The notice of appeal must -
- (a) set out every question of law in respect of which the appeal is lodged;
  - (b) set out the grounds for the appeal;
  - (c) be lodged with the relevant High Court and with the Water Tribunal; and
  - (d) be served on every party to the matter.

- (4) The appeal must be prosecuted as if it were an appeal from a Magistrate's Court to a High Court.

## **Mediation**

**150.** (1) The Minister may at any time and in respect of any dispute between any persons relating to any matter contemplated in this Act, at the request of a person involved or on the Minister's own initiative, direct that the persons concerned attempt to settle their dispute through a process of mediation and negotiation.

(2) A directive under subsection (1) must specify the time when and the place where such process must start.

(3) Unless the persons concerned have informed the Minister at least seven days before the date specified in terms of subsection (2) that they have appointed a mediator, the Minister must appoint a mediator.

(4) Notwithstanding subsection (3), the parties may at any time during the course of mediation or negotiation proceedings, by agreement between them, appoint another person to act as mediator.

(5) A person appointed by the Minister in terms of subsection (3) must either be an official of the Department or an independent mediator.

(6) Where the Minister or the Department is a party to the dispute, the mediator may not be an official of the Department.

(7) The contents of all discussions which took place and of all submissions made as part of a mediation process under this section are privileged in law, and may not be received in evidence by any court of law, unless the parties agree otherwise.

(8) The fees and expenses of a mediator must be paid by -

(a) the Department, if the Minister has appointed the mediator; or

(b) the parties, if they have appointed the mediator.

## **CHAPTER 16**

### **OFFENCES AND REMEDIES**

*In common with other Acts of Parliament which aim to make non-compliance a criminal offence, this Chapter lists the acts and omissions which are offences under this Act, with the associated penalties. It also gives the courts and water management institutions certain powers associated with prosecutions for these offences, such as the power to remove the cause of a stream flow reduction.*

## **Offences**

**151.** (1) No person may -

(a) use water otherwise than as permitted under this Act;

(b) fail to provide access to any books, accounts, documents or assets when required to do so under this Act;

(c) fail to comply with any condition attached to a permitted water use under this Act;

(d) fail to comply with a directive issued under section 19, 20, 53 or 118;

(e) unlawfully and intentionally or negligently tamper or interfere with any waterwork or any seal or measuring device attached to a waterwork;

(f) fail or refuse to give data or information, or give false or misleading data or information when required to give information under this Act;

(g) fail to register an existing lawful water use when required by a responsible authority to do so;

(h) intentionally refuse to perform a duty, or obstruct any other person in the exercise of any power or performance of any of that person's duties in terms of this Act;

(i) unlawfully and intentionally or negligently commit any act or omission which pollutes or is likely to pollute a water resource;

(j) unlawfully and intentionally or negligently commit any act or omission which detrimentally affects or is likely to affect a water resource;

(k) fail to register a dam with a safety risk;

(l) fail to comply with a temporary restriction on the use of water in terms of item 6 of Schedule 3; or

(m) commit contempt of the Water Tribunal.

(2) Any person who contravenes any provision of subsection (1) is guilty of an offence and liable, on the first conviction, to a fine or imprisonment for a period not exceeding five years, or to both a fine and such imprisonment and, in the case of a second or subsequent conviction, to a fine or imprisonment for a period not exceeding ten years or to both a fine and such imprisonment.

#### **Enquiry in respect of compensation for harm, loss or damage suffered**

- 152.** Where any person is convicted of an offence under this Act and -
- (a) another person has suffered harm or loss as a result of the act or omission constituting the offence; or
  - (b) damage has been caused to a water resource,  
the Court may, in the same proceedings -
    - (i) at the written request of the person who suffered the harm or loss; or
    - (ii) at the written request of the Minister in respect of the damage caused to a water resource; and
    - (iii) in the presence of the convicted person,  
enquire without pleadings into the harm, loss or damage and determine the extent thereof.

#### **Award of damages**

- 153.** After making a determination in terms of section 152, the Court may -
- (a) award damages for the loss or harm suffered by the person referred to in section 152 against the accused;
  - (b) order the accused to pay for the cost of any remedial measures implemented or to be implemented; and
  - (c) order that the remedial measures to be implemented, be undertaken either by the accused or the relevant water management institution.

#### **Offences in relation to employer and employee relationships**

- 154.** Whenever an act or omission by an employee or agent -
- (a) constitutes an offence in terms of this Act, and takes place with the express or implied permission of the employer or principal, as the case may be, the employer or principal, as the case may be, is, in addition to the employee or agent, liable to conviction for that offence; or
  - (b) would constitute an offence by the employer or principal, as the case may be, in terms of this Act, that employee or agent will in addition to that employer or principal be liable to conviction for that offence.

#### **Interdict or other order by High Court**

**155.** A High Court may, on application by the Minister or the water management institution concerned, grant an interdict or any other appropriate order against any person who has contravened any provision of this Act, including an order to discontinue any activity constituting the contravention and to remedy the adverse effects of the contravention.

## **CHAPTER 17**

### **GENERAL AND TRANSITIONAL PROVISIONS**

*This Chapter contains a number of unrelated provisions which, being of general importance to the Act as a whole, are less suited to other Chapters. They relate, among other things, to the binding of all organs of state, to delegations, to the amendment and substitution of legal instruments, to the limitation of liability, and to the authorisation and service of documents. The Chapter refers to the list, in Schedule 7, of laws or parts of laws which are repealed by this Act and which will no longer have effect. However, any act performed under a repealed law remains valid if not inconsistent with this Act and until overridden by this Act. Regulations made under repealed laws also remain valid if not inconsistent with this Act and until repealed by the Minister. This*



*Chapter also provides for overriding any provision in a prior law which exempts a person from payment of a charge or limiting payment to a fixed charge for water use.*

### ***Part 1: Liability***

#### **State bound**

**156.** This Act binds all organs of state.

#### **Limitation of liability**

**157.** Neither the State nor any other person is liable for any damage or loss caused by -  
(a) the exercise of any power or the performance of any duty in terms of this Act; or  
(b) the failure to exercise any power, or perform any duty in terms of this Act, unless the exercise of or failure to exercise the power, or performance or failure to perform the duty was unlawful, negligent or in bad faith.

#### **Amendment or substitution of instruments**

**158.** (1) For the purposes of this section, "instrument" includes any regulation, strategy, licence, directive or notice made, determined, issued or given in terms of this Act.

(2) If the proposed amendment or substitution of an instrument -  
(a) is not likely to alter the rights and obligations of any person materially;  
(b) corrects any clerical mistake, unintentional error or omission in an instrument;  
(c) corrects any figure miscalculated in an instrument; or  
(d) corrects any misdescription of any person, thing or property, the amendment or substitution may be made without following the procedure required for establishing or giving effect to the instrument.

#### **Effect of delegation**

**159.** Where a power is conferred on a person to delegate the exercise of a power then, unless the contrary intention appears -

- (a) such a delegation does not prevent the exercise of that power, or the performance of that duty by the person who made the delegation;
- (b) such a delegation may be made subject to such conditions or limitations as the person making that delegation may specify; and
- (c) a power so delegated, when exercised or performed by the delegatee, must be regarded as having been exercised or performed by the person making the delegation.

### ***Part 2: Powers and authorisations***

#### **Documents deemed to be properly authorised and issued**

**160.** (1) A notice, directive or other document issued in terms of this Act in good faith by any water management institution and purporting to have been signed by the chairperson, secretary or chief executive officer of the institution must be regarded as having been properly authorised and issued in terms of a valid decision, until evidence to the contrary is adduced.

(2) Any document issued in terms of this Act without authority may be ratified subsequently.

#### **Documents and steps valid under certain circumstances**

**161.** (1) A notice, directive or other document issued in good faith in terms of this Act, but which does not comply with this Act, is valid if the non-compliance is not material and does not prejudice any person.

(2) The failure to take any steps required in terms of this Act as a prerequisite for any decision or action does not invalidate the decision or action if the failure -

- (a) is not material;

- (b) has subsequently been rectified; and
- (c) does not prejudice any person.

(3) A failure in good faith to consult with or send notice to any relevant person or body as required by this Act does not invalidate any act of or process for which such consultation is a prerequisite.

### **Service of documents**

**162.** (1) Any notice, directive or other document in terms of this Act, must be served -

(a) if it is to be served on a natural person -

- (i) by hand delivery to that person;
- (ii) by hand delivery to a responsible individual at that person's business or residential address;
- (iii) by sending it by registered mail to that person's business or residential address; or
- (iv) where that person's business and residential address is unknown, despite reasonable enquiry, by publishing it once in the *Gazette* and once in a local newspaper circulating in the area of that

person's

last known residential or business address; or

(b) if it is intended for a juristic person -

- (i) by hand delivery to a responsible individual at the registered address or principal place of business of that juristic person;
- (ii) by sending it by facsimile to the registered address or principal place of business of that juristic person;
- (iii) by sending it by registered mail to the registered address or principal place of business of that juristic person;
- (iv) by conspicuously attaching it to the main entrance of the registered address or the principal place of business of that juristic person; or
- (v) by hand delivery to any member of that juristic person's board of directors or governing body.

(2) Any notice, directive or other document served according to subsection (1) is considered to have come to the notice of the person, unless the contrary is proved.

### **Repeal of laws, and savings**

**163.** (1) The laws set out in Schedule 7 are hereby repealed to the extent set out in the third column of that Schedule.

(2) This Act overrides any provision in a prior law exempting a person from payment of a charge, or limiting payment to a fixed charge for water use.

(3) Anything done under a law repealed by this Act remains valid -

- (a) to the extent that it is not inconsistent with this Act; and
- (b) until anything done under this Act overrides it.

(4) Any regulation made under a law repealed by this Act remains in force and is considered to have been made under this Act -

- (a) to the extent that it is not inconsistent with this Act; and
- (b) until it is repealed by the Minister under this Act.

### **Short title and commencement**

**164.** This is the National Water Act, 1998, which takes effect on a date fixed by the President by proclamation in the *Gazette*.

## **Schedule 1**

### **PERMISSIBLE USE OF WATER**

**[Sections 4(1) and 22(1)(a)(i) and Item 2 of  
Schedule 3]**

(1) A person may, subject to this Act -

- (a) take water for reasonable domestic use in that person's household, directly from any water resource to which that person has lawful access;
  - (b) take water for use on land owned or occupied by that person, for -
    - (i) reasonable domestic use;
    - (ii) small gardening not for commercial purposes; and
    - (iii) the watering of animals (excluding feedlots) which graze on that land within the grazing capacity of that land, from any water resource which is situated on or forms a boundary of that land, if the use is not excessive in relation to the capacity of the water resource and the needs of other users;
  - (c) store and use run-off water from a roof;
  - (d) in emergency situations, take water from any water resource for human consumption or firefighting;
  - (e) for recreational purposes -
    - (i) use the water or the water surface of a water resource to which that person has lawful access; or
    - (ii) portage any boat or canoe on any land adjacent to a watercourse in order to continue boating on that watercourse; and
  - (f) discharge -
    - (i) waste or water containing waste; or
    - (ii) run-off water, including stormwater from any residential, recreational, commercial or industrial site, into a canal, sea outfall or other conduit controlled by another person authorised to undertake the purification, treatment or disposal of waste or water containing waste, subject to the approval of the person controlling the canal, sea outfall or other conduit.
- (2) An entitlement under this Schedule does not override any other law, ordinance, bylaw or regulation, and is subject to any limitation or prohibition thereunder.

## Schedule 2

### PROCEDURAL MATTERS REGARDING SERVITUDES

#### [Sections 127(4) and 129(2)]

1. A person who intends to claim a servitude or an amendment of a servitude under the Act must give the owner of the land which will be subject to the servitude written notice of his or her claim.
2. Where a claimant is not the owner of the land in favour of which the servitude is claimed, the claimant must give the owner written notice of the claimant's claim.
3. The notice must include details of at least the following, where relevant:
  - (a) the entitlement of the claimant to the use of the water;
  - (b) a description of the land which will be subject to the servitude;
  - (c) whether the servitude claimed is a personal or a praedial servitude;
  - (d) in the case of a personal servitude, the name, identity number or registration number (if applicable) of the person in whose favour the servitude is claimed;
  - (e) in the case of a praedial servitude, a description of the land in favour of which the servitude is claimed;
  - (f) the likely impact of the servitude on the land or its use;
  - (g) in the case of a servitude of aqueduct, the route along which the water is to be led over the land which will be subject to the servitude and other affected land;
  - (h) in the case of a servitude of submersion, where the water will be stored and the area that will be submerged;
  - (i) the nature and locality of any proposed waterwork, including any road or other structure, which will reduce the loss and inconvenience to the owner or occupier of the land which will be subject to the servitude, as a result of the servitude;
  - (j) how and when maintenance of the proposed waterwork is likely to be carried out;
  - (k) the nature, quantity and situation of any materials required from the land which will be subject to the servitude for the purpose of constructing any proposed waterwork;
  - (l) the land reasonably required during the construction period for -
    - (i) construction camps;

- (ii) accommodating people;
  - (iii) workshops; or
  - (iv) storage purposes;
  - (m) the extent and location of any land reasonably required for construction, operating and maintaining a proposed waterwork on the land which will be subject to the servitude; and
  - (n) the compensation offered.
4. A plan depicting the location of the proposed waterworks on the land which will be subject to the servitude must be attached to the notice.
5. When a person gives a notice of a claim for a servitude or for an amendment of a servitude, that person must also send, by registered post, a copy of the notice to -
- (a) the lessee of the land;
  - (b) the national, provincial or local government authority responsible for controlling, maintaining or repairing a road across which the claimant intends constructing a waterwork in terms of the servitude or amendment; and
  - (c) every person who, from a perusal of -
    - (i) the title deeds of the land;
    - (ii) the records of the Registrar of Mining Titles; or
    - (iii) the records of any other government office which records prospecting or mining rights, appears to have any interest in the land which may be negatively affected by the servitude, if the whereabouts of the person can be readily ascertained.
6. A notice under item 1 or 2 may be amended as a result of -
- (a) the claimant exercising his or her rights under section 128 of the Act; or
  - (b) objections to the notice by the owner of the land subject to the servitude or the owner of the land in favour of which the servitude is claimed.
7. An amended notice must be dealt with in the same way as the original notice.
8. A claimant may, not earlier than 14 days and not later than 90 days after the notices required in terms of this Schedule have been given, apply to the High Court for the award of a servitude claimed in terms of the procedure set out in this Schedule and the High Court may make such order as it deems fit.

### **Schedule 3**

#### **POWERS WHICH MAY BE EXERCISED AND DUTIES TO BE PERFORMED BY CATCHMENT MANAGEMENT AGENCIES ON ASSIGNMENT OR DELEGATION**

[Sections 72, 73 and 151(1)(l)]

#### **General**

1. Subject to Chapter 2 and sections 72 and 73 of this Act a catchment management agency may exercise any of the powers or perform any of the duties set out in this Schedule and any other powers or duties necessary or desirable in order to ensure compliance with the Act, to the extent that such powers and duties have been assigned or delegated to it, and within the constraints of the assignment or delegation.

#### **Power to manage, monitor, conserve and protect water resources and to implement catchment management strategies**

2. A catchment management agency may -
- (a) manage and monitor permitted water use within its water management area;
  - (b) conserve and protect the water resources and resource quality within its water management area;
  - (c) subject to the provisions of the Act, develop and operate a waterwork in furtherance of its catchment management strategy;
  - (d) do anything necessary to implement catchment management strategies within its water management area; and
  - (e) by notice to a person taking water, and after having given that person a reasonable opportunity to be heard, limit the taking of water in terms of Schedule 1.

### **Catchment management agencies may make rules to regulate water use**

3. (1) A catchment management agency may make rules to regulate water use.
- (2) The rules made under subitem (1) may relate, amongst other things, to -
  - (a) the times when;
  - (b) the places where;
  - (c) the manner in which; and
  - (d) the waterwork through which, water may be used.
- (3) A water user must adhere to any such rules which apply to that user.
- (4) A rule made under subitem (1) prevails over a conflicting distribution condition contained in any authorisation.
- (5) Before making rules a catchment management agency must -
  - (a) publish a notice in the *Gazette* -
    - (i) setting out the proposed rules;
    - (ii) inviting written comments to be submitted on the proposed rules, specifying an address to which and a date before which the comments are to be submitted, which date may not be earlier than 60 days after publication of the notice;
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the catchment management agency considers to be appropriate;
  - (c) consider all comments received on or before the date specified in paragraph (a)(ii); and
  - (d) consider all applicable conditions for provision of services and bylaws made under the Water Services Act, 1997 (Act No. 108 of 1997), by water services institutions having jurisdiction in the area in question.
- (6) After complying with subitem (5), a catchment management agency must -
  - (a) finalise the rules; and
  - (b) make it known, in an appropriate manner, that the rules have been finalised and where they may be read; or
  - (c) deliver or send a copy of the rules to each water user to whom the rules apply.

### **Catchment management agencies may require establishment of management systems**

4. (1) A catchment management agency may require in writing that a water user -
  - (a) install a recording or monitoring device to monitor storing, abstraction and use of water;
  - (b) establish links with any monitoring or management system to monitor storing, abstraction and use of water; and
  - (c) keep records on the storing, abstraction and use of water and submit the records to the catchment management agency.
- (2) If the water user fails to comply with a requirement of subitem (1)(a) or (b), a catchment management agency may undertake the installation or establishment of such links and recover any reasonable cost from that water user.

### **Catchment management agencies may require alterations to waterworks**

5. (1) A catchment management agency may, by written notice to the owner or person in control of a waterwork, require that person to collect and submit particular information within a period specified to enable the catchment management agency to determine whether that waterwork is constructed, maintained and operated in accordance with the Act.
- (2) A catchment management agency may direct the owner or person in control of a waterwork at the owner's own cost and within a specified period, to -
  - (a) undertake specific alterations to the waterwork;
  - (b) install a specific device; or
  - (c) demolish, remove or alter the waterwork or render the waterwork inoperable in a manner specified in the directive.
- (3) A catchment agency may only issue such a directive if it is reasonably necessary in order to -
  - (i) protect authorised uses of other persons;
  - (ii) facilitate monitoring and inspection of the water use; or

- (iii) protect public safety, property or the resource quality.
- (4) If the owner fails to comply with a directive, the catchment management agency may -
  - (a) undertake the alterations;
  - (b) install the device; or
  - (c) demolish, remove or alter the waterwork or render the waterwork inoperable, and recover any reasonable costs from the person to whom the directive was issued.

### **Catchment management agencies may temporarily control, limit or prohibit use of water during periods of water shortage**

6. (1) If a catchment management agency on reasonable grounds believes that a water shortage exists or is about to occur within an area it may, despite anything to the contrary in any authorisation, by notice in the *Gazette* or by written notice to each of the water users in the area who are likely to be affected -
- (i) limit or prohibit the use of water;
  - (ii) require any person to release stored water under that person's control;
  - (iii) prohibit the use of any waterwork; and
  - (iv) require specified water conservation measures to be taken.
- (2) A notice contemplated in subitem (1) must -
- (a) specify the geographical area or water resource to which the notice relates;
  - (b) set out the reason for the notice; and
  - (c) specify the date of commencement of the measures.
- (3) In exercising the powers under subitem (1), the catchment management agency must -
- (a) give preference to the maintenance of the Reserve;
  - (b) treat all water users on a basis that is fair and reasonable; and
  - (c) consider -
    - (i) the actual extent of the water shortage;
    - (ii) the likely effects of the shortage on the water users;
    - (iii) the strategic importance of any water use; and
    - (iv) any water rationing or water use limitations by a water services institution having jurisdiction in the area in question under the Water Services Act, 1997 (Act No. 108 of 1997).
- (4) If the owner or person in control of a waterwork contravenes a notice issued under subitem (1), the catchment management agency may -
- (a) modify, or require the owner of the waterwork to modify the waterwork so that it cannot be used to take more water than that allowed for in the notice; or
  - (b) remove the waterwork or require the owner to remove the waterwork if the notice contains a prohibition on the use of that waterwork.
- (5) A catchment management agency may recover from the owner any reasonable costs incurred by it in acting under subitem (4).

## **Schedule 4**

### **MANAGEMENT AND PLANNING OF WATER MANAGEMENT INSTITUTIONS**

**[Sections 79(2) and 82(4)]**

#### ***Part 1: Governing board***

#### **Governing board**

1. (1) The board -
- (a) is responsible for the management of the affairs of the water management institution; and
  - (b) may exercise the powers of the institution.
- (2) Without limiting subitem (1), it is the role of the board -
- (a) to decide the strategies and policies to be followed by the institution; and

(b) to ensure that the institution exercises its powers or performs its duties in a proper, efficient, economical and sustainable manner.

(3) The board must carry out its functions as efficiently as possible, consistent with prudent commercial practice.

(4) In the absence of the chairperson, the deputy chairperson performs all the functions of the chairperson.

### **Terms and conditions of appointment**

2. (1) A board member holds office for a term -

(a) specified in the constitution, if the institution has a constitution; or

(b) determined by the Minister, if the institution has no constitution.

(2) The institution may pay a board member from the revenues of the institution an amount of remuneration, determined by the board from time to time, in accordance with any directive from the Minister.

### **Chief executive officer**

3. (1) The board may appoint a suitably qualified person as chief executive officer of the institution.

(2) The chief executive officer of the institution holds office on the terms and conditions determined by the board.

(3) The board may remove the chief executive officer of the institution from office.

(4) The Minister may, for good reasons and after consultation with the board, direct the board to remove the chief executive officer from office.

(5) The board must comply with a directive given by the Minister under subparagraph (4).

(6) The functions to be performed by the chief executive officer in terms of this Schedule may also be performed by the chairperson or any other officer designated by the chairperson.

(7) The board must, in consultation with the Minister of Public Service and Administration, determine the salary of its chief executive officer, subject to the approval of the Minister.

### **Vacancies, resignations and removal from office**

4. (1) The position of a board member becomes vacant if the member -

(a) has been declared to be of unsound mind by a competent authority;

(b) is declared insolvent;

(c) resigns;

(d) is convicted of any offence involving dishonesty;

(e) is absent without prior consent of the chairperson from two consecutive meetings of the board; or

(f) fails to make any disclosure required to be made in terms of item 7.

(2) An ordinary member or the deputy chairperson may resign in writing addressed to the chairperson.

(3) The chairperson may resign in writing addressed to the Minister.

### **Validity of decisions**

5. (1) An act or decision of the board is not invalid merely because of -

(a) a defect or irregularity in, or in connection with, the appointment of a board member; or

(b) a vacancy in the membership of the board, including a vacancy resulting from the failure to appoint an original board member.

(2) Anything done by or in relation to a person purporting to act as chairperson or as a board member is not invalid merely because -

(a) the occasion for the person to act had not arisen or had ceased;

(b) there was a defect or irregularity in relation to the appointment; or

(c) the appointment had ceased to have effect.

## ***Part 2: Board members***

### **Duties of board members**

6. (1) A board member must at all times act honestly in performing the functions of his or her office.

(2) A board member must at all times exercise a reasonable degree of care and diligence in performing a member's functions, and in furtherance of this duty without limiting its scope, must -

(a) take reasonable steps to inform himself or herself about the institution, its business and activities and the circumstances in which it operates;

(b) take reasonable steps, through the processes of the board, to obtain sufficient information and advice about all matters to be decided by the board to enable him or her to make conscientious and informed

decisions; and

(c) exercise an active discretion with respect to all matters to be decided by the board.

(3) A board member need not give continuous attention to the affairs of the board, but is required to exercise reasonable diligence in relation to -

(a) the business of; and

(b) preparation for and attendance at meetings of, the board and any committee to which the board member is appointed.

(4) In determining the degree of care and diligence required to be exercised by a board member, regard must be had to the skills, knowledge or insight possessed by that member, and to the degree of risk involved in any particular circumstances.

(5) A board member, or former board member, must not make improper use of his or her position as a member or of information acquired by virtue of his or her position as a member to gain, directly or indirectly, an advantage for himself or herself or for any other person, or to prejudice the institution.

(6) This item must be interpreted as adding to, and not deviating from, any law relating to the criminal or civil liability of a member of a governing body of a corporate body, and it does not prevent any criminal or civil proceedings being instituted in respect of such a liability.

### **Disclosure of interest**

7. (1) If a board member has a direct or indirect pecuniary or other interest in any matter in which the institution is concerned, which could conflict with the proper performance of his or her duties in relation to that matter, he or she must disclose that interest as soon as practicable after the relevant facts come to his or her knowledge.

(2) If the board member is present at a meeting of the board at which the matter is to be considered, the board member must disclose the nature of his or her interest to the meeting immediately before the matter is considered.

(3) If the board member is aware that the matter is to be considered at a meeting of the board at which he or she does not intend to be present, he or she must disclose the nature of his or her interest to the chairperson before the meeting is held.

(4) A board member who has made a disclosure under this paragraph must not -

(a) be present during any deliberation; or

(b) take part in any decision, of the board in relation to the matter in question.

(5) Any disclosure made under this paragraph must be noted in the minutes of the relevant meeting of the board.

### **Recovery of improper profits**

8. If a person contravenes item 7, the institution, or the Minister in the name of the institution, may recover from the person as a debt due to the institution, through a competent court, either or both of the following -

(a) if that person, or any other person, made a profit as a result of the contravention, an amount equal to that profit; and

(b) if the institution has suffered loss or damage as a result of the contravention, an amount equal to that loss or damage.

## ***Part 3: Proceedings of the board***

### **Convening meetings**

9. (1) The board must meet at least twice in each year.

(2) Meetings must be held at the times and, subject to subitem (4), the places determined by the board.

(3) The chairperson may convene a meeting at any time and must do so when requested by one third of the board members.



(4) The chairperson may, from time to time, determine that a meeting be held by telephone, closed-circuit television or other means of communication.

### **Notices of meeting**

**10.** (1) Except as provided in subitem (3), the chairperson or the chief executive officer must give at least seven days' written notice to board members of any meeting convened at the request of one third of the board members.

(2) A notice given in terms of subitem (1) must -

- (a) specify the date and time of the meeting; and
- (b) state the general nature of the business of the meeting; and either
- (c) state the place of the meeting; or
- (d) specify the means of communication by which the meeting will be held.

(3) The chief executive officer or chairperson must give notice of a meeting -

- (a) in writing; and
- (b) not less than seven days in advance except in cases of emergency or where every board member agrees to accept short notice.

(4) If notice of a meeting is given the board must, if requested by a board member, allow that member to participate in the meeting in the manner contemplated in item 16.

(5) The proceedings of, or resolutions passed at a meeting of, a board are not invalid merely because -

- (a) the chief executive officer omitted to send a notice to a board member; or
- (b) a member did not receive a notice of the meeting.

### **Quorum**

**11.** (1) No business may be conducted at a meeting unless a quorum of members is present.

(2) A quorum is a majority of the members for the time being.

(3) If a quorum is not present within 30 minutes after the time appointed for a meeting, the person presiding at the meeting may adjourn the meeting to the same time and place, seven days after the adjournment.

(4) If a quorum is not present at an adjourned meeting within 30 minutes after the time appointed for the meeting, the meeting is automatically cancelled.

### **Adjournment**

**12.** (1) The person presiding at a meeting at which a quorum is present -

- (a) may adjourn the meeting with the meeting's consent; and
- (b) must adjourn the meeting if the meeting so directs.

(2) An adjourned meeting must be held at the time and place agreed to by the meeting before it is adjourned.

(3) Only unfinished business of an initial meeting can be conducted at an adjourned meeting.

### **Person presiding at meetings**

**13.** (1) Subject to item 7(4) -

(a) the chairperson must preside at all meetings of the board at which the chairperson is present; and

(b) in the absence of the chairperson, the deputy chairperson must preside at a meeting of the board.

(2) If neither the chairperson nor the deputy chairperson is present, the meeting must appoint a board member present at the meeting to preside.

### **Voting**

**14.** (1) A question arising at a meeting must be determined by a majority of votes of board members present and voting.

(2) If voting on a question is equal, the person presiding has a casting vote as well as a deliberative vote.

### **Minutes**

**15.** (1) The chief executive officer must ensure that complete and accurate minutes of each meeting are kept.

(2) Draft minutes of each meeting must -

(a) be presented to the next meeting of the board for amendment, if necessary, and adoption; and

(b) be entered in a durable, bound volume of minutes.

(3) The person presiding at the next meeting must sign and date an affirmation to the effect that any minutes of the previous meeting have been adopted by the meeting.

### **Participation in meetings**

**16.** (1) The board may, by resolution, permit board members to participate in a particular meeting by telephone, closed-circuit television or other means of communication.

(2) A board member who participates in a meeting under permission given under subitem (1) must be regarded as being present at the meeting.

### **Resolutions without meetings**

**17.** (1) If all the board members for the time being (other than a board member who is absent from South Africa at the time) sign a document containing a statement that they are in favour of a resolution set out in the document, a resolution in those terms shall be taken to have been passed at a meeting of the board held on the day on which the document is signed or, if the members do not sign it on the same day, on the day on which the last member signs the document.

(2) For the purpose of subitem (1), two or more separate documents containing a statement in identical terms, each of which is signed by one or more board members, must be taken to be one document.

(3) A document referred to in this item may be in the form of a telex or facsimile.

### **Execution of documents**

**18.** (1) Subject to subitem (2), a document is duly executed by the board if it is executed on behalf of the board by any two board members.

(2) The board may, either generally or in a particular case or class of cases, by resolution authorise the chief executive officer to execute documents on behalf of the board.

### **Appointment of committees**

**19.** (1) The board may, from time to time -

(a) appoint such temporary or standing committees as it sees fit from among its members;

(b) appoint persons other than board members to a committee;

(c) remove any person appointed to a committee from such committee; and

(d) determine the terms of reference of any committee, which may include -

(i) full decision making powers on particular matters; or

(ii) a requirement to refer decisions back to the board for ratification.

(2) Items 7, 11, 12, 14, 15, 16, 17, 18(1) and 20 apply to a committee as if it were the board.

(3) Part 2 also applies to any member of a committee who is not a board member.

(4) A committee must report to the board at the times and in the manner determined by the board.

### **Power to regulate proceedings**

**20.** Subject to this Part, the board may regulate its own proceedings.

## ***Part 4: Institutional planning***

### **Business plans**

**21.** (1) The board must prepare business plans.

- (2) The first business plan must be for a period of not less than three years and must begin when the first financial year starts, which must be not more than six months after the board is established.
- (3) Each subsequent business plan must be updated annually.
- (4) The board may review and revise a business plan at any time, and must do so when so directed by the Minister.

#### **General matters to be included in business plans**

22. Each business plan must be in the form determined by the Minister and -
  - (a) must set out the objectives of the institution;
  - (b) must outline the overall strategies and policies that the institution is to follow to achieve the objectives;
  - (c) must include a statement of the services which the institution expects to provide and the standards expected to be achieved in providing those services;
  - (d) must include the financial and performance indicators and targets considered by the board to be appropriate;
  - (e) may include any other information which the board considers appropriate; and
  - (f) must include any other information determined by the Minister.

#### **Financial matters to be included in business plans**

23. Each business plan -
  - (a) must include a financial target;
  - (b) must outline the overall financial strategies for the institution including the setting of charges, borrowing, investment and purchasing and disposal strategies;
  - (c) must include a forecast of the revenue and expenditure of the institution, including a forecast of capital expenditure and borrowings;
  - (d) must provide for capacity building amongst its board members and officials;
  - (e) may include any other financial information which the board considers appropriate; and
  - (f) must include any other financial information determined by the Minister.

#### **Matters to be considered in setting financial targets**

24. In preparing or revising a financial target, the board must have regard to -
  - (a) the need to maintain the institution's financial viability;
  - (b) the need to maintain a reasonable level of reserves, especially to provide for -
    - (i) corrective action to redress the results of past racial and gender discrimination in the use of water resources;
    - (ii) any estimated future demand for the services of the institution; and
    - (iii) any need to improve the accessibility of, and performance standards for, the services provided by the institution; and
  - (c) other matters determined by the Minister.

#### **Business plans to be given to Minister**

25. (1) When the board prepares or revises a business plan, it must immediately make a copy of the plan available to the Minister.
- (2) The Minister may -
  - (a) within 60 days after receiving a copy of a prepared plan; or
  - (b) within 30 days after receiving a copy of a revised plan, make comments on the plan to the board.
- (3) The board must consult in good faith with the Minister following communication to it of the Minister's comments and must make any changes to the plan that are agreed upon by the Minister and the board.
- (4) The Minister may, from time to time, direct the board to include in, or omit from, a business plan, any matter, including a financial matter.
- (5) Before giving a directive under this item, the Minister must consult with the board as to the matters to be included in the directive.
- (6) The board must comply with a directive given under this item.

### **Board to notify Minister of significant events**

26. If matters arise that might prevent, or materially affect, achievement of the objectives of the institution in terms of the business plan or financial targets contained in the business plan, the board must immediately notify the Minister of the existence of such matters.

### **Institution must act in accordance with business plan**

27. The institution must act only in accordance with its business plan, as it exists from time to time, unless the Minister has directed otherwise.

### **Minister may require information**

28. (1) The Minister may direct the board to give him or her specific information.  
(2) The board must comply with such directive.

## ***Part 5: Monitoring and intervention***

### **Provision of information by an institution**

29. (1) An institution must provide the Minister or any person authorised by the Minister with -  
(a) the information which the Minister requires on the affairs and financial position of the institution; and  
(b) access to such books, accounts, documents and assets of the institution as the Minister may require.  
(2) The Minister may appoint a person to investigate the affairs or financial position of an institution and recover the reasonable fees and disbursements of that person from that institution.  
(3) A board member and an employee of a board have the same duties towards the Minister or a person authorised by the Minister as an institution has in subitem (1), except to the extent that the board member or employee can show that he or she is unable to comply.

### **Taking possession of books, records and assets**

30. The Minister or a person authorised by the Minister may enter into the premises of any institution and take possession of any book, record or asset of the institution where this is necessary in order to obtain any information to which the Minister is entitled in terms of this Part or for the purposes of any investigation that the Minister is entitled to conduct in terms of this Part.

### **Offence**

31. Any institution, board member or employee of the board who does not comply with items 28 to 30 or obstructs a person appointed under item 29(2) is guilty of an offence and liable on conviction to a sentence contemplated in section 151 of the Act.

## ***Part 6: Records and reporting***

### **Financial records and accountability**

32. (1) The financial year of an institution is for a 12-month period determined by the board.  
(2) The board must ensure that the chief executive officer of the institution keeps -  
(a) proper records and accounts of the activities, transactions and affairs of the institution and of the board; and  
(b) any other records or accounts that are necessary to explain sufficiently the financial operations and financial position of the institution.  
(3) The board and the chief executive officer of the institution must each do all things necessary to -  
(a) ensure that all money payable to the institution is properly collected;  
(b) ensure that all money spent by the institution is properly spent and properly authorised;  
(c) ensure that there is adequate control over all assets acquired for the purposes of the institution, or

- managed or controlled by it;
- (d) ensure that all liabilities incurred on behalf of the institution are properly authorised;
  - (e) ensure efficiency and economy of operations and avoidance of waste and extravagance;
  - (f) develop and maintain an adequate budgeting and accounting system; and
  - g) develop and maintain an adequate financial control system.

### **Annual report**

- (1) An institution must, in respect of each financial year, prepare an annual report containing -
  - a) a report of its operations during the financial year;
  - b) financial statements for the financial year; and
  - c) a copy of each directive given to it during that year by the Minister.
- (2) The institution must submit the report to the Minister not later than six months after the end of the financial year in question.
- (3) The report of operations referred to in subitem (1)(a) must be prepared in a form and contain information determined by the Minister.
- (4) The financial statements referred to in subitem (1)(b) must be consistent with generally accepted accounting practices and must contain the information and be prepared in the manner and form determined by the Minister.
- (5) Such financial statements must -
  - (a) fairly present the results of the financial transactions of the institution during the financial year to which they relate and the financial position of the institution as at the end of the year; and
  - (b) be audited by a chartered accountant appointed by the board.
- (6) The institution must publish its annual report and make copies available at the offices of the institution for inspection and purchase by the public.
- (7) The institution must -
  - (a) if it is a catchment management agency, table its annual report in Parliament; or
  - (b) if it is a water user association, send a copy of its annual report to the Secretary to Parliament.

### **Schedule 5**

#### **MODEL CONSTITUTION OF WATER USER ASSOCIATION**

[Sections 91(1)(f), 93(1) and 94(2)]

#### **Name of Association**

- 1. The name of the Association is [specify the name] (hereinafter referred to as "the Association").

#### **Application of the National Water Act of 1998 to the constitution**

- 2. This constitution is subject to Chapter 8 of the National Water Act of 1998 (hereafter referred to as the Act) and Schedule 4 to the Act.

#### **Objects of the Association**

- 3. The objects of the Association are - [briefly describe the objects]

#### **Principal functions of the Association**

- 4. The principal functions to be performed by the Association in its area of operation are -

[Note: The following are options. Others may be proposed. Choose and number your options.]

- \* To prevent water from any water resource being wasted.
- \* To protect water resources.
- \* To prevent any unlawful water use.
- \* To remove or arrange to remove any obstruction unlawfully placed in a watercourse.
- \* To prevent any unlawful act likely to reduce the quality of water in any water resource.

- \* To exercise general supervision over water resources.
- \* To regulate the flow of any watercourse by -
  - clearing its channel;
  - reducing the risk of damage to the land in the event of floods;
  - changing a watercourse back to its previous course where it has been altered through natural causes.
- \* To investigate and record -
  - the quantity of water at different levels of flow in a watercourse;
  - the times when; and
  - the places where water may be used by any person entitled to use water from a water resource.
- \* To construct, purchase or otherwise acquire, control, operate and maintain waterworks considered to be necessary for -
  - draining land; and
  - supplying water to land for irrigation or other purposes.
- \* To supervise and regulate the distribution and use of water from a water resource according to the relevant water use entitlements, by erecting and maintaining devices for -
  - measuring and dividing; or
  - controlling the diversion of the flow of water.

### **Ancillary functions of Associations**

5. (1) The Association may perform functions other than its principal functions only if it is not likely -
- (a) to limit the Association's capacity to perform its principal functions; and
  - (b) to be to the financial prejudice of itself or its members.

(2) Other functions of the Association may include -

**[Note: The following are options. Others may be proposed. Choose and number your options.]**

- \* Providing management services, training and other support services to -
  - (a) water services institutions; and
  - (b) rural communities.
- \* Providing catchment management services to or on behalf of responsible authorities.

### **Founding members**

6. (1) The founding members of the Association are the members whose names appear in Annexure 1 of this constitution and who have been authorised by the proposed participants to act on their behalf in establishing the Association.

(2) The founding members will, for purposes of arranging the first election of members of the Management Committee, be considered to be the Management Committee of the Association with powers and duties limited to arranging the election in accordance with this constitution.

### **Membership of the Association**

7. (1) The first members of the Association are the persons who, during the consultation process, indicated their willingness to become members of the Association and whose names appear in Annexure 2 of this constitution.

(2) Application for new membership of the Association must be addressed to the Management Committee which must, at a meeting of the Committee, consider an application and approve it unless there is good reason to refuse it.

(3) An association must allow a person to become a member of the Association if directed by the Minister to do so.

(4) A member may only resign as a member of the Association with the approval of the Management Committee, which may not unreasonably withhold its approval. **[Note: A reason for not accepting a resignation would be, for example, if the resignation would detrimentally affect the Association's ability to meet its financial commitments in respect of infrastructure provided to serve the member concerned.]**

### **Register of members**

8. All members must communicate their addresses from time to time to the person acting as secretary of the Association, who must keep a register of the names of members and of their addresses.

## **Rights of members**

9. (1) Membership of the Association does not give any member a right to any of the moneys, property or assets of the Association, but only gives members the privileges of membership, subject to such charges and reasonable restrictions as are imposed by the Management Committee from time to time.

(2) A member whose application for membership has been approved is bound by the constitution and rules of the Association which are then in force or as they are subsequently amended.

## **Liability of members**

10. The liability of members is limited to the amount of unpaid charges and interest thereon owing by them to the Association.

## **Qualification of candidates for membership of Management Committee**

11. Any member of the Association is, subject to disqualifications contemplated in Schedule 4 to the Act, eligible for election as a member of the Management Committee. If the Association's area of operation is divided into sub-areas, a member will only be eligible for election as a member of the Management Committee for the sub-area in which that member resides.

## **Nomination of and voting for members of Management Committee**

12. Any person whose name is on the voters list of the Association may nominate candidates for election as members of the Management Committee and may vote at an election of members of the Committee. A person whose name appears on a voters list prepared for a sub-area of the Association's area of operation, will be entitled to nominate candidates and to vote only in elections for that sub-area.

## **Membership of Management Committee**

[Note: The following are options. Others may be proposed. Choose and number your options.]

13. (1) **Option (a)** The Management Committee of the Association will consist of [specify the number] members. Option (b) [Note: This option is additional to option (a) and applies where the area of operation of the Association is divided into sub-areas.] The area of operation of the Association will be divided into sub-areas as described in Annexure 3 to this constitution. Each area will be represented on the Management Committee on the basis set out in that Annexure.

(2) Membership of the Management Committee will be determined by an election process in which all members whose names are on the Association's voters list may participate.

(3) **Option (a)** Members will, subject to the disqualifications contemplated in Schedule 4, be elected for a fixed term of [specify period] years.

**Option (b) [Applies to election process only]** Members will, subject to the disqualifications contemplated in Schedule 4, be elected for a fixed term of [specify period] years. The first election will take place as follows -

(i) one-third of the members elected who stand highest on the poll will hold office for a period of [specify period] years;

(ii) one-third of the members elected who stand next highest on the poll will hold office for a period of [specify period] years; and

(iii) the remaining members elected will hold office for a period of [specify period] years.

If, in any case -

(a) no poll is required because the nominations received were not greater than the number of members to be elected; or

(b) two or more candidates have received an equal number of votes, the respective periods of office of the members will be determined by lot under supervision of the returning officer.

(4) If a vacancy occurs on the Management Committee, the vacancy must be filled according to this item, provided that the member must be elected for a period equal to the remainder of the period for which the member who has vacated the office would otherwise have continued in office.

(5) At least 30 days' notice of an election must be given to all members of the Association.

### **Appointment of chairperson and deputy chairperson**

**[Note: The following are options. Others may be proposed. Choose and number your options.]**

**14. (1) Option (a)** After the election of the Management Committee the members of that Committee must elect a chairperson and deputy chairperson of the Association from amongst their members. The Management Committee may appoint any person to chair the proceedings for that purpose.

#### **Option (b)**

(1) After the election of the Management Committee the members of the Association must elect a chairperson and a deputy chairperson of the Association from amongst the elected members of the Management Committee. The members of the Association may appoint any person to chair the proceedings for that purpose.

(2) The chairperson and deputy chairperson hold office for a period of 12 months from the date of their election and may be re-elected.

(3) When the period of office of a chairperson or deputy chairperson expires, that person will, provided that he or she remains a member of the Association, remain in office until the next meeting of the Management Committee.

(4) A new chairperson and deputy chairperson of the Management Committee will be elected annually. Should any of these offices be vacated before the term expires, the office must be filled immediately according to the procedure set out in this item.

### **Voter's list**

**15. (1)** The founding members of the Association must select a person to prepare a voters list for the first election of members of the Management Committee. The voters' list must show -

(a) the names of all members included in Annexure 2 to this constitution and, where appropriate, the name of a member's accredited representative;

(b) particulars of each member's entitlement to water use; and

(c) the number of votes a member is entitled to.

(2) If the Association's area of operation is divided into sub-areas, the voters' list must also be divided into subareas and the particulars referred to in subitem (1) must be shown under the respective subareas.

(3) The number of votes will be determined on the following basis -

**[Note: The following are options. Others may be proposed. Choose and number your options.]**

#### **Option (a)**

One vote per entitlement to water use.

#### **Option (b)**

A pro-rata number of votes in proportion to the quantity of water authorised under a particular entitlement, compared to the total quantity of water under all of the entitlements registered with the Association. In this calculation all fractions must be rounded off to the next higher figure.

#### **Option (c)**

A pro-rata number of votes in proportion to the quantity of water authorised under a particular entitlement, compared to the total quantity of water under all the entitlements registered with the Association. In this calculation-

(i) all fractions must be rounded off to the next higher figure; and

(ii) no member will be awarded more than 10 votes.

#### **Option (d)**

One vote for every five hectares or part of five hectares of land that can be irrigated in terms of a member's entitlement.

#### **Option (e)**

One vote for every five hectares or part of five hectares of land that can be irrigated in terms of a member's entitlement, provided that no member will be awarded more than 10 votes.

(4) If the entitlement to use water is not in the name of a natural person, the holder must nominate an accredited representative whose name must appear on the voters' list and who may exercise the vote.

(5) If the entitlement is in the name of two or more persons they must designate one of their numbers to represent them and that person's name must appear on the voters' list and he or she may exercise the vote.



(6) The voters' list must annually be revised by the Management Committee and also whenever there is an amendment to the Association's area of operation.

### **Appointment of employees**

**[Note: The appointment of a Chief Executive Officer for the Association is dealt with in Schedule 4 to the Act.]**

**16.** (1) The Management Committee may employ such persons as it considers necessary to perform the Association's functions under this constitution.

(2) The appointment of employees or any change in their conditions of service must be approved by resolution of the Management Committee.

(3) All employees of the Association will remain in office despite any change in the composition and membership of the Management Committee.

### **Raising of loans**

**17.** (1) The Management Committee may raise by way of loans, including bank overdrafts, any funds required by it for the purpose of carrying out any of its functions under this constitution or the Act.

(2) Whenever the Management Committee proposes to raise a loan, it must give notice in writing of its intention, setting out details of the proposal. The notice must be given to every member of the Association not less than 21 days before the date of the meeting of the Committee at which the proposal will be considered.

(3) No loan may be raised without a resolution of the Management Committee passed at a meeting at which not less than two-thirds of the members of the Committee are present.

### **Charges and the recovery of charges**

**18.** (1) For the purpose of defraying any expenditure that the Management Committee has lawfully incurred or may lawfully incur in carrying out its functions and duties it may annually assess charges on members according to the pricing strategy for water use set by the Minister.

(2) The Management Committee may recover the charges assessed from either -

- (a) the owners of the land concerned; or
- (b) any person to whom water is supplied on the land.

(3) Whenever the Management Committee has assessed a charge, the Committee must prepare an assessment roll setting forth -

- (a) the name of each member liable to pay charges;
- (b) a description of the piece of land, which may be a specially delineated area, in respect of which the charge is assessed;
- (c) the quantity of water or abstraction time period to which the member is entitled;
- (d) the amount of the charge assessed;
- (e) the date or dates on which payment is due and the amount due on each date; and
- (f) the rate of interest payable on non-payment and the effective date of interest.

(4) A copy of the assessment roll must lie open for inspection in the office of the Association at all reasonable times by any member of the Association.

### **Annual Report**

**[Note: The following are options. Others may be proposed. Choose and number your options.]**

#### **Option (a)**

**19.** The procedure as set out in Schedule 4 to the Act applies.

**[Note: This option is only recommended for use by well-established irrigation boards with a large membership and which are transformed into water user associations after promulgation of the Act.]**

#### **Option (b)**

The Management Committee must, within three months after the end of the Association's financial year, convene a general meeting of members and must at the meeting -

- (i) table an audited financial statement of the Association's accounts for the preceding financial year, including full particulars of any remuneration paid by the Association to members of the Management Committee and employees of the Association; and
- (ii) give an account to the members of its activities during the year.

### **Winding up**

**[Note: The following are options. Others may be proposed. Choose and number your options.]**

#### **Option (a)**

**20.** (1) The Association may be dissolved by a resolution passed at a special general meeting held for that purpose, provided that -

- (i) the resolution is passed by a majority of two-thirds of the members present and entitled to vote at the meeting; and
- (ii) the resolution is confirmed at a further special general meeting held not less than four weeks after the preceding special general meeting by a majority vote of members entitled to vote thereon.

(2) A meeting passing a resolution referred to in subitem (1)(i) of this constitution may also pass resolutions by a majority vote for -

- (a) the appointment of a liquidator; and
- (b) the disposal of surplus funds and assets of the Association after winding up and after the payment of all debts and obligations of the Association, provided that any surplus assets may only be transferred to an Association or institution with objects similar to those of the Association, or to the Minister.

#### **Option (b)**

The affairs of the Association will be wound up by a person appointed by the Minister in accordance with any directives given by the Minister, and subject to section 97 of the Act.

### **LIST OF FOUNDING MEMBERS**

#### **ANNEXURE 1**

**(In alphabetical order)**

### **LIST OF MEMBERS**

#### **ANNEXURE 2**

**(In alphabetical order)**

### **DESCRIPTION OF SUB-AREAS AND REPRESENTATION IN MANAGEMENT COMMITTEE**

#### **ANNEXURE 3**

## **Schedule 6**

### **WATER TRIBUNAL**

**[Section 148(4)]**

#### ***Part 1: Water Tribunal members***

#### **Terms of office of members**

- 1.** (1) A member of the Water Tribunal is appointed for a period of office determined by the Minister, which may not exceed four years.
- (2) A member may be re-appointed.

## **Disqualification of members**

2. No person may hold office as a member of the Water Tribunal -
- (a) if that person is an unrehabilitated insolvent; or
  - (b) if that person has been convicted of any offence involving dishonesty or has been sentenced to imprisonment without the option of a fine. A disqualification under this subitem ends three years after the sentence has been served.

## **Nominations for appointment to Water Tribunal**

3. (1) Whenever necessary, the Minister must request the Judicial Service Commission to -
- (a) publish a notice in the *Gazette* calling for nominations for appointment to the Water Tribunal; and
  - (b) consider what further steps, if any, are appropriate to bring the contents of the notice to the attention of interested persons, and take those steps which the Commission considers to be appropriate.
- (2) A notice in terms of subitem (1) must set out, in general terms, at least -
- (a) the activities of the Tribunal;
  - (b) the time commitments reasonably expected from members of the Tribunal;
  - (c) the term of office for which appointments will be considered;
  - (d) the criteria for disqualification as a member;
  - (e) the requirements with which a nomination must comply;
  - (f) the date by which nominations must be submitted, which may not be earlier than 30 days after publication of the notice; and
  - (g) the address to which nominations must be sent.
- (3) Every nomination of a person for appointment to the Tribunal must be signed by a proposer and a seconder, neither of whom may be the nominee, and must contain the nominee's signed acceptance.
- (4) The Judicial Service Commission -
- (a) must consider all valid nominations received before the date contemplated in subitem (2)(f);
  - (b) may prepare a short list of nominees;
  - (c) may interview all short-listed nominees; and
  - (d) must make recommendations to the Minister on the appointment of members of the Tribunal.
- (5) In recommending a nominee for appointment the Judicial Service Commission must consider -
- (a) the criteria set out in section 146(4) of the Act;
  - (b) the reputation and integrity of the nominee; and
  - (c) any conflict of interests which the nominee may have.
- (6) The Judicial Service Commission must recommend a candidate for appointment for every vacancy, including that of chairperson or deputy chairperson, where necessary.
- (7) The Department must pay all costs -
- (a) relating to the publication of notices in terms of subitem (1); and
  - (b) incurred by the Judicial Service Commission in the performance of its task.

## **Termination of office of members**

4. (1) A member of the Water Tribunal ceases to hold office -
- (a) from the effective date of the member's resignation;
  - (b) if the member is absent without leave from the chairperson on two consecutive sittings of the Tribunal at which the member's presence is required. Leave may be granted retrospectively if the absence of the member was due to unforeseen circumstances;
  - (c) if the member has become disqualified in terms of item 2;
  - (d) if the member has been declared to be of unsound mind by a competent authority; or
  - (e) if the member's appointment has been terminated in terms of section 146 of the Act.
- (2) A member who is not the chairperson must notify the chairperson of his or her resignation. The chairperson must notify the Minister of his or her own resignation and the resignation of any other member.

## ***Part 2: Lodging and hearing of appeals and applications***

## **Lodging of appeals and applications**

5. (1) An appeal to the Water Tribunal under section 148(1) and an application for determination of compensation must be commenced by serving a copy of a written notice of appeal or application on the relevant responsible authority or catchment management agency and lodging the original with the Tribunal.

(2) The Tribunal may, for good reason, condone the late lodging of an appeal or application.

(3) A responsible authority or a catchment management agency against whose decision or offer an appeal or application is lodged must within a reasonable time -

- (a) send to the Tribunal all documents relating to the matter, together with the reasons for its decision; and
- (b) allow the appellant or applicant and every party opposing the appeal or application to make copies of the documents and reasons.

## **Hearing of appeals or applications by Water Tribunal**

6. (1) An appeal or application before the Water Tribunal must be heard by one or more members, as the chairperson may determine.

(2) A party to an appeal or application may be represented by a person of that party's choice.

(3) Appeals and applications to the Tribunal take the form of a rehearing. The Tribunal may receive evidence, and must give the appellant or applicant and every party opposing the appeal or application an opportunity to present their case.

(4) The Tribunal must keep minutes containing a summary of the proceedings of every hearing.

## **Subpoenas and evidence**

7. (1) The Water Tribunal may -

- (a) subpoena for questioning any person who may be able to give information relevant to the issues; and
- (b) subpoena any person who is believed to have possession or control of any book, document or object relevant to the issues, to appear before the Tribunal and to produce that book, document or object.

(2) A subpoena must be signed by a Tribunal member and must -

- (a) specifically require the person named in it to appear before the Tribunal;
- (b) state the date, time and place at which the person must appear; and
- (c) sufficiently identify any book, document or object to be produced by that person.

(3) The law relating to privilege, as it applies to a witness subpoenaed to give evidence or to produce any book, document or object before a court of law, applies to the questioning of any person and to the production of any book, document or object in terms of this item.

(4) The party at whose request a subpoena was issued must pay witness fees, travel and subsistence allowances to a person subpoenaed to appear before the Tribunal, at the applicable High Court scale.

(5) The Tribunal may administer an oath or accept an affirmation from any person called or subpoenaed to give evidence.

## **Contempt of the Water Tribunal**

8. (1) A person commits contempt of the Water Tribunal -

- (a) if, after having been subpoenaed to appear before the Tribunal, the person without good cause does not attend;
- (b) if the person, without good cause, fails to produce any book, document or object specified in a subpoena;
- (c) if, after having appeared in response to a subpoena, the person fails to remain in attendance until excused by the Tribunal;
- (d) by refusing to take the oath or to make an affirmation as a witness when the Tribunal so requires;
- (e) by refusing to answer any question fully and to the best of that person's knowledge and belief, but subject to item 7(3);
- (f) if during the proceedings, the person behaves improperly; or
- (g) if the person prejudices or improperly influences the proceedings of the Tribunal.

(2) The Water Tribunal may refer any contempt to a High Court. A High Court may make an appropriate order.

### **Decisions of the Water Tribunal**

**9.** (1) The Water Tribunal must give its decision in writing. A majority decision of members hearing a matter (if the matter is heard by more than two members) constitutes a decision of the Tribunal.

(2) The Tribunal must, at the request of any party and within a reasonable time, give written reasons for its decision  
on any matter.

## Schedule 7

### ACTS REPEALED

[Section 163(1)]

<b>Number and year of Act</b>	<b>Short title</b>	<b>Extent of repeal</b>
Act No. 32 of 1914	Hartebeestpoort Irrigation Scheme (Crocodile River) Act, 1914	The whole
Act No. 40 of 1916	Mapochs Gronden Water and Commonage Act, 1916	The whole
Act No. 23 of 1918	Hartebeestpoort Irrigation Scheme (Acquisition of Land) Act, 1918	The whole
Act No. 11 of 1919	Riparian Land (Erven and Commonages) Act, 1919	The whole
Act No. 13 of 1919	The Bedford Additional Water Supply (Private) Act, 1919	The whole
Act No. 14 of 1919	Rand Mines Power Supply Company Water Supply (Private) Act, 1919	The whole
Act No. 24 of 1921	Durban Waterworks Consolidation (Private) Act, 1921	The whole
Act No. 14 of 1923	Mapochs Gronden Water and Commonage Act Amendment Act, 1923	The whole
Act No. 14 of 1925	Ebenezer (Van Rhynsdorp) Exchange of Land Act, 1925	The whole
Act No. 15 of 1925	Sundays River Settlements Administration Act, 1925	The whole
Act No. 4 of 1926	Brandvlei Land and Irrigation Works Act, 1926	The whole
Act No. 16 of 1926	Winterton Irrigation Settlement (Local Board of Management) Act, 1926	The whole
Act No. 15 of 1929	Pretoria Waterworks (Private) Act, 1929	The whole
Act No. 18 of 1929	Rand Mines Power Supply Company Additional Water Supply (Private) Act, 1929	The whole
Act No. 21 of 1929	Irrigation Loans Adjustment Act, 1929	The whole
Act No. 41 of 1930	Irrigation Districts Adjustment Act, 1930	The whole
Act No. 10 of 1932	Marico-Bosveld Irrigation Scheme Act, 1932	The whole
Act No. 13 of 1932	Mafeking Waterworks (Private) Act, 1932	The whole
Act No. 20 of 1933	Franschoek Water (Private) Act, 1933	The whole
Act No. 11 of 1934	Irrigation Districts Adjustment (Amendment) Act, 1934	The whole
Act No. 38 of 1934	Vaal River Development Scheme Act, 1934	The whole
Act No. 38 of 1935	Kopjes Irrigation Settlement Act, 1935	The whole
Act No. 39 of 1935	Vyfhoek Management Act, 1935	The whole
Act No. 1 of 1936	Vyfhoek Management Amendment Act 1936	The whole
Act No. 4 of 1937	Vaal River Development Scheme (Amendment) Act, 1937	The whole
Act No. 16 of 1937	Uitenhage (Groendal) Water (Private) Act, 1937	The whole
Act No. 19 of 1937	Mapochs Gronden Amendment Act, 1937	The whole
Act No. 20 of 1937	The Durban Waterworks (Private) Act, 1937	The whole

<b>Number and year of Act</b>	<b>Short title</b>	<b>Extent of repeal</b>
Act No. 15 of 1939	Cannon Island Settlement Management Act, 1939	The whole
Act No. 10 of 1943	Oliphants River Irrigation Works Act, 1943	The whole
Act No. 18 of 1944	Vaal River Development Scheme (Amendment) Act, 1944	The whole
Act No. 21 of 1944	Irrigation Districts Adjustment Act, 1944	The whole
Act No. 11 of 1945	The Durban Waterworks (Private) Act Amendment (Private) Act, 1945	The whole
Act No. 23 of 1945	Saldanha Bay Water Supply Act, 1945	The whole
Act No. 37 of 1946	N'Jelele Irrigation District Adjustment Act, 1946	The whole
Act No. 23 of 1947	Klipdrift Settlement Act, 1947	The whole
Act No. 24 of 1947	Skanskop Settlement Act, 1947	The whole
Act No. 37 of 1947	Vyfhoek Management Amendment Act, 1947	The whole
Act No. 5 of 1948	The Durban Waterworks (Private) Act Further Amendment (Private) Act, 1948	The whole
Act No. 21 of 1948	Vaal River Development Scheme Amendment Act, 1948	The whole
Act No. 22 of 1948	Hartebeestpoort Irrigation Scheme (Crocodile River) Amendment Act, 1948	The whole
Act No. 31 of 1948	Buffelspoort Irrigation Scheme Act, 1948	The whole
Act No. 7 of 1949	Irrigation Commission Repeal Act, 1949	The whole
Act No. 24 of 1949	Bospoort Irrigation Scheme Act, 1949	The whole
Act No. 34 of 1949	Irrigation Amendment Act, 1949	The whole
Act No. 17 of 1950	Rand Water Board Statutes (Private) Act, 1950	The whole
Act No. 23 of 1950	Olifantsnek Irrigation District Adjustment Act, 1950	The whole
Act No. 24 of 1950	Breede River Conservation District Adjustment Act, 1950	The whole
Act No. 18 of 1951	Kopjes Irrigation Settlement Amendment Act, 1951	The whole
Act No. 43 of 1951	Saldanha Bay Water Supply Amendment Act, 1951	The whole
Act No. 6 of 1952	Southern Suburbs of Cape Town Water Supply Act Amendment (Private) Act, 1952	The whole
Act No. 7 of 1952	The Durban Waterworks Additional Borrowing Powers (Private) Act, 1952	The whole
Act No. 2 of 1953	Lichtenburg Waterworks (Private) Act, 1953	The whole
Act No. 37 of 1954	Mooi River District Adjustment Act, 1954	The whole
Act No. 42 of 1954	Mapochsgronde Irrigation Scheme Act, 1954	The whole
Act No. 31 of 1956	Irrigation Districts Adjustment Act, 1956	The whole
Act No. 54 of 1956	Water Act, 1956	The whole
Act No. 45 of 1957	Hartebeestpoort Irrigation Scheme (Crocodile River) Amendment Act, 1957	The whole
Act No. 75 of 1957	Water Amendment Act, 1957	The whole
Act No. 36 of 1960	Durban Waterworks (Private) Act, 1960	The whole
Act No. 59 of 1960	Marico Bosveld Irrigation Scheme Amendment Act, 1960	The whole

<b>Number and year of Act</b>	<b>Short title</b>	<b>Extent of repeal</b>
Act No. 1 of 1961	Vyfhoek Management Amendment Act, 1961	The whole
Act No. 56 of 1961	Water Amendment Act, 1961	The whole
Act No. 1 of 1962	Cannon Island Settlement Management Amendment Act, 1962	The whole
Act No. 50 of 1963	Klipdrift Settlement Amendment Act, 1963	The whole
Act No. 63 of 1963	Water Amendment Act, 1963	The whole
Act No. 75 of 1963	Northern Vyfhoek Settlement Adjustment Act, 1963	The whole
Act No. 29 of 1964	Rand Water Board Statutes (Private) Act, 1964	The whole
Act No. 35 of 1964	Kopjes Irrigation Settlement Adjustment Act, 1964	The whole
Act No. 36 of 1964	Olifants River (Oudtshoorn) Act, 1964	The whole
Act No. 28 of 1965	Great Fish River Irrigation District Adjustment Amendment Act, 1965	The whole
Act No. 71 of 1965	Water Amendment Act, 1965	The whole
Act No. 11 of 1966	Water Amendment Act, 1966	The whole
Act No. 53 of 1966	Roodepoort and Weltevreden Agricultural Settlements Adjustments Act, 1966	The whole
Act No. 71 of 1967	Vaal River Development Scheme Amendment Act, 1967	The whole
Act No. 73 of 1967	Mafeking Waterworks (Private) Amendment Act, 1967	The whole
Act No. 79 of 1967	Water Amendment Act, 1967	The whole
Act No. 34 of 1968	Waterval River (Lydenburg) Act, 1968	The whole
Act No. 53 of 1969	Rand Water Board Statutes (Private) Act Amendment Act, 1969	The whole
Act No. 77 of 1969	Water Amendment Act, 1969	The whole
Act No. 78 of 1969	Orange River Development Project Act, 1969	The whole
Act No. 68 of 1970	Van Wyksvlei Settlement Regulation Act, 1970	The whole
Act No. 36 of 1971	Water Amendment Act, 1971	The whole
Act No. 31 of 1972	Rand Water Board Statutes (Private) Act Amendment Act, 1972	The whole
Act No. 45 of 1972	Water Amendment Act, 1972	The whole
Act No. 42 of 1975	Water Amendment Act, 1975	The whole
Act No. 27 of 1976	Water Amendment Act, 1976	The whole
Act No. 105 of 1977	Vaal River Development Scheme Amendment Act, 1977	The whole
Act No. 108 of 1977	Water Amendment Act, 1977	The whole
Act No. 34 of 1978	Irrigation Districts Adjustment Amendment Act, 1978	The whole
Act No. 73 of 1978	Water Amendment Act, 1978	The whole
Act No. 51 of 1979	Water Amendment Act, 1979	The whole
Act No. 92 of 1980	Water Amendment Act, 1980	The whole
Act No. 8 of 1982	Rand Water Board Statutes (Private) Amendment Act, 1982	The whole
Act No. 11 of 1982	Vaal River Development Scheme Amendment Act, 1982	The whole
Act No. 96 of 1984	Water Amendment Act, 1984	The whole



<b>Number and year of Act</b>	<b>Short title</b>	<b>Extent of repeal</b>
Act No. 122 of 1984	Forest Act, 1984	Sections 7, 8 and 9
Act No. 110 of 1986	Water Amendment Act, 1986	The whole
Act No. 68 of 1987	Water Amendment Act, 1987	The whole
Act No. 37 of 1988	Water Amendment Act, 1988	The whole
Act No. 38 of 1988	Water Act (Bophuthatswana), 1988	The whole
Act No. 40 of 1988	Rand Water Board Statutes (Private) Act Amendment Act, 1988	The whole
Act No. 36 of 1990	Rand Water Board Statutes (Private) Act Amendment Act, 1990	The whole
Act No. 68 of 1990	Water Amendment Act, 1990	The whole
Act No. 16 of 1991	Water Amendment Act, 1991	The whole
Act No. 92 of 1993	Water Amendment Act, 1993	The whole
Act No. 32 of 1994	Water Laws Rationalisation and Amendment Act, 1994	The whole
Act No. 51 of 1995	Water Amendment Act, 1995	The whole
Act No. 58 of 1997	Water Amendment Act, 1995	The whole

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PROVINCE OF WESTERN CAPE

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**WESTERN CAPE NATURE  
CONSERVATION LAWS  
AMENDMENT ACT, 2000**

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PROVINSIE WES-KAAP

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**WES-KAAPSE WYSIGINGSWET OP  
NATUURBEWARINGSWETTE, 2000**

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**No 3, 2000**

**GENERAL EXPLANATORY NOTE:**

- [                    ]    Words in bold type in square brackets indicate omissions from existing enactments.
- Words underlined with a solid line indicate insertions in existing enactments.
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## AMENDMENT ACT

To provide for the amendment of various laws on nature conservation in order to transfer the administration of the provisions of those laws to the Western Cape Nature Conservation Board; to amend the Western Cape Nature Conservation Board Act, 1998 to provide for a new definition of Department and the deletion of a definition; to provide for an increase in the number of members of the Board; to provide for additional powers of the Board; to amend the provisions regarding the appointment and secondment of persons to the Board; and to provide for matters incidental thereto.

**B**E IT ENACTED by the Provincial Parliament of the Province of Western Cape, as follows:—

### **Amendment of Ordinance 19 of 1974**

1. The Nature and Environmental Conservation Ordinance, 1974 (Ordinance 19 of 1974), is hereby amended as indicated on a copy of the existing text thereof as set out in Schedule 1. 5

### **Amendment of certain laws**

2. The laws referred to in the first column of Schedules 2, 3 and 4 are amended to the extent indicated in the second column of those Schedules.

### **Amendment of section 1 of Act 15 of 1998** 10

3. Section 1(1) of the Western Cape Nature Conservation Board Act, 1998 (“the principal Act”), is hereby amended—

(a) by the substitution in paragraph (vi) of the following definition for the definition of “Department”:

**“Department”** means the Department of Environmental and Cultural Affairs and Sport referred to in Column 1 of Schedule 2 of the Public Service Act, 1994;”, and 15

(b) by the deletion in paragraph (xiv) of the definition of “provincial administration”.

### **Amendment of section 2 of Act 15 of 1998** 20

4. Section 2 of the principal Act is hereby amended by the substitution for the words “nine members” of the words “twelve members”.

**Amendment of section 4 of Act 15 of 1998**

5. Section 4(1) of the principal Act is hereby amended in paragraph (b), by the substitution for the words “five other persons” of the words “eight other persons”.

**Amendment of section 8 of Act 15 of 1998**

6. Section 8 of the principal Act is hereby amended in subsections (2), (4) and (7)(b) 5 by the substitution for the word “five” of the word “seven”.

**Amendment of section 9 of Act 15 of 1998**

7. Section 9 of the principal Act is hereby amended—

- (a) in subsection (1)—
- (i) by the deletion in the introduction of the following words: 10  
“the *Board* shall administer the laws specified in the first column of Schedule 1 to the extent prescribed”, and
- (ii) by the insertion after paragraph (o) of the following paragraph:  
“(oA) subject to section 51(1)(g) of the Public Finance Management Act, 1999 (Act 1 of 1999), establish trusts, and companies not 15  
for gain contemplated by section 21 of the Companies Act, 1973 (Act 61 of 1973);”, and
- (b) by the insertion after subsection (1), of the following subsection:  
“(1A) The *Board* shall by agreement with the *Department* provide 20  
services required by the *Department*.”

**Amendment of section 10 of Act 15 of 1998**

8. Section 10(4)(a) of the principal Act is hereby amended by the substitution for the words “from the *provincial administration*” of the words “in terms of this Act”.

**Amendment of section 11 of Act 15 of 1998**

9. Section 11(8) of the principal Act is hereby amended by the substitution for the 25 words “the *provincial administration*” of the words “a *provincial department*”.

**Amendment of section 12 of Act 15 of 1998**

10. Section 12(1) of the principal Act is hereby amended by the substitution for the words “Director-General of the *provincial administration*” of the words “*Provincial Minister of Finance*”. 30

**Amendment of section 13 of Act 15 of 1998**

11. Section 13(2) of the principal Act is hereby amended by the substitution for the words “relevant department of the *provincial administration*” of the word “*Department*”.

**Amendment of section 15 of Act 15 of 1998** 35

12. Section 15 of the principal Act is hereby amended—

- (a) by the substitution for subsection (2) of the following subsection:  
“(2) Before the *effective date* the *Board* may employ and pay as 40  
contemplated by subsection (1)(a), the *chief executive officer* and other persons approved by the *responsible Minister*.”;
- (b) by the substitution for subsection (3) of the following subsection:  
“(3) Between the *effective date* and the *staff transfer date* the 45  
*responsible Minister* shall—
- (a) after consultation with the *Board*;
- (b) in accordance with the provisions of Schedule 2, and
- (c) subject to section 15(3)(a) of the Public Service Act, 1994,

decide which officers in the Department responsible for *nature conservation* and *nature conservation administration* will be seconded to the Board.”;

(c) by the substitution for subsection (4) of the following subsection:

“(4) The *Board* may at any time after the commencement of this Act enter into an agreement with any member of the *Provincial Cabinet* concerning the secondment of officers appointed by the member concerned acting as an executing authority referred to in the Public Service Act, 1994.”, and

(d) by the addition of the following subsection:

“(5) Items 1 to 3 of Schedule 2 apply to employees seconded to the *Board* in terms of subsection (3).”.

#### **Amendment to section 22 of Act 15 of 1998**

13. Section 22 of the principal Act is hereby amended by the substitution for the proviso thereto of the following proviso:

“provided that regulations with financial implications shall be made in consultation with the *Provincial Minister of Finance*.”.

#### **Amendment of section 24 of Act 15 of 1998**

14. The following section is hereby substituted for section 24 of the principal Act:

“24. Subject to item 4 of Schedule 2, all records and information of the *Department* which the *responsible Minister*, after consultation with the *Board*, considers necessary for the proper performance of the *Board's* functions, shall without delay be delivered to the *Board* after the *effective date*.”

#### **Repeal of Schedule 1**

15. Schedule 1 of the principal Act is hereby repealed.

#### **Amendment of Schedule 2 of Act 15 of 1998**

16. Schedule 2 of the principal Act is hereby amended as follows:

##### **“SCHEDULE 2**

##### **Persons employed in Department immediately prior to staff transfer date**

1. A person who has been seconded to the *Board* in terms of section 15(3)(a) becomes an employee on the staff establishment of the *Board* on the *staff transfer date*, unless the person chooses to remain a member of the [*provincial administration*] *Department* in terms of item 2.

##### **Persons who remain members of Department**

2. (1) A person who elects to remain a member of the [*provincial administration*] *Department* must inform the *Department* thereof in writing before the *staff transfer date*.

(2) A person who has submitted a written notice in terms of subitem (1) remains a member of the [*provincial administration*] *Department* on the *staff transfer date* with retention of rank, remuneration, uninterrupted period of service and other service benefits and obligations, but—

(a) becomes supernumerary to the staff establishment of the [*provincial administration*] *Department*, and

(b) subject to subitem (3), is seconded to the *Board* for a period of one year from the *staff transfer date* in accordance with any applicable collective agreement.

(3) The secondment of a person to the *Board* in terms of subitem (2)—

- (a) may be terminated pursuant to any collective agreement applicable to supernumerary staff in the [*provincial administration*] Department, and
- (b) must be terminated—
  - (i) if during the period of that secondment the person informs the *Department* in writing that he or she elects to become an employee of the *Board*, whereupon that person becomes an employee on the staff establishment of the *Board* with immediate effect; 5
  - (ii) on the expiry of the period of one year referred to in subitem (2)(b), unless the secondment is extended in exceptional circumstances by agreement between the person, the *Board* and the [*provincial administration*] responsible Minister. 10

#### **Persons transferred to Board**

3. The transfer of persons to the *Board* takes place in terms of section 197(1)(a) of the Labour Relations Act, 1995 (Act 66 of 1995), and with retention of rights and obligations in accordance with— 15
- (a) section 197 of that Act, and
  - (b) any applicable collective agreement concluded between the [*provincial administration*] responsible Minister and the recognised employee organisations before the *staff transfer date*. 20

#### **Personnel records and information of [Board] Department**

4. All personnel records and information relating to personnel in the *Department* transferred to the *Board*, including all financial and administrative information in the possession of other provincial departments, must, without delay, be delivered to the *Board* after the *staff transfer date*.”. 25

#### **Short title and commencement**

17. (1) This Act is called the Western Cape Nature Conservation Laws Amendment Act, 2000 and, subject to subsection (2), comes into operation on a date determined by the Premier by proclamation in the *Provincial Gazette*. 30
- (2) Different dates may be determined for the commencement of the amendment or repeal of the various provisions referred to in Schedules 1, 2, 3 and 4.

*SCHEDULE I***GENERAL EXPLANATORY NOTE:**

- [                    ]      Words in bold type in square brackets indicate omissions from the existing ordinance.
- Words underlined with a solid line indicate insertions in the existing ordinance.      5
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**ORDINANCE**

**Ordinance to consolidate and amend the laws relating to nature [and environmental] conservation and to provide for matters incidental thereto.      10**

**B**E IT ORDAINED by the Provincial Council of the Province of the Cape of Good Hope as follows:—

**Division of Ordinance**

1. This ordinance is divided as follows:—

Chapter I	Definitions [ <b>and Establishment of Department of Nature and Environmental Conservation and Advisory Committee</b> ] (section[s] 2[-5]).	5
Chapter II	Nature Reserves (sections 6-15).	10
Chapter III	Miscellaneous Conservation Measures (sections 16-25).	
Chapter IV	Protection of Wild Animals other than Fish (sections 25A-47).	15
Chapter IVA	Protection of Rhinoceroses (section 47A).	20
Chapter V	Protection of Fish in Inland Waters (sections 48-61A).	
Chapter VI	Protection of Flora (sections 62-72).	25
Chapter VIA	Professional Hunters, Hunting Outfitters and Directors of Professional Hunting Schools (sections 72A-72H).	30
Chapter VII	General and Supplementary (sections 73-90).	
Schedule 1	Endangered Wild Animals.	35
Schedule 2	Protected Wild Animals.	
Schedule 3	Endangered Flora.	
Schedule 4	Protected Flora.	40
Schedule 5	Noxious Aquatic Growths.	
Schedule 6	Ordinances Repealed.	45

## CHAPTER I

DEFINITIONS [AND ESTABLISHMENT OF DEPARTMENT OF NATURE  
AND ENVIRONMENTAL CONSERVATION AND ADVISORY COMMITTEE]  
(sec[s] 2[-5])

## Definitions

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2. In this ordinance, unless inconsistent with the context—

“**adequately enclosed**” in relation to land means enclosed by—

- (a) any fence, wall or obstruction of any kind whatsoever forming all enclosure from which any wild animal of a species specified in a certificate of adequate enclosure issued in terms of section 35(4)(b) is unable to escape without breaking it; 10
- (b) any natural boundary through or over which any wild animal of a species so specified will under normal circumstances not pass, or
- (c) any combination of fences, walls, obstructions or boundaries referred to in paragraphs (a) and (b) so that any wild animal of a species so specified cannot escape from such land; 15

[“**Administration**” means the Provincial Administration of the Province of the Cape of Good Hope;]

“**angling**” means the catching of fish in inland waters by means of a line and hook, whether or not any rod, bait or lure is used, or by means of a set line, and “angle” has a corresponding meaning; 20

“**angling season**” means the period in any year determined by [proclamation] notice issued in terms of section 78(b);

“**aquatic growth**” means any vegetation which grows or is able to grow in inland waters; 25

“**artificial lure or spoon**” means a device which by its simulation of life or by its appearance or colour is designed or likely to delude, entice or attract a fish into seizing such device;

“**biltong**” means the meat of any wild animal which has been or is being dried, smoked, salted, cured or treated in any other manner for the purpose of preservation; 30

“**biltong sausage**” means sausage, whether dried or not, made wholly or partly of the meat of any wild animal;

“**black bass**” means any fish of the genus *Micropterus*;

“**bluegill sun-fish**” means any fish of the species *Lepomis macrochirus*; 35

“**Board**” means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998);

“**buy**” includes barter or exchange;

“**captivity**” in relation to any wild animal means the keeping within an enclosure by means of any fence, wall or obstruction of any kind whatsoever in such a way that such wild animal is unable to maintain itself by natural means; 40

“**capture**” in relation to any wild animal means by any means whatsoever to capture, catch or take or to attempt or to pursue with intent to capture, catch or take;

“**carcase**” in relation to any wild animal means the whole or any part of the meat (whether dried, smoked, salted, cured or treated in any manner), the head, tooth, horns, shell, scale, tusks, bones, feathers, tail, claw, paw, hoof, skin, hide, hair, viscera or any part whatsoever of the carcase, and includes the egg; 45

“**carp**” means any fish of the carp family not indigenous to the Republic and includes carp (*Cyprinus carpio*), the atavistic or wild form of the goldfish (*Carassius auratus*) and the crucian carp (*Carassius carassius*) but does not include domestic gold-fish; 50

“**cast-net**” means a net (also known as an umbrella-net or throw-net) with or without weights on the perimeter thereof which is cast on water so that it opens and sinks in the water; 55

“**catch**” in relation to fish includes any means or method of taking (whether alive or dead), injuring, immobilizing or killing or attempting to take, injure, immobilize or kill, or to pursue or wilfully disturb;

“**certificate**” means a certificate issued under this ordinance;



- “**crab-net**” means a net (also known as a ring-net) made of wire or any other material of which the opening is attached to a frame, whether or not any bait or lure is placed in such net, but does not include a landing-net;
- “**cultivate**” means the artificial reproduction of flora in any manner whatsoever;
- “**daily bag limit**” means the number of any species of protected wild animal or of fish determined by **[proclamation] notice** issued in terms of section 79(a);
- “**Department**” means the **Department of Nature and Environmental Conservation established by section 3;**
- “**Director**” means the **Director of Nature and Environmental Conservation referred to in section 3;**
- “**division**” means the area under the jurisdiction of a divisional council;
- “**endangered flora**” means flora of any species which is in danger of extinction and is specified in Schedule 3 or Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include flora of any species specified in such Appendix and Schedule 4;
- “**endangered wild animal**” means a wild animal of any species which is in danger of extinction and is specified in Schedule I or Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include a wild animal of any species specified in such Appendix and Schedule 2;
- “**fauna**” means wild animal;
- “**fire-arm**” includes an air-gun having a barrel of a calibre of not less than five comma six millimetres;
- “**flora**” means endangered flora, protected flora or indigenous unprotected flora and includes the whole or any part of the plant, whether dead or dried;
- “**full-time employee**” means an employee who is employed full-time on a monthly basis and is in receipt of a salary or wage which is in accordance with local tariffs for the kind of work done by him or her;
- “**fyke-net**” means a device made of rings or hoops over which a net, wire or any other material has been spread or which is made of wire only and which has one or more funnel-shaped openings and includes anything which, whether attached to such device or not, is used to guide fish to any funnel-shaped opening in such device;
- “**honorary nature [and environmental] conservation officer**” means an honorary nature [and environmental] conservation officer appointed in terms of section 22;
- “**hunt**” in relation to any wild animal means by any means whatsoever to hunt or search for, to kill, capture or attempt to kill or capture, or to pursue, follow or drive with intent to kill or capture, or to shoot at, poison, be in wait for or wilfully disturb;
- “**hunting season**” means the period in any year determined by **[proclamation] notice** issued in terms of section 78(a);
- “**indigenous flora**” means any flower, plant, shrub or tree or part thereof indigenous to the Republic **[or the territory of South West Africa]**, whether or not it is or has been cultivated and whether or not it is no longer growing in a free state of nature but does not include any plant, shrub or tree which is a noxious weed in terms of any law;
- “**indigenous unprotected flora**” means any species of indigenous flora not specified in Schedule 3 or 4;
- “**inland waters**” means all waters which do not permanently or at any time during the year form part of the sea and includes any tidal river other than a tidal river in respect of which a notice issued under section 23(1)(b) of the Sea Fisheries Act, 1973 (Act 58 of 1973), is in force;
- “**landing net**” means a net attached to a frame in such manner as to leave an opening not exceeding six hundred and ten millimetres measured in a straight line between any two points on the perimeter of the frame and which is used only for lifting fish caught by angling out of the water;
- “**licence**” means a licence issued under this ordinance;

- “**local authority**” means any institution or body contemplated by section 84(1)(f) of the Republic of South Africa Constitution Act, 1961 (Act 32 of 1961);
- “**local nature reserve**” means a local nature reserve established under section 7;
- “**nature [and environmental] conservation**” means the preservation of fauna and flora; 5
- “**nature [and environmental] conservation officer**” means a nature [and environmental] conservation officer appointed in terms of section 20;
- “**nature [and environmental] conservation ranger**” means a nature [and environmental] conservation ranger appointed in terms of section 23; 10
- “**net**” means a fyke-net, cast-net, crab-net, landing-net, staked net or trek-net;
- “**non-spinning artificial fly**” means a hook with one point and one barb to which matter not edible by fish is attached and which is constructed so as not to rotate or spin round when attached to a line and drawn through the water and to which no appliance is affixed which is capable of rotating or spinning round; 15
- “**noxious aquatic growth**” means any species of aquatic growth specified in Schedule 5;
- “**owner**” means—
- (a) in relation to land—
- (i) the person in whom is vested the legal title thereto; 20
- (ii) where the legal title thereto is vested in an association of persons, whether corporate or unincorporate, the person designated in writing as the owner thereof by such association;
- (iii) in the case of land under the control or management of a local authority, the local authority concerned; 25
- (iv) in the case of State land not under the control or management of a local authority, the Minister of the Department of State or the [Administrator] Provincial Government having control or management thereof or any officer designated by such Minister or [Administrator] Provincial Government for the purpose; 30
- (v) in the case of land not occupied by the owner as contemplated by subparagraph (i), the person who is in actual occupation of the land, who exercises general control over such land and who has been authorised in writing by the owner as contemplated by the said subparagraph to exercise the rights conferred on an owner of land by this ordinance; 35
- (vi) where the owner as contemplated by subparagraph (i), (ii) or (v) is dead or insolvent or has assigned his estate for the benefit of his creditors or has been placed under curatorship by order of court or is a company being wound up or under judicial management, the person in whom the administration of such land is vested as executor, administrator, trustee, assignee, curator, liquidator or judicial manager, as the case may be, and 40
- (b) in relation to inland waters, the owner as contemplated by paragraph (a) of the land on which the waters concerned are situated or which abuts on such waters;
- “**permit**” means a permit issued under this ordinance; 45
- “**pick**” includes cut, chop off, take, gather, pluck, uproot, break, damage or destroy;
- “**poison**” means any poison, preparation or chemical substance used to catch, immobilize, sterilize, kill or physically harm a wild animal;
- “**prescribed**” means prescribed by regulation; 50
- “**privately owned inland waters**” means any dam, reservoir, vlei or other inland waters completely surrounded by land owned by one owner;
- “**private nature reserve**” means a private nature reserve established in terms of section 12;
- “**problem wild animal**” means any animal declared to be a problem wild animal in terms of section 79(d); 55

“**protected flora**” means any species of flora specified in Schedule 4 or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include any species of flora specified in such Appendix and Schedule 3;

“**protected wild animal**” means any species of wild animal specified in Schedule 2 or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include any species of wild animal specified in such Appendix and Schedule 1;

“**Province**” means the Province of Western Cape;

“**provincial nature reserve**” means a provincial nature reserve established in terms of section 6(i);

“**public road**” means a public road as defined in section 1 of the Road Traffic [Ordinance, 1966 (Ordinance 21 of 1966)] Act, 1989 (Act 29 of 1989);

“**registered flora grower**” means a person who has been registered as a flora grower and holds a licence issued to him or her in terms of section 65;

“**registered flora seller**” means a person who has been registered as a flora seller and holds a licence issued to him or her in terms of section 65;

“**relative**” in relation to the owner of any land means the spouse, parent, step-parent, adoptive parent, son-in-law, child, step-child, adopted child, brother, sister or grandchild of such owner; provided that in relation to an owner of land which is an unincorporate association of persons, “relative” means the relative as hereinbefore defined of every member of such association;

“**responsible Minister**” means the member of the Provincial Cabinet responsible for nature conservation;

“**sell**” includes hawk, peddle, barter or exchange or offer, advertise, expose or have in possession for the purpose of sale, hawking, peddling, bartering or exchanging;

“**set line**” means a line and hook with or without any bait or lure which, when used for catching fish, is not manipulated directly or indirectly by any person but does not include a line and hook attached to a reel and rod lying loose on or fixed into the ground;

“**snatching**” means the catching of fish by the jerking of a hook in water with the intention of impaling fish thereon;

“**staked net**” means a net (also known as a set net, gill-net or drift-net), with or without weights or floats, which is set upright in water with the intention of causing fish to become caught or entangled therein, whether or not such net drifts or is attached to anything;

“**this ordinance**” includes any regulation, proclamation or notice made or issued thereunder;

“**tidal waters**” means that part of any inland waters which, owing to the influence of the sea, becomes saline at any time or the level of which rises at any time owing to the influence of the sea;

“**trap**” means any trap, springtrap, snare, gin, cage, net, pitfall or birdlime and any other device or method whatsoever which can be used or adapted for the capture of wild animals;

“**trek-net**” means a net (also known as a seine, bait seine, drag-net or bait trek-net), with or without weights or floats, which is moved through water in an upright position with the intention of catching fish;

“**trout**” means any fish of the genus *Salmo* or the genus *Salvelinus*;

“**waters**” includes any river, stream, creek, lake, vlei, pan, lagoon, dam, reservoir, furrow or pond, whether the water therein is fresh or saline, and includes the foreshore and bank thereof and any part of such waters;

“**weapon**” means—

(a) a fire-arm having a barrel exceeding one hundred millimetres in length and includes ammunition for any such fire-arm, or

(b) any other instrument which is capable of propelling a projectile or which can itself be propelled or used in such a way that a wild animal may be killed, injured or immobilized thereby,

and includes a spear, assegai, bow-and-arrow, axe, bush-knife, knife or similar object and any narcotic whatsoever, and

**“wild animal”** means any live vertebrate or invertebrate animal (including the egg or spawn of any such animal but excluding any ostrich used for farming purposes and the egg thereof) belonging to a non-domestic species and includes any such animal which is kept or has been born in captivity.

**[Establishment of Department of Nature and Environmental Conservation 5**

3. (1) There shall be a department of the Administration to be known as the Department of Nature and Environmental Conservation which shall be under the control of an officer styled the Director of Nature and Environmental Conservation and who shall, subject to the laws governing the Public Service of the Republic, be appointed by the Administrator. 10

(2) The Director shall as soon as possible after the end of each year prepare and submit to the Administrator a report on the activities of the Department during the previous year and may in such report make such comments or recommendations relating to the Department or the administration thereof or to nature and environmental conservation as he may consider necessary or desirable. 15

(3) The Administrator shall lay every report submitted to him under subsection (2) on the table of the Provincial Council within fourteen days after the receipt thereof if the Council is then in session or, if the Council is not then in session, after the commencement of the next ensuing session.

**Exercise and delegation of powers 20**

4. (1) Whenever a power or a duty is conferred or imposed on the Department by this ordinance, the Director may exercise such power or perform such duty.

(2) The Director may delegate any power or duty conferred or imposed on him by this ordinance to any officer under his control.

**Establishment of Nature and Environmental Conservation Advisory Committee 25**

5. (1) The Administrator may establish a Nature and Environmental Conservation Advisory Committee (hereinafter in this section referred to as “the committee”) consisting of so many members as he may from time to time determine.

(2) The functions of the committee shall be to advise the Director or the Administrator, as the case may be, on such matters relating to nature and environmental conservation or the application of any provision of this ordinance as it considers necessary or desirable or as may be referred to it by the Director or the Administrator. 30

(3) The chairman and other members of the committee shall be appointed and the terms and conditions of office of such chairman and members shall be determined by the Administrator. 35

(4) Every member of the committee who is not an officer, official or employee in the public service or in the service of a provincial administration may, if the Administrator so decides, be paid such remuneration and allowances as the Administrator may determine out of moneys appropriated by the Provincial Council for the purpose. 40

(5) The members of the committee shall hold office during the Administrator’s pleasure.]

## CHAPTER II

## NATURE RESERVES (secs 6-15)

## Part I: Provincial Nature Reserves (secs 6-6A)

## Establishment of provincial nature reserves

6. (1) The **[Administrator]** responsible Minister may by proclamation— 5
- (a) establish a provincial nature reserve on any land under his or her control or management;
  - (b) define the boundaries of any such reserve, either by description or by reference to the boundaries indicated on a map or plan filed in a specified office, and from time to time alter and in the aforementioned manner redefine 10 such boundaries;
  - (c) assign a name to any such reserve and alter such name at any time, and
  - (d) after compliance *mutatis mutandis* with the provisions of section 7(2) and due consideration of any objections lodged with him or her, abolish any such reserve. 15
- (1A) (a) The **[Administrator]** responsible Minister may, after consultation and the conclusion of an agreement with any State Department and in accordance with the terms and conditions of such agreement, by proclamation—
- (i) establish a provincial nature reserve on land which is under the control or management of such State Department; 20
  - (ii) define the boundaries of any such reserve, either by description or by reference to a map or plan filed in a specified office, and from time to time alter and in the aforementioned manner redefine such boundaries;
  - (iii) assign a name to any such reserve and alter such name at any time, and
  - (iv) abolish any such reserve. 25
- (b) An agreement contemplated by paragraph (a) shall provide for—
- (i) the currency of the agreement, the terms and conditions on which any of the parties thereto may withdraw and the terms and conditions on which the agreement may, during its currency, be terminated;
  - (ii) a definition, in the manner provided in paragraph (a)(ii), of the boundaries of the land involved in such agreement and the terms and conditions on which such boundaries may be altered;
  - (iii) the manner in which a name shall be assigned to such provincial nature reserve and the manner in which such name may be altered;
  - (iv) the terms and conditions on which such nature reserve may be abolished, 35 subject to any provisions under subparagraph (i) in such agreement;
  - (v) the terms and conditions which are applicable to the establishment of such nature reserve on such land;
  - (vi) the manner in which such nature reserve shall be managed, controlled and developed; 40
  - (vii) the delegation by the contracting parties of any or all of their powers and duties to one of their number or to a joint committee appointed by them;
  - (viii) the apportionment between the contracting parties of any revenue, profits, assets, losses and liabilities arising as a result of such agreement;
  - (ix) the enforcement on such nature reserve of any regulations which are 45 applicable to provincial nature reserves;
  - (x) the preparation and submission to the **[Administrator]** responsible Minister of reports on the management, control and development of such nature reserve, and
  - (xi) any other matter in general which the contracting parties deem necessary to 50 include in such agreement.
- (2) The **[Administrator]** responsible Minister may [-
- (a)] by agreement or expropriation acquire any land which he or she considers necessary and suitable for the purpose of establishing a provincial nature reserve thereon [, and 55

- (b) **subject to the law governing the Public Service or the Provincial Service appoint officers, officials or employees for carrying out the provisions of this section and for the enforcement of any regulations made under subsection (6) and in force in any provincial nature reserve].**

(3) The [Director] Board shall, subject to the directions of the [Administrator] responsible Minister, manage, control and develop every provincial nature reserve with a view to the propagation, protection and preservation of fauna and flora and may in or in connection with any reserve provide amenities, facilities and services for the recreation and enjoyment of the public.

(3A) The Board may appoint as many of its employees as are necessary for the carrying out of the provisions of this section and for the enforcement of any regulations made under subsection (6) and in force in any provincial nature reserve.

(4) In the exercise of the powers and functions conferred or imposed on [him] it by subsection (3), the [Director] Board may in or in connection with a provincial nature reserve—

- (a) build, construct and maintain roads, bridges, ferries, buildings, fences and such other works as [he] it may deem necessary;
- (b) take such steps as [he] it may deem necessary or desirable for the propagation, protection or preservation of fauna and flora;
- (c) set aside places or inland waters for the propagation and cultivation of fauna and flora;
- (d) provide and maintain accommodation, camping areas, garages, entertainments, transport services or other undertakings for the amusement, recreation, enjoyment and general convenience of visitors;
- (e) conduct businesses for the sale of necessities and the supply of services for the convenience of visitors;
- (f) call for public tenders for the provision and maintenance of anything mentioned in paragraph (d) or the conducting of any business referred to in paragraph (e) and with the approval of and subject to such conditions as may be determined by the [Administrator] responsible Minister, grant permission to any person from whom a tender has been received, to provide such service or conduct such business and may for that purpose let land or buildings thereon;
- (g) levy charges for entry into and remaining in any such reserve or any part thereof or for the use or enjoyment of anything provided therein, or
- (h) perform any act or acquire any thing which [he] it considers necessary for the better achievement of the objects and purposes of this section.

(5) **[The provisions of the Shop Hours Ordinance, 1930 (Ordinance 14 of 1930), and the Licences Ordinance, 1981 (Ordinance 17 of 1981), shall not apply in respect of any business conducted in a provincial nature reserve in terms of subsection (4)].**

(6) The [Administrator] responsible Minister may in respect of any provincial nature reserve make regulations as to—

- (a) the regulation, restriction or prohibition of the entry of persons into such reserve or any part thereof, the conduct of persons in such reserve, the exclusion or ejection of persons **[of certain races, classes or groups of persons]** from such reserve or any part thereof, and the periods and times during which such reserve shall be open to visitors;
- (b) the regulation, restriction or prohibition of the introduction into or the possession within such reserve of any fauna, flora, poison, explosive material or any weapon, trap, net or other thing which could be used for the killing or catching of wild animals or fish;
- (c) the regulation, restriction or prohibition of the removal of fauna or flora from such reserve;
- (d) the protection and preservation of such reserve and the fauna, flora and any property therein;
- (e) the regulation, restriction or prohibition of the making of fires or the commission or omission of any act which may cause a fire;
- (f) the prohibition of the entry into or use in such reserve of certain classes of vehicles, the regulation and control of traffic in such reserve and the conveyance of passengers and the routes to be followed therein;

- (g) the regulation, restriction or prohibition of the introduction into such reserve or the use on any waters in such reserve of boats or other craft or certain classes of boats or craft, the conveyance of passengers on boats or craft and the routes to be followed by such boats or craft;
  - (h) the seizure or destruction of any animal found in such reserve in contravention of the provisions of any regulation in force therein; 5
  - (i) the handing over or seizure of anything brought into or removed from such reserve in contravention of any regulation in force therein or in possession of any person in such reserve in contravention of any such regulation;
  - (j) the powers and duties of **[officers, officials or]** employees appointed under subsection **[2(b)] (3A)**, and 10
  - (k) any other matter in respect of which the **[Administrator]** responsible Minister deems it necessary or expedient to make regulations in order to achieve the objects of this section.
- (7) Regulations made under subsection (6) may be made to apply generally to all provincial nature reserves or to any specified provincial nature reserve and may prescribe in respect of any contravention thereof or failure to comply therewith a fine not exceeding one thousand five hundred rand or imprisonment for a period not exceeding six months. 15

#### **[Establishment of Provincial Nature Reserves Land Acquisition Fund 20**

**6A. (1) A fund to be known as the Provincial Nature Reserves Land Acquisition Fund (hereinafter referred to as the Fund) is hereby established.**

**(2) The Fund shall consist of—**

- (a) all moneys received by the Department by way of contributions, donations and bequests for the purchase of land for the purposes of a provincial nature reserve or part of a provincial nature reserve, and 25**
- (b) moneys appropriated by the Provincial Council—**
  - (i) for the purposes of the Fund, and**
  - (ii) in respect of the amount of interest received on the investment of money of the Fund which is not immediately required for the purposes of the Fund. 30**

**(3) The Fund shall be managed and controlled by the Administrator and for this purpose the Administrator may delegate all or any of his powers in writing to a senior officer in the full-time employment of the Administration.**

**(4) Money in the Fund shall be applied by the Administrator for the purchase of land for the purposes of provincial nature reserves. 35**

**(5) (a) The Administrator shall cause to be kept a full and correct account of all moneys received by the Fund and expended out of the Fund.**

**(b) The account contemplated by paragraph (a) shall be audited by the Provincial Auditor. 40**

**(6) The Administrator shall annually as soon as possible after 31 March lay upon the Table of the Provincial Council a statement of the income and expenditure of the Fund.]**

#### **Part II: Local Nature Reserves (secs 7-11)**

#### **Establishment of local nature reserves by local authority 45**

**7. (1) Any local authority may with the approval of the [Administrator] responsible Minister and subject to such conditions as he or she may specify, establish a local nature reserve on land vested in it or under its control or management and may for that purpose acquire land by agreement or expropriation.**

**(2) A local authority desiring to establish a local nature reserve in terms of subsection (1) shall once a week for two consecutive weeks with an interval of not less than seven days cause a notice in both official languages to be published in a newspaper circulating in its area of jurisdiction— 50**

- (a) stating its intention to establish such reserve on land of which the boundaries**

are defined in such notice, either by description thereof or by reference to the boundaries indicated on a map or plan filed in a specific office;

- (b) stating the name which it desires to assign to such reserve, and
- (c) calling on persons wishing to object to such establishment to lodge their objections in writing together with the reasons therefor with such local authority on or before a date specified in such notice, being not less than thirty days after the last publication of such notice. 5

(3) When applying for the **[Administrator's]** responsible Minister's approval in terms of subsection (1), the local authority concerned shall furnish **[the Administrator]** that Minister with a copy of the notice referred to in subsection (2) and the objections, if any, lodged with it in accordance with such subsection together with its comments thereon. 10

(4) The **[Administrator]** responsible Minister may, in considering any application under this section, require the local authority to furnish him or her with such further information as he or she may deem necessary and shall thereupon, in his or her discretion, refuse the application or grant the application subject to such conditions as he or she may deem necessary or desirable. 15

(5) Every decision by the **[Administrator]** responsible Minister under subsection (4) shall be notified in the *Provincial Gazette* and where an application has been granted the name assigned to the reserve concerned, the boundaries thereof, defined in accordance with subsection (2), and the conditions, if any, subject to which approval has been granted shall be stated in the relevant notice. 20

(6) Subject to any conditions imposed by the **[Administrator]** responsible Minister under subsection (4), the provisions of section **[6(2)(b) and]** 6(3) to and including 6(7) shall apply *mutatis mutandis* in respect of a local nature reserve and any reference in any such section to— 25

- (a) **[the law governing the Public Service or the Provincial Service;]**
  - (b) the **[Administrator]** responsible Minister (except in section 6(3)) or the **[Director]** Board;
  - (c) a provincial nature reserve, or 30
  - (d) regulations made by the **[Administrator]** responsible Minister;
- shall be construed as a reference to, respectively—
- (i) **[the law governing the appointment of employees of the local authority concerned;]**
  - (ii) the local authority concerned; 35
  - (iii) a local nature reserve, or
  - (iv) by-laws or regulations made by the local authority concerned.

(7) A local authority which has established a local nature reserve may with the approval of the **[Administrator]** responsible Minister and, in the case of paragraph (b), after compliance *mutatis mutandis* with the provisions of subsections (2) and (3)— 40

- (a) at any time alter the boundaries or the name or the boundaries and the name thereof, or
- (b) abolish such reserve,

and any such alteration or abolition shall be notified in the *Provincial Gazette*.

#### **Advisory boards for local nature reserves** 45

8. (1) As soon as a local nature reserve has been established the local authority concerned shall appoint an advisory board for the purpose of advising and making recommendations to it in connection with the management, control and development of such reserve.

(2) (a) Such advisory board shall be constituted in accordance with by-laws or regulations made under section 9 and provision shall be made therein that the **[Administrator]** responsible Minister shall appoint at least one person to be a member but may in addition appoint up to five more persons to be members of such board. 50

(b) Any by-laws or regulations made before the coming into operation of the Nature and Environmental Conservation Amendment Ordinance, 1986, by a local authority under section 9 in connection with the appointment of members of an advisory board of a local nature reserve by the **[Administrator]** responsible Minister shall be deemed to have been amended in accordance with the provisions of paragraph (a). 55



(3) No member of an advisory board shall be remunerated for his or her services as a member of such board but such member may be paid the reasonable expenses incurred by him or her in connection with his or her duties as such.

**By-laws and regulations relating to advisory boards for local nature reserves**

**9.** (1) A local authority shall, in the manner provided by law for the making of by-laws or regulations by such local authority, make by-laws or regulations relating to— 5

- (a) the constitution of an advisory board referred to in section 8(1);
- (b) the period of office and vacation of office of members of such board, and
- (c) the holding of meetings at intervals of not more than twelve months by and the proceedings at meetings of such board. 10

(2) Any by-laws or regulations made before the coming into operation of the Nature and Environmental Conservation Amendment Ordinance, 1986, under subsection (1)(c) in connection with the intervals between meetings of an advisory board shall be deemed to have been amended in accordance with the provisions of subsection (1)(c).

**[Administrator's] Responsible Minister's powers in respect of acts done by local authority in relation to local nature reserves 15**

**10.** (1) If the [Administrator] responsible Minister is of opinion that any action taken or anything done or proposed to be taken or done by a local authority in the course of or in connection with the management, control or development of a local nature reserve established by it is or will be detrimental to such reserve or to the purposes for which it was established, he or she may, after consultation with such local authority, by order in writing— 20

- (a) prohibit such action or the doing of such thing or the continuance thereof, or
- (b) permit such action to be taken or thing to be done or the continuance thereof subject to such conditions as he or she may determine. 25

(2) The [Administrator] responsible Minister may, if, after the expiration of a reasonable period of time, he or she is of the opinion that a local authority has not taken adequate steps to comply with an order issued in terms of subsection (1), by notice in the *Provincial Gazette* abolish the local nature reserve concerned; provided that, at least six weeks prior to such notice, he or she had given notice in writing by registered mail to such local authority of his or her intention to abolish such nature reserve after a date specified therein. 30

**[Payment of subsidy in respect of local nature reserve**

**11.** (1) There shall be paid from moneys appropriated by the Provincial Council for the purpose to every local authority which has established a local nature reserve, an annual subsidy equal to one-half, or such greater or smaller fraction as the Administrator may generally or specially determine, of the subsidisable expenditure incurred by such local authority in connection with such reserve as determined in terms of subsections (2) and (3). 35

(2) For the purpose of determining the subsidisable expenditure contemplated by subsection (1), a local authority shall, on or before such date in each year and in such manner as the Administrator may direct, submit to the Director an estimate of the expenditure it proposes to incur and of the revenue it expects to accrue to it during the following year in respect of the local nature reserve concerned. 40

(3) On receipt of such estimate the Director shall approve the whole or part of the proposed expenditure and the difference between the proposed expenditure so approved and the estimated revenue contemplated by subsection (2) shall for the purposes of subsection (1) be the subsidisable expenditure contemplated by subsection (1). 45

(4) Nothing in this section contained shall be construed so as to preclude a local authority from spending more than its subsidisable expenditure in connection with 50

the reserve concerned but any expenditure in excess of the subsidisable expenditure shall not, except with the approval of the Administrator, rank for subsidy.

(5) The Director may, at such intervals as he deems fit, make advances against the subsidy payable in terms of this section, subject to such adjustments as may be necessary when audited statements of actual expenditure and revenue become available.] 5

### Part III: Private Nature Reserves (secs 12-13)

#### Establishment of private nature reserves

12. (1) Any owner of land may with the approval of the [Administrator] responsible Minister and subject to such conditions as he or she may specify, establish a private nature reserve on land of which he or she is the owner and assign a name to such reserve. 10

(2) Any person desiring to establish a private nature reserve in terms of subsection (1), shall apply to the [Administrator] responsible Minister for his or her approval and furnish him or her with—

- (a) a definition, either by description thereof or by reference to the boundaries indicated on a map or plan filed in a specific office, of the boundaries of the land on which he or she desires to establish such reserve; 15
- (b) proof of his or her ownership in such land;
- (c) the name which he or she proposes to assign to such reserve, and
- (d) such further information as the [Administrator] responsible Minister may require. 20

(3) The [Administrator] responsible Minister may, in his or her discretion, refuse any application under subsection (2) or grant such application subject to such conditions as he or she may deem necessary or desirable.

(4) If any application under subsection (2) is granted, the [Administrator's] responsible Minister's approval shall be notified in the *Provincial Gazette* and the name assigned to the reserve concerned, the boundaries thereof, defined in accordance with subsection (2)(a), and the conditions, if any, subject to which approval has been granted shall be specified in the relevant notice. 25

(5) (a) Any person who has established a private nature reserve may at any time with the approval of the [Administrator] responsible Minister— 30

- (i) alter the boundaries or the name or the boundaries and the name of such reserve, or
- (ii) abolish such reserve.

(b) Any such reserve may at any time be abolished by the [Administrator] responsible Minister on good cause shown and after consultation with the person who established it. 35

(c) Any alteration or abolition as contemplated by this subsection shall be notified in the *Provincial Gazette*.

#### Rights and duties of owner of private nature reserve 40

13. Subject to any conditions imposed by the [Administrator] responsible Minister under section 12(3), any person who has established a private nature reserve shall manage, control and develop such reserve with a view to the propagation, protection and preservation of fauna and flora and such person or any other person authorised by him or her in writing may, notwithstanding anything to the contrary in this ordinance— 45

- (a) subject to the provisions of sections 26, 27, 35 and 62, at any time and by any means other than by the use of fire or poison, hunt any wild animal or pick any flora found in such reserve; 45
- (b) subject to the provisions of section 31(2) and any regulations made under section 82(1)(d) keep any such animal which has been captured in such reserve in captivity, or 50
- (c) sell any such animal which has been so captured or the carcase of any such animal.

**Part IV: General (secs 14-15)****Prohibition on hunting of wild animals and picking of flora in provincial or local nature reserve**

- 14.** No person shall—
- (a) hunt any wild animal, or 5
  - (b) pick any flora,
- in a provincial or local nature reserve unless he or she is in possession of a permit authorising him or her to do so issued in any case contemplated—
- (i) by paragraph (a), by the **[Director] Board**, or
  - (ii) by paragraph (b), by the **[Director] Board** or the local authority concerned, 10  
respectively.

**15. Assent to section 15 withheld by the State President.****CHAPTER III****MISCELLANEOUS NATURE [AND ENVIRONMENTAL] CONSERVATION MEASURES (secs 16-25) 15****Powers of [Department] Board**

- 16.** (1) The **[Department] Board** shall in the interests of nature **[and environmental]** conservation—
- (a) conduct experiments, undertake research, make surveys, and conduct investigations in connection with any fauna, flora, inland waters, fish in such waters or aquatic growths and may for any such purpose acquire such property, whether movable or immovable, as may be necessary or desirable for the purpose; 20
  - (b) publish or in any other manner disseminate information relating to nature **[and environmental]** conservation which it acquires in the course of its activities and which may serve to further the achievement of the objects and purposes of this ordinance; 25
  - (c) take such measures as may be necessary or desirable for—
    - (i) the acclimatization and quarantining of fish imported into the Province;
    - (ii) the control of fish and aquatic growths in inland waters, or 30
    - (iii) the protection, propagation or cultivation of fauna or flora;
  - (d) erect, re-erect, maintain and repair on any land or in any inland waters such beacons, buoys, notices, notice boards, signs or other marks as may be necessary or desirable for the enforcement of any provision of this ordinance, and 35
  - (e) generally take such steps as may be necessary or desirable for the achievement of the objects and purposes of this ordinance.
- (2) Any person generally or specially authorised thereto in writing by the **[Director] Board** may, for any purpose mentioned in subsection (1)(c)(ii) or (d)—
- (a) enter upon the land or waters in question with such employees, assistants, animals, vehicles, appliances and instruments as may be required; 40
  - (b) make use of any natural material, including water, found on such land or in such waters, and
  - (c) cut any vegetation growing wild in the vicinity of any such beacon, buoy, notice, notice board, sign or other mark. 45
- (3) Any person referred to in subsection (2) shall, prior to the exercise by him or her of any power mentioned in such subsection, give reasonable notice to the owner or occupier of the land or waters concerned of his or her intention to exercise such powers.
- (4) The powers specified in subsection (1), except paragraph (c)(i) thereof, may also be exercised in or in respect of any local or private nature reserve. 50

**Measures to ensure survival of endangered wild animals or endangered flora**

- 17.** (1) If the **[Director] Board** at any time considers it necessary or desirable that

special measures should be taken to ensure the survival of any species of endangered wild animal or endangered flora, [he] it may, [with the approval of the Administrator and] after consultation with the owner of any land on which any animal of such species or such flora is found—

- (a) cause such number of either or both sexes of such animal or such number or quantity of the plants, seeds or other parts of such flora as [he] it may deem necessary to be captured, picked or gathered on such land and removed to a provincial nature reserve or such other place as [he] it deems fit for the purpose of preserving or propagating such species or such flora, or 5
- (b) take such measures as [he] it may consider necessary for the preservation, cultivation and propagation on such land of such species or flora. 10

(2) The [Director] Board shall give reasonable notice to the owner of the land referred to in subsection (1) of the time when, the place where and the manner in which it is proposed to capture, pick, gather, preserve, cultivate or propagate the animals or flora referred to in such subsection; provided that the provisions of this subsection shall not apply in respect of the owner of any land to which any such animal may flee while being pursued for the purpose of being captured in terms of this section. 15

(3) The [Director] Board may, in the exercise of the powers conferred on [him] it by subsection (1), in writing authorise such persons as [he] it may deem necessary to enter upon the land in question and to capture, pick or gather the animals or flora or to take the required measures for the preservation, cultivation and propagation thereof as contemplated by that subsection and any such person may thereupon enter upon such land and capture, pick or gather such animals or flora or take such measures thereon or on any other land to which any such animals may flee while being pursued. 20

(4) Any person who resists, hinders or wilfully obstructs any person in possession of the written authority of the [Director] Board issued under subsection (3) in the exercise of his or her powers or functions under that subsection shall be guilty of an offence. 25

(5) The [Administrator] Board shall on the application of the owner of any land referred to in subsection (1) pay to such owner such compensation in respect of the wild animals or flora removed from his or her land in terms of the said subsection or any other damage suffered by him or her in consequence of the exercise of the powers contemplated by this section as the [Administrator] Board may deem reasonable in the circumstances. 30

#### **[Director] Board may cause certain wild animals to be hunted**

18. (1) If the [Director] Board is of opinion that any wild animal or any species of wild animal found on any land— 35

- (a) is detrimental to the preservation of fauna or flora;
- (b) is likely to be dangerous to human life;
- (c) is wounded, diseased or injured;
- (d) is causing damage to crops or other property, whether movable or immovable, of any person, or 40
- (e) should be hunted in the interests of nature conservation,

[he] it may [with the approval of the Administrator], cause such animal, or such number of such species as [he] it may determine, to be hunted on such land or on any land to which such animal or, in the case of a species of wild animal, the number of such species determined by [him] it may flee while being pursued for the purpose of being hunted in terms of this section. 45

(2) The provisions of subsections (3) and (4) of section 17 shall apply *mutatis mutandis* in respect of the exercise of the powers conferred on the [Director] Board by subsection (1) of this section. 50

(3) The ownership in the carcase of any wild animal killed during a hunt in terms of subsection (1) shall vest in the [Administration] Board.

#### **[Director] Board may cause certain fish or aquatic growths to be destroyed**

19. (1) If the [Director] Board is of opinion that any fish or aquatic growth found in

any inland waters is injurious to any other fish or aquatic growth or to the water in such inland waters, **[he]** it may—

- (a) in writing order the owner of such inland waters to take such measures, including measures inconsistent with the provisions of this ordinance, as **[he]** it may specify in such order, to catch or kill such fish or to destroy such growth, and 5
- (b) if requested thereto by such owner, render such assistance to such owner as the **[Director]** Board may deem necessary for the purpose of enabling such owner to comply with such order. 10

(2) If an owner contemplated by subsection (1) refuses or, within a period of twelve months from the date of an order in terms of subsection (1), fails to comply with such order the **[Director]** Board may cause the fish or growth concerned to be caught, killed or destroyed, as the case may be, and recover the costs incurred in that regard from such owner. 10

#### **Appointment of nature [and environmental] conservation officers** 15

##### **20. [The Administrator may appoint—**

- (a) **subject to the law governing the Public Service or the Provincial Service, so many officers, officials or employees, and**
- (b) **so many other persons**

**as he may deem expedient as nature and environmental conservation officers for the carrying out of the provisions of this ordinance.]** 20

The Board may appoint as many of its employees as it deems expedient as nature conservation officers for the carrying out of the provisions of this ordinance.

#### **Powers of nature [and environmental] conservation officers**

**21. (1) A nature [and environmental] conservation officer may, subject to any limitation imposed in terms of section 25(2)—** 25

- (a) demand from any person performing or whom he or she reasonably suspects of having performed any act for the performance of which a licence, permit, exemption, order or the written permission of the owner of land or of any other person is necessary under any provision of this ordinance the production of such licence, permit, exemption, order or permission; 30
- (b) where any person has performed or he or she reasonably suspects any person of having performed on any land any act which may only be performed on land in respect of which a certificate of adequate enclosure has been issued under section 35(4)(b), demand from the owner of such land the production of such certificate; 35
- (c) demand from any person whom he or she reasonably suspects—
  - (i) of having committed an offence under this ordinance, or
  - (ii) will be able to furnish evidence in connection with an offence committed or alleged to have been committed under this ordinance, 40
 the name and address and any other information necessary for the identification of such person;
- (d) question any person who in his or her opinion may be able to furnish any information required by him or her in connection with the enforcement of any provision of this ordinance and for that purpose demand that any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance be brought to a standstill; 45
- (e) demand from any person who is required under this ordinance to keep any book, statement or invoice the production of such book, statement or invoice;
- (f) conduct any investigation he or she considers necessary in order to ascertain whether any provision of this ordinance is being complied with by any person and may for such purpose without warrant and without permission enter upon any land, premises, vehicle, place, building, tent, vessel, boat, craft, float, aircraft or other means of conveyance and there carry out such inspection and investigation as may be necessary, including an inspection or investigation of any container or other thing found thereon or therein; 50
- (g) in the course of any inspection or investigation in the exercise of his or her powers and the performance of his or her functions under this ordinance, 55

- without warrant and without permission, demand that any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance be brought to a standstill and be kept stationary until he or she has searched it;
- (h) without warrant and without permission, enter upon any land, premises, vehicle, vessel, boat, craft, float, aircraft or other means of conveyance and there conduct a search if he or she reasonably suspects that there is thereon or therein anything which— 5
- (i) is used or has been used in;
- (ii) forms or has formed an element in, or 10
- (iii) will afford evidence of, the commission of any offence under this ordinance;
- (i) without warrant seize anything which—
- (i) may, in his or her opinion, afford evidence of the commission of an offence under this ordinance, or
- (ii) he or she reasonably suspects is being or has been used for the conveyance of any fauna or flora in respect of which an offence has been committed under this ordinance, or 15
- (j) without warrant seize and confiscate any wild animal which is found in the possession of or being kept in captivity by any person, if— 20
- (i) such person fails on demand by such officer to produce a permit authorising such possession or keeping, or
- (ii) such animal is in the possession of or being kept in captivity by such person contrary to any condition specified in a permit produced by such person authorising such possession or keeping.
- (2) A nature **[and environmental]** conservation officer may in the exercise of his or her powers or the performance of his or her functions under this ordinance take with him or her an interpreter and one or more assistants who shall, while acting under the directions of such nature **[and environmental]** conservation officer, be deemed to be nature **[and environmental]** conservation officers. 25
- (3) Anything seized under subsection (1)(i) shall, if no prosecution for an offence under this ordinance is instituted in connection therewith, be returned to the person from whose possession it was taken. 30

#### **Appointment and powers of honorary nature [and environmental] conservation officers**

22. (1) The **[Director]** Board may appoint any person **[he]** it considers suitable as an honorary nature **[and environmental]** conservation officer for the carrying out of the provisions of this ordinance. 35
- (2) (a) Every honorary nature **[and environmental]** conservation officer shall have all the powers conferred on a nature **[and environmental]** conservation officer by subsections (1)(a) to and including (e) and subsection (2) of section 21. 40
- (b) When an honorary nature **[and environmental]** conservation officer takes with him or her an interpreter or assistant as contemplated by section 21(2), such interpreter or assistant shall be deemed to be an honorary nature **[and environmental]** conservation officer.

#### **Appointment and powers of nature [and environmental] conservation rangers** 45

23. (1) Any local authority may, subject to the law governing the appointment of employees of such local authority, appoint so many persons as it may deem expedient as nature **[and environmental]** conservation rangers for the carrying out of the provisions of this ordinance within the area of jurisdiction of such local authority.
- (2) (a) Every nature **[and environmental]** conservation ranger shall have all the powers conferred by section 21 on a nature **[and environmental]** conservation officer and may exercise such powers within the area of jurisdiction of the local authority which appointed him or her. 50
- (b) When a nature **[and environmental]** conservation ranger takes with him or her an interpreter or assistant as contemplated by section 21(2), such interpreter or assistant shall be deemed to be a nature **[and environmental]** conservation ranger. 55

**[Payment of subsidy in respect of remuneration of nature and environmental conservation rangers**

24. The Administrator may, subject to such conditions as he may deem necessary or desirable, pay from moneys appropriated by the Provincial Council for the purpose, to every local authority which has appointed nature and environmental conservation rangers an annual subsidy equal to one-half, or such greater fraction as he may generally or specially determine, of the expenditure incurred by such local authority in remunerating such rangers.] 5

**Certificate of appointment**

25. (1) Every nature [and environmental] conservation officer, honorary nature [and environmental] conservation officer and nature [and environmental] conservation ranger shall be furnished by the [Director] Board with a certificate of appointment in the prescribed form and shall when exercising any power or performing any function under this ordinance and if so required, produce such certificate for inspection. 10

(2) When furnishing a certificate of appointment contemplated by subsection (1), the [Director] Board may limit the exercise of the powers referred to in section 21 by the officer or ranger concerned to or in respect of— 15

- (a) such areas;
- (b) such offences under this ordinance;
- (c) [persons of such race or class], or 20
- (d) such fauna and flora,

as [he] it may generally or specially determine and specify in such certificate.

(3) A certificate of appointment issued under subsection (1) shall remain valid, in the case of—

- (a) a nature [and environmental] conservation officer or nature [and environmental] conservation ranger, until he or she leaves the service of the [Administration] Board or the local authority concerned, as the case may be, or until withdrawn by the [Director] Board whichever is the shorter period, and 25
- (b) an honorary nature [and environmental] conservation officer, for the period specified in the certificate. 30

**Transitional provision**

25A. Any person appointed as a nature and environmental conservation officer, honorary nature and environmental conservation officer or a nature and environmental conservation ranger in terms of sections 20, 22 and 23 immediately before the amendment of those sections in terms of the Nature Conservation Laws Amendment Act, 2000, is, from the date of commencement of that Act, regarded as having been appointed as a nature conservation officer, honorary nature conservation officer or a nature conservation ranger, respectively, in terms of those sections as amended by that Act. 35 40

**CHAPTER IV**

**PROTECTION OF WILD ANIMALS OTHER THAN FISH (secs 25A-47)**

**Application of Chapter IV**

25[A]B. For the purposes of this Chapter the term “wild animal” shall not include fish. 45

**Prohibition on hunting or possession of endangered wild animals**

26. No person shall without a permit hunt or be in possession of any endangered wild animal or the carcase of any such animal.

**Hunting of protected wild animals**

- 27.** (1) Subject to the provisions of subsections (2) and (3) no person shall hunt any protected wild animal—
- (a) during any hunting season, unless he or she is the holder of a permit or of a licence in the prescribed form issued to him or her by the **[Director] Board**, a receiver of revenue or any person authorised to do so by the **[Director] Board** on payment of the prescribed fee, or 5
  - (b) at any other time unless he or she is the holder of a permit to do so.
- (2) The provisions of subsection (1)(a) shall not apply to any owner of land, any relative of such owner or any full-time employee of such owner acting on the authority of such owner, in respect of any protected wild animal found on the land of such owner. 10
- (3) Subject to the provisions of any regulation made under section 82(1)(c) the provisions of subsection (1) shall not apply to any person not in possession of a weapon, who—
- (a) in the presence of the owner of any land on which any protected wild animal is being hunted by any other person as contemplated by such subsection, or 15
  - (b) in the absence but with the written permission of such owner, assists such other person during such hunt by acting as a beater.

**Prohibition on killing or capturing of protected wild animals in excess of daily bag limit** 20

**28.** No person authorised by any provision of this ordinance to hunt any wild animal shall at any time kill or capture a greater number of any species of protected wild animal than the daily bag limit determined in respect of such species by **[proclamation] notice** under section 79(a).

**Prohibited ways of hunting** 25

- 29.** No person shall unless he or she is the holder of a permit authorising him or her to do so, hunt any wild animal—
- (a) by means of fire or poison;
  - (b) with the aid of artificial light;
  - (c) on or from a public road; 30
  - (d) by means of any trap;
  - (e) during the period one hour after sunset on any day and one hour before sunrise on the following day;
  - (f) by means of any weapon in a public place within the area of jurisdiction of a local authority; 35
  - (g) by means of a fire-arm which discharges a rim-fire cartridge of a calibre less than five comma six millimetres;
  - (h) by means of a fire-arm which discharges more than two shots without being manually reloaded;
  - (i) by means of a bow-and-arrow; 40
  - (j) by means of a set gun or any similar contrivance;
  - (k) by means of any device which injects an intoxicating or a narcotic agent or poison into such animal;
  - (l) by the use of a dog, except for the hunting of birds or for the purpose of following or searching for any such animal which has been wounded; 45
  - (m) in the case of birds in or upon inland waters, by the use of a boat for the purpose of chasing or killing such birds;
- provided that in respect of the hunting of—
- (i) rodents, the provisions of paragraphs (a), (b), (d), (e), and (l), or
  - (ii) any bird or any other wild animal which is not an endangered or a protected wild animal, the provisions of paragraph (g), or 50
  - (iii) any such wild animal by a registered veterinary surgeon in **[the practise of] practising his or her profession**, the provisions of paragraph (k), shall not apply.



**Prohibition on use of certain fire-arms to hunt certain wild animals**

**30.** No person shall use a fire-arm having a barrel of a calibre of six comma five millimetres or less to hunt any Buffalo, Eland, Kudu, Wildebeest, Oryx or Red Hartebeest.

**Prohibition on keeping of wild animals in captivity**

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**31.** (1) No person shall without a permit authorising him or her to do so, keep any wild animal in captivity; provided that in the case of a wild animal which is a bird, the provisions of this section shall only apply in respect of a bird which is an endangered or protected wild animal.

(2) No person shall at any time, whether authorised by a permit issued under subsection (1) or not, restrain any wild animal by means of a rope, cord, chain or any similar contrivance.

**Prohibition on release of exotic wild animals**

**31A.** No person shall without a permit authorising him or her to do so, release any exotic wild animal in the Province.

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**Prohibition on manipulation of boundary fences, etc.**

**31B.** No person shall—

- (a) alter, remove or partly remove or cause to be altered, removed or partly removed any fence, whether on a common boundary or on his or her own property, in such a manner that any wild animal which as a result thereof gains access or may gain access to his or her property or a camp on his or her property cannot escape or is likely not to be able to escape therefrom, and
- (b) heap up or cause to be heaped up soil or any other material on one side of any fence, whether on a common boundary or on his or her own property, or remove or cause to be removed soil on one side of such fence in such manner that such heaping up or such removal has the effect of reducing or increasing the height, as the case may be, of such fence on one side, unless any wild animal which gains or may gain access to such property or a camp on such property over such lower section of such fence can escape or is likely to be able to escape therefrom.

30

**Prohibition on laying of poison**

**32.** (1) Subject to the provisions of subsection (2), no person shall lay or cause or allow to be laid any poison at any place where it is likely to or in such manner that it may be assimilated or ingested by a wild animal.

(2) The provisions of subsection (1) shall not preclude any person from laying any poison with due observance of such provisions, for the purpose of exterminating rodents, Redwinged Starlings, European Starlings, English Sparrows or Colies.

35

**Prohibition on use of motor vehicles or aircraft for [the] purpose of hunting wild animals or of filming or photographing [a] hunt, etc., of such animals**

**33.** (1) Subject to the provisions of subsection (2), no person shall without a permit use any motor vehicle or aircraft to hunt any wild animal or to hunt, disturb, drive or stampede any wild animal or animals for the purpose of filming or photographing such hunt, disturbance, drive or stampede or for any other purpose whatsoever.

40

(2) The provisions of subsection (1) shall not preclude the use of a motor vehicle for the hunting in accordance with the provisions of this ordinance of any wild animal by the owner of any land on such land.

45

**34.**

### Certificate of adequate enclosure

35. (1) Any owner of land on which any species of protected wild animal is found may in the prescribed manner and form and in relation to any such species, apply to the **[Director] Board** for a certificate of adequate enclosure as contemplated by subsection (4) in respect of the whole or any portion of such land. 5

(2) Any application under subsection (1) shall—

- (a) include a full description of the land in respect of which application is made, its boundaries and size and the vegetation thereon;
- (b) state the species of protected wild animal to which the application relates, the estimated number of such species in a free state of nature and the number of such species in captivity, on the land referred to in paragraph (a); 10
- (c) set forth the grounds on which the land in question is considered to be adequately enclosed, and
- (d) reflect such further information as may be prescribed.

(3) For the purpose of deciding upon any such application the **[Director] Board** may require the applicant to furnish **[him]** it with such further information as **[he]** it may consider necessary or desirable. 15

(4) If the **[Director] Board**—

- (a) having regard to the size of the land in respect of which application has been made under subsection (1), the number of the species of protected wild animal to which such application relates which is normally found on such land and such other circumstances as **[he]** it may consider relevant, is of opinion that the animals in question are in effect being kept in captivity, **[he]** it shall refuse the application, or 20
- (b) is satisfied that such land is adequately enclosed in relation to such species, **[he]** it may in **[his]** its discretion grant the application subject to such conditions as **[he]** it may consider necessary or desirable and issue to the applicant a certificate of adequate enclosure in respect of such land and shall in such certificate specify the conditions, if any, subject to which it is issued, define the boundaries of the land concerned and specify the species of protected wild animal to which it relates. 25 30

(5) (a) A certificate of adequate enclosure issued in terms of subsection (4) shall, subject to the provisions of paragraph (b), be valid for the period specified therein.

(b) A certificate of adequate enclosure may at any time during the period of validity thereof be withdrawn by the **[Director] Board** summarily and without prior notice to or consultation with the holder thereof; provided that such withdrawal may be set aside by the **[Director] Board** if, after consultation with such holder, **[he]** it is of the opinion that such setting aside is necessary or desirable. 35

(6) Any certificate issued under section 22 of the Nature Conservation Ordinance, 1965 (Ordinance 26 of 1965) prior to the repeal of that ordinance by section 89 of this ordinance shall be deemed to be a certificate of adequate enclosure issued in terms of subsection (4) of this section, and any such certificate shall remain valid for the period stated therein unless it is withdrawn in terms of subsection (5) prior to the expiration of such period. 40

### Rights of holder of certificate of adequate enclosure and certain other persons 45

36. Any owner of land to whom a certificate of adequate enclosure has been issued in terms of section 35(4)(b), any relative of such owner, any full-time employee of such owner acting under the authority of such owner and any other person in possession of a permit or of a licence referred to in section 27(1)(a) and acting with the permission of such owner may, notwithstanding anything to the contrary contained in this ordinance but subject to any conditions specified in such certificate— 50

- (a) at any time by any means other than by the use of fire or poison and on the land in respect of which such certificate was issued hunt any number of the species of protected wild animal specified in such certificate;

- (b) subject to the provisions of section 31(2) and any regulations made under section 82(1)(d) keep any animal of such species which has been captured on such land in captivity on such land, and
- (c) sell or donate any animal of such species which has been so captured or the carcase of any such animal. 5

#### **Certificate of adequate enclosure lapses on transfer or lease of land**

37. Any certificate of adequate enclosure issued in terms of section 35(4)(b) shall lapse upon the transfer or lease of the land in respect of which it was issued or of any portion of such land.

#### **Transfer of hunting and other rights 10**

38. (1) The **[Director] Board** may in writing authorise—
- (a) any owner of land to whom a certificate of adequate enclosure has been issued in terms of section 35(4)(b), or
  - (b) any other owner of land,
- to transfer, whether temporarily or permanently, to a person approved by **[him] it** and subject to such conditions as **[he] it** may impose—
- (i) in the case of an owner referred to in paragraph (a), the rights conferred on such owner by section 36, and
  - (ii) in the case of an owner referred to in paragraph (b), the rights of any such owner under this ordinance. 15 20
- (2) In the application of the provisions of this ordinance, any person to whom any rights have been transferred as contemplated by subsection (1), shall as from the date of such transfer and, in the case of a temporary transfer, for the duration of the period concerned, be deemed to be the owner of the land in question.

#### **Owner of land may permit other persons to hunt wild animals on his or her land 25**

39. (1) Subject to the provisions of this ordinance, any owner of land may permit any other person to hunt in accordance with such provisions any wild animal on the land of such owner and to remove any such animal or the carcase of any such animal from such land.
- (2) Subject to the provisions of subsection (3) no permission granted in terms of subsection (1) shall be valid unless it is reduced to writing and reflects—
- (a) the full names and address of the owner concerned and of the person to whom it is granted, and
  - (b) the number and the species of wild animal, the date or dates and the land in respect of which it is granted, 30 35
- and is signed and dated by such owner.
- (3) The provisions of subsection (2) shall not apply in respect of permission granted in terms of subsection (1) to any relative or full-time employee of any owner of land.

#### **Hunting of wild animals on land belonging to another person**

40. No person shall on land of which he or she is not the owner hunt any wild animal or remove any such animal or the carcase of such animal from such land without the permission of the owner of such land granted in terms of section 39. 40

#### **Donation or sale of wild animal or carcase thereof**

41. No person shall donate or sell any wild animal or the carcase of any such animal to any other person unless, when he or she delivers such animal or carcase to such other person, he or she furnishes such other person with a written document signed by him or her reflecting—
- (a) the full names and address of such firstmentioned person;
  - (b) the full names and address of such other person;
  - (c) the number and species of wild animals or carcasses so donated or sold; 45 50

- (d) the date on which such animal or carcase was so donated or sold, and
- (e) a statement by him or her that he or she has donated or sold such animal or carcase to such other person.

#### **Possession of wild animal or carcase thereof**

42. (1) Any person found in possession of any wild animal or the carcase of any such animal shall be guilty of an offence unless, in the event of— 5
- (a) the animal having been hunted by him or her on the land of any other person, he or she is in possession of the written permission contemplated by section 39, or
  - (b) his or her having acquired such animal or carcase from any other person, he or she is in possession of a written document contemplated by section 41. 10
- (2) The provisions of subsection (1) shall not apply in any case where a relative or full-time employee of any owner of land is found in possession of a wild animal or the carcase of any such animal which such relative or employee has hunted on the land of such owner with his or her permission or which such owner has sold or donated to such relative or employee. 15

#### **Documents relating to permission to hunt or to [the] donation of wild animals or [the] carcasses thereof to be retained for certain period**

43. Every document referred to in sections 39 and 41 shall be retained by the person to whom it was furnished for a period of at least two months from the date on which it was so furnished or while such person is in possession of the wild animal or carcase to which it relates, whichever is the longer period. 20

#### **Miscellaneous offences in relation to certain wild animals**

44. (1) Subject to the provisions of this ordinance, no person shall without a permit authorising him or her to do so— 25
- (a) import into, export from or transport in or through the Province any wild animal;
  - (b) (i) import into the Province from any place outside the Republic the carcase of any wild animal, or
  - (ii) export from the Province the carcase of any endangered wild animal or any protected wild animal specified in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; 30
  - (c) sell, buy, donate or receive as a donation the carcase or anything manufactured from the carcase of any endangered wild animal; 35
  - (d) process, prepare, cure, tan or in any manner whatsoever treat the carcase of any endangered wild animal for the purpose of—
    - (i) manufacturing any article therefrom;
    - (ii) exhibiting such carcase or any article manufactured therefrom, or
    - (iii) mounting such carcase, or 40
  - (e) sell, buy, donate, receive as a donation or be in possession of any live endangered or protected wild animal.
- (2) The provisions of subsection (1)(a) shall not be construed so as to preclude the export from or the transport in or through the Province without a permit, of any bird which is not an endangered or protected wild animal. 45

#### **Sale and purchase of biltong and biltong sausage**

45. (1) No person shall sell biltong or biltong sausage unless—
- (a) the meat of which it was made is the meat of a wild animal hunted in accordance with the provisions of this ordinance or any other law;
  - (b) it has been packed by the producer thereof in a securely sealed and unbroken container and such seal and container is intact, and 50
  - (c) the names and address of the producer appear in clearly legible letters and figures on such container.
- (2) No person shall buy any biltong or biltong sausage which does not comply with the provisions of subsection (1)(b) and (c). 55

### Sale of carcasses of wild animals

46. No carcass of any wild animal shall be sold by any person other than—
- (a) the owner of any land on which the animal concerned was hunted in accordance with the provisions of this ordinance;
  - (b) a market master at a public or municipal market, or 5
  - (c) a person authorised by a permit issued under this ordinance [**or a licence issued under the Licences Ordinance, 1981 (Ordinance 17 of 1981),**] to sell such carcass.

### Local authority may permit owner of land to hunt certain wild animals

47. (1) If, on application in the prescribed form by an owner of land within its area of jurisdiction a local authority is satisfied that damage is being done to crops or other property of such owner, by—
- (a) any species of protected wild animal other than African Elephant, African Lion, Bontebok, Red Hartbeest, Eland, Oryx, Black Wildebeest, Oribi, Blue Duiker, Klipspringer or Ant-bear, or 15
  - (b) birds which are not endangered or protected wild animals,
- it may, notwithstanding anything to the contrary in this ordinance contained, issue a permit in the prescribed form authorising such owner or a person nominated by him or her to hunt such species or birds on the land of such owner at the place where such damage is being done and may in a case referred to in paragraph (b), notwithstanding the provisions of section 29(a), (d) or (e), specify in any such permit that any birds referred to in such paragraph may be hunted by means of poison or a trap and at any time of the day or night. 20
- (2) A permit issued in terms of subsection (1) shall be valid for a period specified therein not exceeding one month from the date of issue thereof. 25

## CHAPTER IVA

### PROTECTION OF RHINOCEROSES (sec 47A)

#### Protection of and penalties for offences with regard to rhinoceroses, etc.

- 47A. (1) Notwithstanding anything to the contrary contained in this ordinance, no person shall, without a permit authorising him or her to do so— 30
- (a) hunt, capture, possess, import into, export from or transport through the Province, buy, sell, receive as a donation or donate any rhinoceros, or
  - (b) possess, import into, export from or transport through the Province, buy, sell, receive as a donation or donate the carcass (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of any rhinoceros. 35
- (2) Any person who contravenes a provision of subsection (1) shall be guilty of an offence and shall, upon conviction, be liable to a fine not exceeding one hundred thousand rands or to imprisonment for a period not exceeding ten years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any rhinoceros or the carcass (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of any rhinoceros in respect of which the offence was committed. 40
- (3) (a) The court convicting any person of an offence contemplated by subsection (2), read with subsection (1)— 45
- (i) shall, without notice to any person and in addition to the penalty which it may impose in terms of subsection (2), declare any rhinoceros or the carcass (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of any rhinoceros in respect of which the offence was committed to be forfeited to the [**Administration**] Board, and 50
  - (ii) may, without notice to any person and in addition to the penalty and forfeiture contemplated by subparagraph (i), declare any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance and any weapon, instrument, receptacle or other thing which was used for or in connection with the

commission of the offence and which was produced to the court to be forfeited to the [Administration] Board.

(b) The [Administration] Board or any person authorised thereto by [him] it, may cause to be destroyed or sold or may direct what may otherwise be done with anything declared to be forfeited in terms of paragraph (a). 5

(c) Any rights which any person other than the convicted person may have in any rhinoceros or any carcase (whether untreated, processed, prepared, cured, tanned or treated in any other manner whatsoever) of a rhinoceros or any other thing forfeited in terms of paragraph (a) shall not be affected by such forfeiture if such person proves that he or she was not aware of the commission of the offence or that he or she took all reasonable steps to prevent the commission of the offence or that he or she could not prevent the commission of the offence and that he or she may lawfully possess whatever has been forfeited. 10

(d) The provisions of section 35(4) of the Criminal Procedure Act, 1977 (Act 51 of 1977), shall, subject to the provisions of paragraph (c), apply *mutatis mutandis* in respect of any forfeiture in terms of this subsection. 15

(4) [Where in any prosecution under subsection (1) read with subsection (2) any person is shown to have performed any act contemplated by subsection (1), it shall, until the contrary is proved, be presumed that the performance of such act was unlawful]. 20

(5) [The Director-General: Provincial Administration of the Cape of Good Hope may, from money appropriated by Parliament for that purpose and with the concurrence of the Minister of Finance, pay a cash amount, which in his opinion] The Board may from money appropriated by the Provincial Parliament of the Western Cape for that purpose and with the concurrence of the provincial Minister responsible for financial affairs, pay a cash amount, which in its opinion is fair and reasonable in the circumstances, to any person, except a person in the employ of the State who provided [him] it with any information or evidence with regard to an offence contemplated by subsection (2), irrespective of whether such information or such evidence leads to a prosecution and conviction in a competent court. 25 30

## CHAPTER V

### PROTECTION OF FISH IN INLAND WATERS (secs 48-61A)

#### Pollution of inland waters

48. No person shall deposit or cause or allow to be deposited—

(a) in any inland waters, or 35

(b) in any place from where it is likely to percolate into or in any other manner enter any inland waters,

anything, whether solid, liquid or gaseous, which is or is likely to be injurious to any fish or fish food or which, if it were so deposited in large quantities or numbers, would be so injurious. 40

#### Obstruction of fish in inland waters

49. No person shall place or cause or allow to be placed in any inland waters any article or thing, other than a net of which the use in inland waters is authorised by any provision of this ordinance, which will or is likely to prevent the free passage of fish in such waters. 45

#### Placing of fish etc. in inland waters

50. No person shall without a permit place in or in any manner introduce into or cause or allow to be placed or introduced into any inland waters any live fish or any aquatic growth; provided that the provisions of this section shall not apply in respect of live fish which is replaced into any inland waters immediately after it has been caught in such waters. 50

### **Killing of fish**

51. Subject to the provisions of section 61, no person shall by any means whatsoever kill or injure any fish or wilfully disturb or destroy the spawn of any fish in any inland waters; provided that the provisions of this section shall not apply in respect of any fish which is killed or injured while being caught in and taken from such waters in accordance with the provisions of this ordinance. 5

### **Prohibition on catching of certain species of fish and catching of fish outside angling season**

52. Subject to the provisions of section 61 no person shall without a permit—  
 (a) catch any fish which is an endangered wild animal or have in his or her possession any such fish or the carcass or spawn thereof, or 10  
 (b) at any time outside the angling season for any species of fish catch any fish of such species in any inland waters.

### **Angling licence**

53. Subject to the provisions of sections 52 and 61, no person shall angle in any inland waters without a licence issued by the **[Director] Board**, a receiver of revenue or any person authorised to do so by the **[Director] Board** in the prescribed form on payment of the prescribed fee. 15

### **Netting licence**

54. (1) Subject to the provisions of section 61, no person shall for any purpose whatsoever use any fyke-net, crab-net, staked net or trek-net in any inland waters without a licence in the prescribed form issued to him or her by the **[Director] Board** on payment of the prescribed fee. 20

(2) Subject to the provisions of sections 52 and 61, no person shall for any purpose whatsoever use any cast-net in any inland waters without a licence in the prescribed form issued to him or her by the **[Director] Board**, a receiver of revenue or any person authorised to do so by the **[Director] Board** on payment of the prescribed fee. 25

### **Prohibition on catching of more fish than number determined as bag limit and of undersized fish**

55. (1) Subject to the provisions of section 61, no person shall without a permit at any time in any inland waters— 30

- (a) catch a greater number of any species of fish than the daily bag limit determined in respect of such species by **[proclamation] notice** under section 79(a), or
- (b) catch any fish which is of a size or mass less than the size or mass determined by regulation made under section 82(1)(h) in respect of the species of such fish. 35

(2) Notwithstanding anything to the contrary in this ordinance, the **[Director] Board** may for the purposes of this section authorise any person to whom a permit has been issued for the purposes of subsection (1) to use any net in any inland waters. 40

### **Prohibited ways of catching fish**

56. Subject to the provisions of section 61, no person shall in any inland waters catch fish—

- (a) by snatching or spearing;
- (b) by means of a staked net, trek-net or fyke-net which, in each case, extends over a distance of more than half the width of such inland waters at the place where such net is so used; 45
- (c) by means of a fyke-net if any device used to guide fish to an opening in such net is more than six metres in length;
- (d) by placing a staked net or fyke-net or by using a trek-net within a distance of thirty metres from the extremities of any other such net being used in such 50

waters and for the purposes of this paragraph the extremities of a fyke-net shall be deemed to be the extremities of the devices, if any, used to guide fish to an opening in such net;

- (e) by angling by means of—
  - (i) more than two lines; 5
  - (ii) more than two single hooks attached to any line, or
  - (iii) a set line with more than two hooks attached thereto.

#### **Sale etc. of certain species of fish**

- 57.** No person shall without a permit—
- (a) sell or buy any fish which is an endangered wild animal or the carcase or spawn of such fish; 10
  - (b) sell, buy or transport any live carp, bluegill sunfish, trout, black bass, banded tilapia or exotic invertebrate freshwater fauna;
  - (c) sell or buy any fish the catching of which is prohibited by section 55(1)(b).

#### **Importation and export of fish** 15

- 58.** No person shall without a permit—
- (a) import any live fish or the spawn of any fish into the Province;
  - (b) import into or export from or transport in or through the Province any fish which is an endangered wild animal or the carcase or spawn of any such fish, or 20
  - (c) import into or export from the Province any fish which is a protected wild animal and is specified in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973, or the carcase or spawn of any such fish.

#### **Removal etc. of bait caught in inland waters** 25

- 59.** No crab, prawn, pencil bait, shell bait or worm, whether alive or not, which has been caught in any inland waters shall, except under the authority of a permit—
- (a) be sold to any person, or
  - (b) be bought by any person except from a person authorised by any provision of this ordinance to sell it. 30

#### **Noxious aquatic growths**

**60.** No person shall cultivate, possess, transport, sell, donate, buy or otherwise acquire or import into the Province any noxious aquatic growth.

#### **Privately owned inland waters**

- 61.** The provisions of sections 51, 52, 53, 54, 55 and 56 shall, in respect of any privately owned inland waters, not apply to— 35
- (a) the owner of such waters;
  - (b) any relative of such owner, or
  - (c) any full-time employee of such owner or any other person, acting with the permission of such owner. 40

#### **Exemption from provisions for scientific purposes**

**61A.** The [Director] Board may in [his] its discretion and subject to such conditions as [he] it may deem necessary or desirable grant exemption in writing from any provision of this Chapter to any person doing research on fish or fish food.



## CHAPTER VI

## PROTECTION OF FLORA (secs 62-72)

**Possession etc. of endangered flora**

**62.** (1) Subject to the provisions of this ordinance, no person shall without a permit, be in possession of, sell, buy, donate, receive as a donation, pick, or import into, export from or transport in or through the Province, any endangered flora. 5

(2) The provisions of subsection (1) shall not be construed so as to preclude the possession without a permit by an owner of land, of any endangered flora growing in a natural state on such land.

(3) Any person desiring to sell endangered flora which he or she has cultivated on any fixed premises shall apply to the **[Director] Board** in the prescribed form for registration as a grower of endangered flora and a permit to sell endangered flora which has been cultivated and furnish **[him]** it with the prescribed information and such further information as **[he]** it may require. 10

(4) Upon receipt of any such application, the **[Director] Board** may cause such inspection of the premises concerned as **[he]** it may deem necessary to be made and if **[he]** the Board is satisfied that the granting of such application will further the objectives of this Chapter **[he]** it may, subject to the conditions which **[he]** the Board deems fit, in the prescribed form issue to the applicant a certificate of registration as a grower of endangered flora and a permit to sell endangered flora which has been cultivated. 15 20

**(5) [The holder of a permit issued under subsection (4) shall not be exempt from compliance with any provision of the Licences Ordinance, 1981 (Ordinance 17 of 1981), in connection with the sale of any flora.]**

(6) A certificate and a permit issued under subsection (4) shall be valid—

- (a) in the firstmentioned case, until it is cancelled by the **[Director] Board**, and 25
- (b) in the lastmentioned case, for a period of twelve months from the date of issue thereof.

(7) The holder of a permit issued under subsection (4) shall not sell or donate any endangered flora to any person unless, when he or she sells or donates such flora to such person, he or she furnishes such person with a written and dated document signed by him or her and reflecting— 30

- (a) his or her full name and address;
- (b) the full name and address of such person;
- (c) the number and date of such permit, and
- (d) the name of each species and the number of each species of such flora which has been sold or donated. 35

(8) Notwithstanding any provision to the contrary contained in this section, no permit shall be required for the purchase, receipt as a donation, transport or possession of any endangered flora which has been sold or donated by the holder of a permit issued under subsection (4) and in which such flora is specified; provided that any person who has bought or received as a donation or is in possession of such flora, is in possession of a document contemplated by subsection (7). 40

**Prohibition on picking of certain flora**

**63.** (1) No person shall—

- (a) uproot the plant in the process of picking the flower of any flora; 45
- (b) without a permit—
  - (i) pick any endangered or protected flora, or
  - (ii) pick any flora on a public road or on the land on either side of such road within a distance of ninety metres from the centre of such road, or
- (c) pick any protected or indigenous unprotected flora on land of which he or she is not the owner, without the permission of the owner of such land or of any person authorised by such owner to grant such permission. 50

(2) No permission granted in terms of subsection (1)(c) shall be valid unless it is reduced to writing and reflects—

- (a) the full names and address of the owner of the land concerned or of the person authorised to grant such permission;
- (b) the full names and address of the person to whom permission is granted, and 5
- (c) the number and species of flora, the date or dates on which such flora may be picked and the land in respect of which permission is granted,

and is signed and dated by such owner or the person authorised by him or her.

(3) The provisions of subsection (1)(b) shall not apply to the owner of any land, any relative of such owner and any full-time employee of such owner acting on the instructions or with the consent of such owner, in respect of any protected or indigenous unprotected flora on such land. 10

(4) The provisions of subsection (1)(b)(i) shall not apply to any person authorised in writing by the owner of any land to pick any protected flora on such land for the purpose of gathering and propagating the seed of such flora. 15

### Sale and purchase of protected flora

64. No person shall—

- (a) sell or buy any protected flora at any place other than on the premises of a registered flora grower or registered flora seller, and
- (b) sell any protected flora without a licence issued under section 65(2). 20

### Registration and licensing of flora growers and flora sellers

65. (1) Any person desiring to be registered and licensed in respect of any fixed premises as a flora grower or flora seller, as the case may be, shall apply to the [Director] Board in the prescribed manner and form for registration in terms of this section and furnish [him] it with the prescribed information and such further 25 information as [he] it may require.

(2) Upon receipt of any such application, the [Director] Board may cause such inspection of the premises concerned as [he] it may deem necessary to be made and if, after consultation with the local authority in whose area of jurisdiction such premises are situated and regard being had to any other information at [his] its disposal, [he] it is 30 satisfied that the granting of such application will not be contrary to the objectives of this Chapter, [he] the Board may, in [his] its discretion and subject to the conditions which [he] it deems fit, in the prescribed form issue to any such applicant—

- (a) in respect of the premises concerned, a certificate of registration as a flora grower or flora seller, as the case may be, and 35
- (b) on payment of the prescribed fee, a licence to sell on the premises concerned the protected flora specified by [him] it in such licence;

provided that no fee shall be payable in respect of a licence to sell protected flora which has been cultivated.

(3) [The holder of a licence issued under subsection (2) shall not be exempt from compliance with any provision of the Licences Ordinance, 1981 (Ordinance 17 of 1981), in connection with the sale of any flora.] 40

(4) (a) A licence issued to—

- (i) a flora grower shall be valid for a period of twelve months from the date of issue thereof, and 45
- (ii) a flora seller shall be valid for a period of three years from the date of issue thereof.

(b) A certificate of registration as a flora grower or flora seller shall be valid until it is cancelled by the [Director] Board or, in the case where the [Director] Board does not receive an application for a new licence from a flora grower or flora seller, as the case may be, within thirty days of the expiry of the periods contemplated by paragraph (a), 50 for the periods contemplated by paragraph (a) and for thirty days thereafter.

### Sale of protected flora on [the] premises of registered flora growers and sellers

66. No person shall sell any protected flora on the premises of—
- (a) a registered flora grower unless such flora was propagated or cultivated or occurred in a natural state on such premises;
  - (b) a registered flora seller unless such flora has been obtained from any other registered flora seller or registered flora grower, or
  - (c) a registered flora seller if such flora was propagated or cultivated or occurred in a natural state on any premises of any registered flora seller who is not registered as a flora grower in respect of such premises.

### Sale of protected flora for charitable and other approved purposes 10

67. Notwithstanding anything to the contrary contained in this ordinance, the [Director] Board may subject to such conditions and restrictions as [he] it may deem necessary issue a permit to any person authorising such person to sell protected flora for charitable or such other purposes as the [Director] Board may approve, at a time and place specified in such permit. 15

### Places for sale of indigenous unprotected flora

68. (1) A local authority may in respect of the sale of indigenous unprotected flora within its area of jurisdiction set aside such places as it may deem suitable for the sale of such flora and erect such shelters or other structures as it may deem necessary thereon [and notwithstanding anything to the contrary contained in the Licences Ordinance, 1981 (Ordinance 17 of 1981), when issuing a licence contemplated by Item 32 of the First Schedule to such ordinance authorising the holder of such licence to carry on the business of selling, bartering or exchanging flowers or offering or exposing flowers for sale, barter or exchange, restrict the carrying on of such business in respect of indigenous unprotected flora to any place so set aside]. 20
- (2) No person shall sell any indigenous unprotected flora at any place other than a place set aside in terms of subsection (1) or on the premises of a registered flora seller or registered flora grower. 25

### Sale of indigenous unprotected flora by owner of land

69. Notwithstanding the provisions of section 68(2), an owner of land on which indigenous unprotected flora is being propagated or cultivated or on which such flora occurs in a natural state may sell such flora which has been so propagated or cultivated or which so occurs to any person— 30
- (a) on such land;
  - (b) at a place set aside in terms of section 68(1), or
  - (c) carrying on business under a licence issued to him or her under section 65(2). 35

### Export and importation of flora

70. No person shall without a permit—
- (a) export any flora from the Province; provided that the provisions of this paragraph shall not apply to the export by any person of any flora, except endangered flora and protected flora referred to in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973, which he or she legally obtained from any registered flora grower or registered flora seller who is the holder of a permit to export such flora contemplated by this paragraph; provided further that such person, while he or she is exporting such flora, shall be in possession, in addition to any document contemplated by sections 71 and 72, of a document in which 40 45

the number and date of such export permit of such flora grower or flora seller are reflected, or

- (b) import into the Province any protected flora specified in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973.

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#### **Donation of flora**

71. The provisions of sections 41 and 43 shall apply *mutatis mutandis* in respect of the donation of any flora by any person to any other person.

#### **Possession of flora**

72. The provisions of sections 42 and 43 shall apply *mutatis mutandis* in respect of any person found in possession of any flora.

### **CHAPTER VIA**

#### **PROFESSIONAL HUNTERS, HUNTING OUTFITTERS AND DIRECTORS OF PROFESSIONAL HUNTING SCHOOLS**

##### **Definitions**

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72A. For the purposes of this Chapter—

- (a) “**client**” means a person who is not a South African citizen who, in any form or manner, rewards another person for, or in connection with, the hunting of wild animals or feral animals;
- (b) “**Director of a Professional Hunting School**” means a person who presents and conducts a prescribed course to instruct prospective professional hunters or hunting outfitters or assesses the proficiency of professional hunters or hunting outfitters;
- (c) “**feral animal**” means an animal of a domesticated fauna species, which has gone wild;
- (d) “**hunting outfitter**” means a person who, for any form or manner of reward, presents for hunting or organises or conducts the hunting of, wild animals or feral animals for clients, and
- (e) “**professional hunter**” means a person who, for any form or manner of reward, offers or agrees to escort a client to enable the client to hunt wild animals or feral animals.

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##### **Operating as professional hunters, hunting outfitters and Directors of Professional Hunting Schools**

72B. (1) Subject to the provisions of this Ordinance and any regulation made under section 72G, a person shall not act as a—

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- (a) professional hunter, or
- (b) hunting outfitter, or
- (c) Director of a Professional Hunting School,

unless in possession of a permit which permits that person to do so.

(2) The requirements to be complied with by a professional hunter, a hunting outfitter or a Director of a Professional Hunting School shall be as the [Director] Board may determine from time to time.

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(3) The [Director] Board may exempt any person from the provisions of subsection (1).

##### **Hunting of wild animals or feral animals by client**

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72C. (1) A client shall not hunt a wild animal or a feral animal unless—

- (a) the hunt is organised or conducted by a hunting outfitter, and
- (b) the client is escorted by a professional hunter.

(2) A professional hunter who escorts a client shall ensure that the client does not hunt contrary to the provisions of this Ordinance and may give the client any lawful instruction.

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(3) A client shall obey an instruction given in terms of subsection (2).

(4) A professional hunter may while escorting a client and if this is necessary in defence of life or property or to prevent unnecessary suffering of a wild animal or a feral animal, kill a wild animal or a feral animal.

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**Landowner's permission to hunting outfitters**

**72D.** Subject to the provisions of this Ordinance, a hunting outfitter shall not present for hunting or organise the hunting of, a wild animal or a feral animal for a client unless the hunting outfitter is the holder of a written permission from the owner of the land on which the hunt is presented or organised. 5

**Prohibited act**

**72E.** A person who under false pretences presents, organises or conducts a hunt contemplated in this Chapter for a client shall be guilty of an offence.

**Advisory committee**

**72F.** The [Director] Board may obtain advice from a representative South African Professional Hunting Committee. 10

**Regulations**

**72G.** (1) The [Administrator] responsible Minister may make regulations relating to professional hunters, hunting outfitters, Directors of Professional Hunting Schools and the control and regulation of the hunting of wild animals or feral animals. 15

(2) Regulations made in terms of subsection (1) may, in respect of any contravention thereof or failure to comply therewith, impose a penalty of a fine or imprisonment for a period not exceeding 12 months or both a fine and such term of imprisonment.

**Offences**

**72H.** A person who contravenes or fails to comply with the provisions of section 72B, 72C or 72D shall be guilty of an offence and liable on conviction to a fine or imprisonment for a period not exceeding two years or both a fine and such term of imprisonment. 20

**CHAPTER VII****GENERAL AND SUPPLEMENTARY (secs 73-90) 25****Permits etc. to be issued by [Director] Board**

**73.** Whenever any permit, certificate, written authority, exemption or order is by any provision of this ordinance required for the lawful performance of any act, such permit, certificate, written authority, exemption or order may, unless specific provision is made for the issue thereof by any other authority, on application in the prescribed form, in [his] its discretion be issued by the [Director] Board subject to such conditions as [he] it may, either generally or specially, consider necessary or desirable in regard thereto. 30

**Period of validity of permits etc**

**74.** Unless otherwise provided in this ordinance, any permit, certificate, written authority, licence or exemption issued thereunder shall be valid for the period specified therein. 35

**Cancellation of permits etc. and alteration of conditions relating thereto**

**75.** (1) The [Director] Board or a local authority may at any time if [in his or its] either of them is of the opinion that it is necessary or desirable in the interests of nature [and environmental] conservation— 40

- (a) cancel any permit, certificate, written authority, licence, exemption or order (hereinafter in this section referred to as “document”) issued by [him or it]

either of them in terms of any provision of this ordinance or the issue of which was so authorised by **[him or it]** either of them, or

- (b) consistently with the provisions of this ordinance, amend the conditions, if any, subject to which a document was issued by the deletion or substitution of any condition or the addition of any other condition. 5

(2) For the purpose of exercising any powers contemplated by subsection (1), the **[Director]** Board or the local authority concerned shall notify the holder of such document of **[his or]** its decision to exercise such power, either—

- (a) in writing delivered to him or her personally or posted by registered mail properly stamped and addressed, to his or her last known business or residential address, or 10
- (b) orally through a nature **[and environmental]** conservation officer or ranger under **[his or]** its control.

(3) The holder of such document shall return such document to the **[Director]** Board or local authority, as the case may be, by registered mail within fourteen days after receipt of a notification in terms of subsection (2)(a) or by handing such document to the officer or ranger informing him or her of such decision as contemplated by subsection (2)(b). 15

(4) Any cancellation or amendment in terms of subsection (1) of the conditions specified in any document, shall take effect as soon as the holder of the document is in terms of subsection (2) apprised of the decision concerned. 20

(5) In any case contemplated by subsection (1)(b) the **[Director]** Board or the local authority concerned may, after receipt of the document in question in terms of subsection (3), issue to the holder of such document a copy of the original thereof incorporating the conditions as amended in terms of subsection (1) by the **[Director]** Board or local authority, as the case may be. 25

(6) When any document is cancelled in terms of subsection (1)(a), the holder thereof shall not be entitled to a refund of any fee or portion thereof paid by him or her in respect of such document.

**[No reasons need be given for decisions taken in exercise of powers under ordinance]** 30

**76. No person authorised by any provision of this ordinance to issue or cancel, or to impose or amend conditions relating to any permit, certificate, written authority, exemption, licence or order shall be obliged to furnish to any other person his reasons for any decision taken by him in the exercise of any such power].** 35

**Amendment of Schedules by [Administrator] responsible Minister**

**77.** (1) The [Administrator] responsible Minister may at any time by proclamation and with effect from a date specified in such proclamation, substitute or amend any Schedule to this ordinance other than Schedule 6 by the deletion of any species of fauna or flora specified in any such Schedule or the addition of any other species of fauna or flora. 40

(2) Any amendment in terms of subsection (1) may be made to apply in respect of the Province or any area therein specified in the relevant proclamation and either indefinitely or for a period so specified.

(3) A copy of any proclamation issued in terms of subsection (1) shall be laid upon the table of the Provincial [Council] Parliament within seven days of the promulgation of such proclamation if the Provincial [Council] Parliament is then in session, or, if the Provincial [Council] Parliament is not then in session, within seven days after the commencement of its next ensuing session. 45

**Hunting and angling seasons** 50

**78.** The **[Administrator may by proclamation]** Board may by notice in the *Provincial Gazette* in respect of the Province or any area therein specified in such **[proclamation]** notice—

- (a) each year determine the period in such year during which any species of protected wild animal specified in such **[proclamation]** notice may be hunted under the authority of a permit or licence referred to in section 27(1)(a), or
- (b) determine either indefinitely or for a specified period, the period in each year during which any species of fish specified in such **[proclamation]** notice may be caught by angling under the authority of a license referred to in section 53. 5

#### Miscellaneous powers of **[Administrator]** Board

79. The **[Administrator may by proclamation]** Board may by notice in the *Provincial Gazette*, in respect of the Province or any area therein specified in such **[proclamation]** notice and either indefinitely or for a specified period- 10
- (a) determine the number of any species of protected wild animal or of fish specified in such **[proclamation]** notice which may subject to the provisions of this ordinance be killed, captured or caught-
    - (i) in the case of protected wild animals, during the period commencing one hour before sunrise and ending one hour after sunset, and 15
    - (ii) in the case of fish, during the period of twenty-four hours commencing at midnight, on any one day;
  - (b) if in **[his]** its opinion it is necessary or desirable in the interests of nature **[and environmental]** conservation and subject to such conditions as **[he]** it may deem fit suspend the operation of any provision of section 29 or of any other provision of this ordinance in so far as such provision relates to any species of fauna or flora specified in such **[proclamation]** notice; 20
  - (c) notwithstanding anything to the contrary contained in this ordinance, prohibit, control or restrict the hunting of wild animals or any species of wild animal or the catching of fish or any species of fish; 25
  - (d) declare any species of wild animal which in **[his]** its opinion is, by reason of its prevalence in any area or its mode of living or other characteristics, detrimental to any other species of wild animal or any property, to be a problem wild animal and suspend the operation of any provision of section 29 in so far as it relates to such animal in any area specified in such **[proclamation]** notice; 30
  - (e) prohibit, restrict or regulate the capture, injuring, destruction, export, sale or acquisition in any manner of any species of invertebrate animal specified in such **[proclamation]** notice;
  - (f) prohibit, restrict or regulate the transport of any wild animal specified in such **[proclamation]** notice; 35
  - (g) prohibit or regulate the use either generally or specially—
    - (i) on any inland waters, of any boat or craft designed or intended for propulsion by any means other than human power, or
    - (ii) on the shores below the high water mark of any inland waters, of any motor vehicle as defined in section I of the Road Traffic **[Ordinance, 1966 (Ordinance 21 of 1966)]** Act, 1989 (Act 29 of 1989); 40
  - (h) notwithstanding anything to the contrary contained in any regulation made under section 82—
    - (i) prohibit the use of any tool, instrument or device for the digging for, or the gathering, catching or collecting of any kind of crab, prawn, pencil bait, shell bait or worm or specify any tool, instrument or device which may be used for such purpose; 45
    - (ii) prohibit or regulate the use of any equipment for the catching of fish or any species of fish in any inland waters; 50
    - (iii) prohibit, control or regulate the removal of any kind of crab, prawn, pencil bait, shell bait or worm, whether alive or not, caught in any inland waters, to other inland waters or the sea, or
  - (i) prohibit, control or regulate the picking of flora or any species of flora in any manner or by any means specified in such **[proclamation]** notice. 55

## Exemptions

80. The [Administrator] Board may, if in [his] its opinion it is necessary or desirable in the public interest or in the interests of nature [and environmental] conservation, in writing and subject to such conditions and for such period as [he] it may determine, exempt any person from any provision of this ordinance in so far as such provision relates to any specified species of fauna or flora. 5

## Disposal of articles confiscated or forfeited under ordinance

81. Whenever any article, animal or thing has been confiscated or forfeited to the [Administration] Board under any provision of this ordinance-

- (a) the owner thereof may, within three months from the date of such confiscation or forfeiture or, where proceedings in a Superior Court involving such confiscation or forfeiture have been instituted within such period, within three months after judgement in such proceedings, as the case may be, apply to the [Administrator] Board for the return of such article, animal or thing, and
- (b) the [Administrator] Board may—
  - (i) in the event of an application contemplated by paragraph (a) being made within the relevant period contemplated by the said paragraph return such article, animal or thing to the owner thereof;
  - (ii) after expiration of the relevant period contemplated by paragraph (a), deal in any manner [he] it may deem fit (including the alienation or disposal thereof) with any such article, animal or thing, and
  - (iii) if such article, animal or thing has been alienated or disposed of in terms of subparagraph (ii), pay the proceeds of such alienation or disposal to the owner of the article, animal or thing concerned.

## Regulations

82. (1) The [Administrator] responsible Minister may make regulations-
- (a) relating to the surrender of licences, permits and exemptions at the expiration thereof or when cancelled by a court;
  - (b) regulating or restricting the use of dogs in the hunting of any wild animal in any area in respect of which the operation of section 29(1) has been suspended by [proclamation] notice under section 79(b);
  - (c) regulating or restricting the use of persons as beaters at a hunt of wild animals as contemplated by section 27(3);
  - (d) regulating or restricting the number or the species of wild animals which may be kept in captivity or held in possession and prescribing the conditions under and the manner in which any such wild animal or species shall be so kept or held;
  - (e) specifying measures relating to the control, restriction or prevention of the breeding of wild animals kept in captivity or held in possession;
  - (f) requiring the keeping of books, statements or invoices and the retention thereof by persons who—
    - (i) carry on business by buying or selling flora, fish caught in inland waters or wild animals, or
    - (ii) keep wild animals in captivity or are in possession thereof,
 and specifying the particulars to be entered in such books, statements and invoices;
  - (g) providing for and regulating the putting and keeping in quarantine of any wild animal or fish imported into the Province;
  - (h) determining for the purposes of section 55(b), a size or mass in respect of any species of fish and specifying the methods to be employed in determining the size of fish;
  - (i) providing for the protection, preservation and propagation of any fish food in inland waters;



- (j) regulating, restricting or prohibiting the sale of fish caught or of any kind of crab, prawn, pencil bait, shell bait or worm gathered in any inland waters;
- (k) providing for or prohibiting the use in any inland waters of any type of tool, instrument or device for the digging for or the gathering, catching or collecting of any kind of crab, prawn, pencil bait, shell bait or worm; 5
- (l) providing for and regulating the replacement of soil and plant life removed in the process of collecting any kind of crab, prawn, pencil bait, shell bait or worm;
- (m) providing for the protection of beacons, buoys, notices, notice boards, signs or other marks erected, used or required for the purposes of this ordinance; 10
- (n) providing for or regulating the killing by means of poison of rodents, insects or any bird referred to in section 47(1)(b);
- (o) prescribing the fees payable in respect of the issue of licences, permits, certificates, written authorities or exemptions under this ordinance;
- (p) relating to the forms of licences, permits, certificates or other documents to be issued or used for the purposes of this ordinance; 15
- (q) relating to any matters which are required or permitted to be prescribed by regulation,

and, generally, in regard to any matter which the **[Administrator]** responsible Minister considers necessary or expedient to prescribe or regulate in order to further or achieve the objects of this ordinance, the generality of this provision not being limited by the preceding paragraphs of this subsection. 20

(2) Regulations made under subsection (1) may be made applicable throughout the Province or to or in respect of different areas, inland waters or species of fauna or flora and may prescribe, in respect of any contravention thereof or failure to comply therewith, a penalty of a fine not exceeding one thousand five hundred rand or imprisonment for a period not exceeding six months. 25

### **Restriction of liability**

**83.** No person, including the **[Administration]** Board, or an employee of the Board and a local authority, shall be liable for any damage suffered by any other person in consequence of anything done in good faith in the exercise or performance of any power, duty or function conferred or imposed by or under this ordinance. 30

### **Presumptions**

- 84.** (1) In any prosecution under this ordinance—
- (a) any wild animal, the carcase of any such animal or any fire-arm having a barrel exceeding one hundred millimetres in length, found or proved to have been in or on any vehicle, vessel, boat, craft, float, aircraft or other means of conveyance, shall, unless the contrary is proved, be presumed to have been in possession of the person in charge of such vehicle, vessel, boat, craft, float, aircraft or other means of conveyance at the relevant time; 35 40
  - (b) any person found or proved to have been in possession of any flora shall unless the contrary is proved, be presumed to have picked such flora in contravention of the provisions of this ordinance or to have bought it from a person not authorised by this ordinance to sell it;
  - (c) any person found or proved to have been in possession of any wild animal shall, unless the contrary is proved, be presumed to have kept such animal in captivity at the relevant time; 45
  - (d) any person found removing or proved to have removed any wild animal or the carcase of any such animal from any trap, snare, pitfall, net, birdlime or other

similar device, shall, unless the contrary is proved, be deemed to have laid or prepared such trap, snare, pitfall, net, birdlime or other device and to have captured the animal concerned;

- (e) any person who is found trespassing, while in control of a dog, on any land on which wild animals are normally found or who is proved to have so trespassed on such land shall, unless the contrary is proved, be presumed to have hunted the wild animals normally found on such land by the use of such dog. 5

(2) Whenever—

- (a) a vehicle, vessel, boat, craft, float, aircraft or other means of conveyance is being or has been used for the purpose of or in connection with the commission of an offence under this ordinance; 10

- (b) any wild animal, the carcase of such animal or fish in respect of which an offence is being or has been committed under this ordinance is found or has been in or on a vehicle, vessel, boat, craft, float, aircraft or other means of conveyance, or 15

- (c) a weapon, line, poison, net or any other object which could be used for the hunting of wild animals or the catching of fish and which is being or was used or forms or formed an element in the commission of an offence under this ordinance, is found or has been in or on a vehicle, vessel, boat, craft, float, aircraft or other means of conveyance, 20

the owner of such vehicle, vessel, boat, craft, float, aircraft or other means of conveyance as well as the person in charge thereof at the time of the commission of the offence or at the time when the wild animal, carcase, fish or any object contemplated by paragraph (c) is found or was in or on such vehicle, vessel, boat, craft, float, aircraft or other means of conveyance shall be presumed to have committed the offence concerned and be liable to be convicted and sentenced in respect thereof unless it is proved that he or she did not commit such offence and was unable to prevent the commission thereof. 25

## Offences

85. Any person who—

- (a) contravenes or fails to comply with any provision of this ordinance or any regulation made or instruction given or demand made thereunder; 30

- (b) alters, fabricates or forges any document issued or required for the lawful performance of any act in terms of this ordinance;

- (c) passes, uses, utters or has in his or her possession any altered, fabricated or forged document contemplated by paragraph (b); 35

- (d) under a false name obtains any document contemplated by paragraph (b);

- (e) while prohibited by an order of court from obtaining any document in terms of this ordinance, obtains or applies for such document;

- (f) being the holder of any document issued under this ordinance authorising or directing him or her to perform any act or to perform any act in a specified manner, performs such act without having such document in his or her possession or in a manner other than that so specified; 40

- (g) fails to comply with any term or condition subject to which any document was issued to him or her under this ordinance;

- (h) falsely holds himself or herself out to be a nature [and environmental] conservation officer, nature [and environmental] conservation ranger or an honorary nature [and environmental] conservation officer; 45

- (i) hinders, obstructs or interferes with any officer referred to in paragraph (h) in the exercise of his or her powers or the performance of his or her functions under this ordinance or without good cause refuses or fails on demand to furnish any such officer with his or her name and address or with any information or document required by such officer for the purposes of this ordinance or furnishes any such officer with a false name and address; 50

- (j) while in possession of a fire-arm having a barrel exceeding one hundred

- millimetres in length or of any trap, net, gin, snare, birdlime, cage or other contrivance intended to be used or which could be used for the hunting of wild animals, trespasses on land on which there is or is likely to be any wild animal;
- (k) is found in possession of any wild animal or the carcass of any such animal or of any bait referred to in section 59 and is unable to give a satisfactory account of such possession, or
- (l) knowingly makes a false statement in any application made or in any other document furnished by him or her in terms of any provision of this ordinance, shall be guilty of an offence.

### Penalties

- 86.** (1) Any person convicted of an offence under this ordinance shall, subject to the provisions of subsection (2), be liable, in the case of—
- (a) a contravention of section 29 or 44(1) involving an endangered wild animal, 63(1) involving endangered flora, 14, 26, 32(1), 48, 50, 52(a), 57(a), 58(b), 60, 62(1), 72B or 85(i), to a fine not exceeding one hundred thousand rands or to imprisonment for a period not exceeding ten years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any endangered wild animal or the carcass thereof or any endangered flora in respect of which the offence was committed;
- (b) a contravention of section 27(1), 29, 31, 40, 41, 42(1), 44(1)(a), (b) or (e) or 46 involving an African elephant, to a fine not exceeding one hundred thousand rands or to imprisonment for a period not exceeding ten years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any African elephant or the carcass thereof in respect of which the offence was committed;
- (c) a contravention of section 27(1), 29, 31, 40, 41, 42(1) 44(1)(a), (b) or (e), 46 or 58(c) involving any protected wild animal other than an African elephant, 63(1) involving protected or indigenous unprotected flora, 64, 66 or 70, to a fine not exceeding ten thousand rands or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any such protected wild animal or the carcass thereof or any such flora in respect of which the offence was committed, and
- (d) any other offence in terms of this ordinance or any contravention of any other provision of this ordinance in respect of which no specific penalty is prescribed, to a fine not exceeding five thousand rands or to imprisonment for a period not exceeding one year or to both such fine and such imprisonment, and to a fine not exceeding three times the commercial value of any wild animal or the carcass thereof or any flora in respect of which the offence was committed.
- (2) Where a penalty is specifically prescribed by regulation for a contravention of or failure to comply with any regulation, a person convicted of any such contravention or failure shall be liable only to the penalty so prescribed.

### Cancellation of certificates etc. and forfeiture of certain articles

- 87.** (1) The court convicting any person of an offence under this ordinance—
- (a) may issue an order that any certificate, licence, permit, written authority or exemption issued to such person under this ordinance be cancelled if in its opinion the rights conferred by such certificate, licence, permit, written authority or exemption were abused by such person in the commission of such offence;

- (b) may issue an order disqualifying such person from obtaining for a specified period not exceeding three years, any specified certificate, licence, permit, written authority or exemption under this ordinance, and
- (c) (i) may declare any animal, vehicle, vessel, boat, craft, float, aircraft or other means of conveyance (hereafter referred to as “means of conveyance”) and any weapon, instrument, receptacle or other thing (hereafter referred to as “article”) which was used for the purpose of or in connection with the commission of the offence and was produced to the court, to be forfeited to the **[Administration] Board**; provided that no declaration shall be made in terms of this subparagraph in respect of any means of conveyance or article referred to in this subparagraph if the court is satisfied that the convicted person at the time of the commission of the offence was not the owner thereof and that the owner thereof was unable to prevent the use thereof by the convicted person, and
- (ii) shall declare any wild animal or the carcase thereof or any flora in respect of which the offence was committed and which was submitted to the court to be forfeited to the **[Administration] Board**.
- (2) The registrar or clerk of any court which has—
- (a) issued an order under subsection (1)(a) or (b), shall advise the person or authority who or which issued or, in the case of an order under subsection (1)(b), is authorised to issue the certificate, licence, permit, written authority or exemption in question, of such order and of the sentence imposed on the convicted person, or
- (b) made a declaration under subsection (1)(c), shall advise the **[Director] Board** of such order and of the sentence imposed on the convicted person and shall also forward the article or thing to which the declaration relates to the **[Director] Board** for disposal in terms of section 81.

#### **Disposal of licence fees, fines and proceeds of sale of articles declared forfeited**

**88.** (1) Subject to the provisions of subsection (2), all fees paid in respect of licences, permits, certificates, written authorities or exemptions issued, all fines imposed in respect of offences and the proceeds of the sale of anything declared to be forfeited to the **[Administration] Board** under this ordinance shall be paid **[into the Provincial Revenue Fund] to the Board**.

(2) All fees paid in respect of permits issued under by-laws made by a local authority and all fines paid in respect of contraventions of such by-laws shall be paid into the revenue fund of the local authority concerned.

#### **[Savings in respect of Walvis Bay**

**88A. (1) Any authority, permit (other than a permit for the importing or exporting of wild animals, fish or flora), licence, order, registration, approval, permission, exemption or document effected, given, granted or issued in relation to wild animals, fish or flora in Walvis Bay in terms of or under any law in force in Walvis Bay immediately prior to the first day of April, 1978, and which would, but for the repeal of such law, still have been of force in Walvis Bay on such first day, shall remain of force in Walvis Bay on and after such first day until the date on which the currency thereof would, in terms of such law, have expired or until the thirtieth day of September, 1978, whichever is the earlier and shall, while it so remains of force, be deemed to have been effected, given, granted or issued in terms of this ordinance.**

(2) Any person who, immediately prior to the first day of April, 1978, performed any act or did any thing in relation to wild animals, fish or flora in Walvis Bay for which any authority, permit, licence, order, registration, approval, permission, exemption or document—

- (a) was not required in terms of or under the law in force in Walvis Bay immediately prior to such first day, and

- (b) is required on or after such first day in terms of this ordinance, may, during the period expiring on the thirtieth day of September, 1978, and notwithstanding the provisions of this ordinance, continue to perform such act or do such thing without obtaining or holding the authority, permit, licence, order, registration, approval, permission, exemption or document contemplated by paragraph (b).] 5

#### Repeal of laws

**89.** (1) Subject to the provisions of subsection (2), the laws specified in Schedule 6 are hereby repealed.

(2) Unless otherwise provided in this ordinance, any proclamation, notice, regulation, certificate, licence, permit, permission, written authority or exemption issued, made, promulgated, granted, or given and any other thing done under a law repealed by subsection (1) shall be deemed to have been issued, made, promulgated, granted, given or done under the corresponding provision of this ordinance; provided that— 10

- (i) no permit or other authority issued or granted to any person under a law repealed by subsection (1) authorising such person to keep any wild animal in captivity, shall remain valid for a period longer than three months from the commencement of this ordinance, and 15
- (ii) any regulations made by a local authority under a law repealed by subsection (1), relating to the constitution of an advisory board appointed in respect of a nature reserve established by such local authority, shall be deemed to have been amended in accordance with the provisions of section 8(2). 20

#### Short title and commencement

**90.** This ordinance shall be called the Nature [**and Environmental**] Conservation Ordinance, 1974, and shall come into operation on the first day of September, 1975. 25

## SCHEDULE 1/BYLAE 1

## ENDANGERED WILD ANIMALS/BEDREIGDE WILDE DIERE

(The scientific names shown in the last column are the species of the class or order under which they appear./Die wetenskaplike name in die laaste kolom aangedui is die spesies van die klas of orde waaronder hulle voorkom.)

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
	CLASS/KLAS: MAMMALIA Order/Orde: PHOLIDOTA	
African Scaly Ant-eater	Ietermago	<i>Manis temmincki</i>
	Order/Orde: CARNIVORA	
Cheetah	Jagluiperd	<i>Acinonyx jubatus</i>
	Order/Orde: PERISSODACTYLA	
Black Rhinoceros	Swartrenoster	<i>Diceros bicornis</i>
Square-lipped Rhinoceros	Witrenoster	<i>Ceratotherium simum</i>
Cape Mountain Zebra	Kaapse Bergkwagga	<i>Equus zebra zebra</i>
	Order/Orde: ARTIODACTYLA	
Oribi	Oorbietjie	<i>Ourebia ourebi</i>
	Order/Orde: LAGAMORPHA	
Riverine Rabbit	Rivierkonyn	<i>Bunolagus monticularis</i>
	CLASS/KLAS: AVES	
	Order/Orde: CICONIFORMES	
Bald Ibis	Wildekalkoen	<i>Geronticus calvus</i>
	Order/Orde: FALCONIFORMES	
Bearded Vulture	Lammergier	<i>Gypaelus barbatus</i>
	Order/Orde: SPHENISCIFORMES	
	Family/Familie: SPHENISCIDAE	
All penguins	Alle pikkewyne	
	CLASS/KLAS: AMPHIBIA	
	Order/Orde: ANURA	
Gill's Clawed Toad	Gill se Platanna	<i>Xenopus gilli</i>
Micro Frog	Miniatuurpadda	<i>Microbatrachelia capensis</i> <i>Cacosternum capense</i>
	CLASS/KLAS: REPTILIA	
	Order/Orde: TESTUDINATA	
Geometric Tortoise	Suurpootjie	<i>Psammobates geometricus</i> (= <i>Testudo geometrica</i> )
	CLASS/KLAS: PISCES	
	Order/Orde: CYPRINIFORMES	
	Family/Familie: CYPRINIDAE	
Eastern Cape Redfin	Oos-Kaapse Rooivlerkie	<i>Pseudobarbus afer</i>
Whitefish	Witvis	<i>Barbus andrewi</i>
Smallscale Redfin	Kleinskub-rooivlerkie	<i>Pseudobarbus asper</i>
Burchell's Redfin	Burchell se Rooivlerkie	<i>Pseudobarbus burchellii</i>
Berg River Redfin	Bergrivier-rooivlerkie	<i>Pseudobarbus burgi</i>
Clanwilliam Redfin	Clanwilliam-rooivlerkie	<i>Barbus calidus</i>
Clanwilliam Yellow Fish	Clanwilliam-geelvis	<i>Barbus capensis</i>
Twee River Redfin	Tweerivier-rooivlerkie	<i>Barbus erubescens</i>
Namaqua Barb	Namakwa-ghieliementjie	<i>Barbus hospes</i>
Gold Barb	Goud-ghieliementjie	<i>Barbus pallidus</i>
Straightfin Barb	Lynvin-ghieliementjie	<i>Barbus paludinosus</i>
Fiery Redfin	Vurige Rooivlerkie	<i>Pseudobarbus phlegethon</i>

Sawfin	Saagvin	<i>Barbus serra</i>
Slender Redfin	Slank Rooivlerkie	<i>Pseudobarbus tenuis</i>
Border Barb	Grens-ghieliemientjie	<i>Barbus trevelyani</i>
Threespot Barb	Driekol-ghieliemientjie	<i>Barbus trimaculatus</i>
Clanwilliam Sandfish	Clanwilliam-sandvis	<i>Labeo seeberi</i>
	Order/Orde: SILURIFORMES	
	Family/Familie: BAGRIDAE	
Barnard's Rock Catfish	Barnard se Klipbaber	<i>Austroglanis barnardii</i>
Clanwilliam Rock Catfish	Clanwilliam-klipbaber	<i>Austroglanis gilli</i>
Rock Catfish	Klipbaber	<i>Austroglanis sclateri</i>
	Order/Orde: PERCIFORMES	
	Family/Familie: ANABANTIDAE	
Eastern Province Rocky Cape Kurper	Oostelike Provinsiekurper	<i>Sandelia bainsii</i>
	Kaapse Kurper	<i>Sandelia capensis</i>
	CLASS/KLAS: INSECTA	
	Order/Orde: COLEOPTERA	
	Family/Familie: SCARABAEIDAE	
Cape Dung Beetle	Kaapse Miskruier	<i>Circellium bacchus</i>
	Family/Familie: LUCANIDAE	
Stag Beetle	Grootkaakkewer	Genus <i>Colophon</i>
All species	Alle spesies	
	CLASS/KLAS: ONYCHOPHORA	
	Family/Familie: PERIPATOPSIDAE	
<i>Onychophora</i>	<i>Onychophora</i>	Genus <i>Peripatopsus</i> en/
All species	Alle spesies	and Genus <i>Opisthopatus</i>

## SCHEDULE 2/BYLAE 2

### PROTECTED WILD ANIMALS/BESKERMDE WILDE DIERE

(The scientific names shown in the last column are the families or species of the class or order under which they appear./Die wetenskaplike name in die laaste kolom aangedui is die families of spesies van die klas of orde waaronder hulle voorkom.)

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
	CLASS/KLAS: MAMMALIA	
	Order/Orde: INSECTIVORA	
Elephant Shrew	Klaasneus	Family/Familie: MACROSCOLIDIDAE
Shrews	Skeerbekmuise	Family/Familie:SORICIDAE
Hedgehog	Krimpvarkie	<i>Erinaceus frontalis</i>
	Order/Orde: PRIMATES	
Bush-baby	Nagapie	<i>Galago senegalensis</i>
Samango Monkey	Samango-aap	<i>Cercopithecus mitis</i>
	Order/Orde: CHIROPTERA	
All bats except	Alle vlermuise behalwe	
Fruit Bats of the family PTEROPODIDAE	Vrugtevlerruise van die familie PTEROPODIDAE	
	Order/Orde: CARNIVORA	
African Lion	Leeu	<i>Panthera leo</i>
Leopard	Luiperd	<i>Panthera pardus</i>
Black-footed Cat	Miershooptier	<i>Felis nigripes</i>
Serval Cat	Tierboskat	<i>Felis serval</i>
Aardwolf	Maanhaarjakkals	<i>Proteles cristatus</i>
Brown Hyaena	Strandwolf	<i>Hyaena brunnea</i>

Honey Badger	Ratel	<i>Mellivora capensis</i>
Silver Jackal	Silwerjakkals	<i>Vulpes chama</i>
Bat-eared Fox	Bakoorjakkals	<i>Olocyon megalotis</i>
Snake Mongoose	Slangmuishond	<i>Poecilogale albinucha</i>
	Order/Orde: PROBOSCIDEA	
African Elephant	Olifant	<i>Loxodonta africana</i>
	Order/Orde: HYRACOIDEA	
Tree Dassie	Boomdassie	<i>Dendrohyrax arboreus</i>
	Order/Orde: TUBULIDENTATA	
Ant-bear	Erdvark	<i>Orycteropus afer</i>
	Order/Orde: PERISSODACTYLA	
Burchell's Zebra	Bontkwagga	<i>Equus burchelli</i>
Hartmann's Zebra	Suidwes-bergkwagga	<i>Equus zebra hartmannae</i>
	Order/Orde: ARTIODACTYLA	
Warthog	Vlakvark	<i>Phacochoerus aethiopicus</i>
Hippopotamus	Seekoei	<i>Hippopotamus amphibius</i>
Giraffe	Kameelperd	<i>Giraffa camelopardalis</i>
	Order/Orde: ARTIODACTYLA (cont.)	
Klipspringer	Klipspringer	<i>Oreotragus oreotragus</i>
Grey Duiker	Duiker	<i>Sylvicapra grimmia</i>
Blue Duiker	Bloubokkie	<i>Cephalophus monticola</i>
Steenbok	Steenbok	<i>Raphicerus campestris</i>
Grysbok	Grysbok	<i>Raphicerus melanotis</i>
Grey Rhebuck	Vaalribbok	<i>Pelea capreolus</i>
Kudu	Koedoe	<i>Tragelaphus strepsiceros</i>
Bush-buck	Bosbok	<i>Tragelaphus scriptus</i>
Impala	Rooibok	<i>Aepyceros melampus</i>
Reed-buck	Rietbok	<i>Redunca arundinum</i>
Mountain Rhebuck	Rooiribbok	<i>Redunca fulvorufula</i>
Springbok	Springbok	<i>Antidorcas marsupialis</i>
Oryx	Gemsbok	<i>Oryx gazella</i>
Eland	Eland	<i>Taurotragus oryx</i>
African Buffalo	Buffel	<i>Syncerus caffer</i>
Blue Wildebeest	Blouwildebees	<i>Connochaetes taurinus</i>
Black Wildebeest	Swartwildebees	<i>Connochaetes gnou</i>
Red Hartebeest	Rooihartebees	<i>Alcelaphus buselaphus</i>
Bontebok	Bontebok	<i>Damaliscus dorcas dorcas</i>
Blesbok	Blesbok	<i>Damaliscus dorcas phillipsi</i>
	CLASS/KLAS: AMPHIBIA	
	Order/Orde: ANURA	
All frogs and toads except those specified in Schedule 1.	Alle paddas behalwe dié in Bylae 1 bepaal.	
	CLASS/KLAS: REPTILIA	
	Order/Orde: LACERTILIA	
All lizards	Alle akkedisse	
	Order/Orde: TESTUDINATA	
All tortoises and turtles except those specified in Schedule 1.	Alle skilpaaie en waterskilpaaie behalwe dié in Bylae 1 bepaal.	
	Order/Orde: SQUAMATA	
	Sub-order/Suborde: SERPENTES	
	Family/Familie: COLUBRIDAE	
Water Snakes	Waterslange	<i>Genus Lycodonomorphus</i>
House Snakes	Huislange	<i>Genus Lamprophis</i>



Wolf Snakes	Wolfslange	<i>Genus Lycophidion</i>
File Snakes	Vylslange	<i>Genus Mehelya</i>
Slug-eaters	Slakvreters	<i>Genus Duberria</i>
Egg-eaters	Eiervreters	<i>Genus Dasypeltis</i>
Mole Snakes	Molsslange	<i>Genus Pseudaspis</i>
Green and Bush Snakes	Groen- en Bosslange	<i>Genus Philothamnus</i>
Shovel-snout snakes	Graafneusslange	<i>Genus Prosymna</i>
	CLASS/KLAS: AVES	
All birds except—	Alle voëls behalwe—	
(1) those specified in	(1) dié in Bylae 1	
Schedule 1, and	bepaal, en	
(2) the following:—	(2) die volgende:—	
All Colies	Alle Muisvoëls	Family/Familie:
		COLIIDAE
All Crows	Alle Kraaie	Family/Familie:
		CORVIDAE
Black-eyed Bulbul	Swartoog-tiptol	<i>Pycnonotus barbatus</i>
Cape Bulbul	Kaapse Tiptol	<i>Pycnonotus capensis</i>
Red-eyed Bulbul	Rooioog-tiptol	<i>Pycnonotus nigricans</i>
Cape Sparrow	Kaapse Mossie	<i>Passer melanurus</i>
European Sparrow	Engelse Mossie	<i>Passer domesticus</i>
Masked Weaver	Rietvink	<i>Ploceus velatus</i>
Cape Weaver	Geelvink	<i>Ploceus capensis</i>
<b>[Cape Widow-bird]</b> <u>Yellow</u>	Kaapse <b>[Kaffervink]</b> <u>Flap</u>	
Rumped widow		<i>Euplectes capensis</i>
Red Bishop[ <b>-bird</b> ]	Rooi <b>[Kaffer]</b> vink	<i>Euplectes orix</i>
European Starling	Europese Spreeu	<i>Sturnus vulgaris</i>
Red-billed Quelea	Rooibekvink	<i>Quelea quelea</i>
Red-winged Starling	Rooivlerkspreu	<i>Onychognathus morio</i>
All exotic birds other	Alle uitheemse voëls,	
than—	uitgesonderd—	
Exotic birds of the	Uitheemse voëls van die	
order ANSERIFORMES.	orde ANSERIFORMES.	
Bobwhite Quail	'Bobwhite'- kwartel	<i>Colinus virginianus</i>
Chukar Partridge	Chukarpatrys	<i>Alectoris graeca</i>
Andaman Mynah	Andamanse Spreeu	<i>Sturnus erythropygius</i>
		<i>andamanensis</i>
Pagoda Mynah	Pagodaspreeu	<i>Sturnus pagodarum</i>
Malabar Mynah	Malabaarse Spreeu	<i>Sturnus malabaricus</i>
Mandarin Mynah	Mandarynspreu	<i>Sturnus sinensis</i>
Bank Mynah	Rivierspreu	<i>Acridotheres ginginianus</i>
Common Mynah	Indiese Spreeu	<i>Acridotheres tristis</i>
Greater Hill Mynah	Groot Bergspreeu	<i>Gracula religiosa religiosa</i>
Lesser Hill Mynah	Klein Bergspreeu	<i>Gracula religiosa indica</i>
	CLASS/KLAS: INSECTA	
	Order/Orde: LEPIDOPTERA	
	Family/Familie: LYCAENIDAE	
—	—	<i>Aloeides egerides</i> (Riley)
—	—	<i>Aloeides lutescens</i> Tite
		and/en Dickson
Autumn Copper, Lion's	Leeukopkopervlerkie	<i>Argyrocupha malagrida</i>
Head Copper		<i>malagrida</i> (Wallengren)
Wineland Blue	Wynlandblouetjie	<i>Lepidochrysops bacchus</i>
		Riley
Dickson's Copper	Dickson se kopervlerkie	<i>Oxychaeta dicksoni</i>
—	—	(Gabriel)
		<i>Poecilmitis endymion</i>
		Pennington
Tsomo River Copper	Tsomorivierkopervlerkie	<i>Poecilmitis lyncurium</i>
		(Trimen)
Blue Jewel Copper	Bloujuweelkopervlerkie	<i>Poecilmitis nigricans</i>
		<i>Aurivillius</i>

—	—	<i>Poecilmitis rileyi</i> Dickson
Dickson's Thestor	Dickson se skollie	<i>Thestor dicksoni dicksoni</i>
		Riley
Kaplan's Thestor	Kaplan se skollie	<i>Thestor kaplani</i> Dickson
		and/en Stephen
Wallengren's Copper	Wallengren se kopervlerkie	<i>Trimenia wallengrenii</i>
		(Trimen)
	Family/Familie: HESPERIIDAE	
Bamboo Sylph	Bamboeswaksertjie	<i>Metisella syrinx</i> (Trimen)
Dickson's Sylph	Dickson se waksertjie	<i>Tsitana dicksoni</i> Evans
	Family/Familie: NYMPHALIDAE	
(Western) Forest Emperor, Forest King Charaxes	Boskoningdubbelstert	<i>Charaxes xiphares xiphares</i> <i>f. occidentalis</i> van Son
	Family/Familie: SATYRIDAE	
Dickson's Brown	Dickson se bruintjie	<i>Stygionympha dicksoni</i>
		(Riley)
	Family/Familie: HEPIALIDAE	
Silver-spotted Ghost Moth	Keurboomspeekmot	<i>Leto venus</i> Stoll

### SCHEDULE 3/BYLAE 3

#### ENDANGERED FLORA/BEDREIGDE FLORA

(The scientific names shown in the third column are the species of the family under which they appear./Die wetenskaplike name in die derde kolom aangedui is die spesies van die familie waaronder hulle voorkom.)

<i>Common name</i> (Where known)	<i>Volksnaam</i> (Waar bekend)	<i>Scientific name/ Wetenskaplike naam</i>
	Family/Familie: APOCYNACEAE	
	Halfmens	<i>Pachypodium namaquanum</i>
	Family/Familie: GESNERIACEAE	
	Cape Gloxinia	<i>Charadrophila capensis</i>
	Family/Familie: LILIACEAE	
		<i>Aloe pillansii</i>
		<i>Aloe buhrii</i>
		<i>Aloe erinacea</i>
	Family/Familie: PROTEACEAE	
		<i>Mimetes capitulatus</i>
		<i>Mimetes hottentoticus</i>
		<i>Mimetes stokoei</i>
Mountain Rose	Vleiroos	<i>Orothamnus zeyheri</i>
		<i>Protea odorata</i>
	Family/Familie: STANGERIACEAE	
Bobbejaankos		<i>Stangeria eriopus</i>
	Family/Familie: ZAMIACEAE	
Cycad	Broodboom	<i>Encephalartos</i> spp.

## SCHEDULE 4/BYLAE 4

## PROTECTED FLORA/BESKERMDE FLORA

(The scientific names shown in the third column are the species of the family under which they appear./Die wetenskaplike name in die derde kolom aangedui is die spesies van die familie waaronder hulle voorkom.)

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
	Family/Familie: AMARYLLIDACEAE All species/Alle spesies	
All species except those specified in Schedule 3.	Family/Familie: APOCYNACEAE Alle spesies behalwe dié in Bylae 3 bepaal.	<i>Pachypodium</i> spp.
Cape Holly	Family/Familie: AQUIFOLIACEAE Waterhout	<i>Ilex mitis</i>
Yellow Arum Lily	Family/Familie: ARACEAE Geelvarkblom	<i>Zantedeschia elliotiana</i>
	Family/Familie: ASCLEPIADACEAE All species/Alle spesies	
	Family/Familie: BORAGINACEAE	<i>Echiostachys spicatus</i>
	Family/Familie: BRUNIACEAE All species/Alle spesies	
	Family/Familie: COMPOSITAE	<i>Senecio coleophyllus</i> <i>Cotula duckittae</i>
	Family/Familie: CRASSULACEAE Koesnaatjie	<i>Crassula columnaris</i> <i>Crassula falcata</i> <i>Crassula perfoliata</i> <i>Crassula pyramidalis</i> <i>Kalanchoe thyrsiflora</i> <i>Rochea coccineaas</i>
Red Crassula Pointed-leaf Crassula		
Red Crassula	Klipblom, ook bekend Keiserskroon.	
	Family/Familie: CUNONIACEAE Rooi-els	<i>Cunonia capensis</i> <i>Platylophus trifoliatus</i>
	Family/Familie: DIOSCOREACEAE Skilpad Olifantsvoet	<i>Testudinaria sylvatica</i> <i>Testudinaria elephantipes</i>
Elephant's Foot		
	Family/Familie: ERICACEAE All species/Alle spesies	
	Family/Familie: EUPHORBIACEAE	<i>Euphorbia bupleurtfolia</i> <i>Emphorbia fasciculata</i> <i>Euphorbia globosa</i> <i>Euphorbia horrida</i> <i>Euphorbia meloformis</i> <i>Emphorbia obesa</i> <i>Euphorbia schoenlandii</i>
[Kaffir Hut] <u>Vetmense</u>	Eselkos of Pol [Kafferhut] <u>Vetmense</u>	

[Kaffir Hut] <u>Vetmenseie</u>	[Kafferhut] <u>Vetmenseie</u>	<i>Euphorbia symmetrica</i> <i>Euphorbia valida</i>
	Family/Familie: GEISSOLOMACEAE All species/Alle spesies	
	Family/Familie: GESNERIACEAE	
Cape Primrose, also known as Rexia, Nodding Bells, Twin Sisters or Wild Gloxinia.		Alle spesies van die genus <i>Streptocarpus</i> All species of the genus <i>Streptocarpus</i>
	Family/Familie: GRAMINEAE	
Mountain Bamboo	Bergbamboes	<i>Arundinaria tessellata</i>
Wild Rye Grass	Wilde Rog	<i>Secale africanum</i>
	Family/Familie: GRUBBIACEAE All species/Alle spesies	
	Family/Familie: IRIDACEAE All species/Alle spesies	
	Family/Familie: LEGUMINOSAE	
Tambookie Thorn	Tamboekiedoring	<i>Erythrina acanthocarpa</i> <i>Erythrina humeana</i>
	Klipblom	<i>Liparia comantha</i>
Orange Nodding Head, also known as Mountain Dahlia.	Geelkoppie	<i>Liparia sphaerica</i> <i>Liparia splendens</i>
Wild Sweet Pea	Keurtjie	<i>Podalyria calyprata</i> <i>Priestleya vestita</i>
Silver Pea	Silwerertjie	<i>Priestleya tomentosa</i>
	Family/Familie: LILIACEAE	
All species of the genus ALOE except those specified in Schedule 3 and the species <i>Aloe ferox</i> ./Alle spesies van die genus ALOE behalwe dié in Bylae 3 bepaal en die spesie <i>Aloe ferox</i> .		
		<i>Gasteria beckeri</i> <i>Gloriosa superba</i>
Gloriosa Lily, also known as Turk's Cap. Haworthia, also known as Window Plant.		Alle spesies van die genus <i>Haworthia</i> All species of the genus <i>Haworthia</i>
Red-hot Poker	Vuurpyl	Alle spesies van die genus <i>Kniphofia</i> All species of the genus <i>Kniphofia</i>
	Viooltjies	Alle spesies van die genus <i>Lachenalia</i> All species of the genus <i>Lachenalia</i>
Climbing Bells Christmas Bells	Geelklokkie	<i>Littonia modesta</i> <i>Sandersonia aurantiaca</i>
Forest Lily		Alle spesies van die genus <i>Veltheimia</i> All species of the genus <i>Veltheimia</i> <i>Agapanthus walshii</i> <i>Daubenya aurea</i>

Chinese Lantern	Family/Familie: MELIACEAE Klapperbos	<i>Nymania capensis</i>
	Family/Familie: MESEMBRYANTHEMACEAE All species/Alle spesies	
	Family/Familie: MUSACEAE	Alle spesies van die genus <i>Strelitzia</i> All species of the genus <i>Strelitzia</i>
Blue Water-lily	Family/Familie: NYMPHAEACEAE Blou Waterlelie, ook bekend as Kaaimanblom.	<i>Nymphaea capensis</i>
	Family/Familie: ORCHIDACEAE All species/Alle spesies	
	Family/Familie: OXALIDACEAE Watersuring	<i>Oxalis nutans</i>
	Family/Familie: PEDALIACEAE Kloudoring (Duiwelsklou)	<i>Harpagophytum procumbens</i>
	Family/Familie: PENAEACEAE All species/Alle spesies	
	Family/Familie: POLYGALACEAE	<i>Muraltia minuta</i>
Maidenhair Fern	Family/Familie: POLYPODIACEAE Vrouehaar	Alle spesies van die genus <i>Adiantum</i> All species of the genus <i>Adiantum</i>
Tree Ferns	Boomvarings	<i>Hemitelia capensis</i>
Seven Weeks Fern	Seweweeksvaring	<i>Polystichum adiantiforme</i>
Love-plant	Family/Familie: PORTULACACEAE Hasieskos	Alle spesies van die genus <i>Anacampseros</i> All species of the genus <i>Anacampseros</i>
	Family/Familie: PROTEACEAE	
All species except those specified in Schedule 3./Alle spesies behalwe dié in Bylae 3 bepaal.		
Anemone	Family/Familie: RANUNCULACEAE Anemoon	<i>Anemone capensis</i>
	Family/Familie: RESTIONACEAE	Alle spesies van die genus <i>Chondropetalum</i> All species of the genus <i>Chondropetalum</i> <i>Acockii pillans</i> <i>Elegia fenestrata</i> <i>Restio acockii</i> <i>Restio micans</i> <i>Restio sabulosus</i>

Family/Familie: RETZIACEAE

*Retzia capensis*

Family/Familie: RHAMNACEAE

*Phylica pubescens*

Family/Familie: RORIDULACEAE

All species/Alle spesies

Family/Familie: RUTACEAE

All species/Alle spesies

Family/Familie:  
SCROPHULARIACEAE

Alle spesies van die genus

*Diascia*

All species of the genus

*Diascia*

Harveya

Inkblom

Alle spesies van die genus

*Harveya*

All species of the genus

*Harveya*

Nemesia

Rooileubekkie

*Nemesia strumosa*

Alle spesies van die genus

*Halleria*

All species of the genus

*Halleria*Family/Familie:  
THYMELAEACEAE*Lachnaea aurea***SCHEDULE 5/BYLAE 5****NOXIOUS AQUATIC GROWTHS/SKADELIKE WATERGEWASSE**

<i>Common name (Where known)</i>	<i>Volksnaam (Waar bekend)</i>	<i>Scientific name/ Wetenskaplike naam</i>
<i>Water Hyacinth</i>	<i>Waterhiasint</i>	<i>Eichhornia</i> spp.
Parrot's Feather	Duisendblaar	<i>Myriophyllum</i> spp.
Water Fern	Watervaring	<i>Salvinia</i> spp.

**SCHEDULE 6/BYLAE 6****ORDINANCES REPEALED**

<i>No. and Year</i>	<i>Short Title</i>
26 of 1965	Nature Conservation Ordinance, 1965.
16 of 1967	Nature Conservation Amendment Ordinance, 1967.
30 of 1968	Nature Conservation Amendment Ordinance, 1968.
32 of 1970	Nature Conservation Amendment Ordinance, 1970.

## SCHEDULE 2

ACT	AMENDMENT OF ACT
<p>Environmental Conservation Act, 1989 (Act 73 of 1989), as assigned in terms of Proclamation No. R.29, 1995 of 7 April 1995.</p>	<ol style="list-style-type: none"> <li>1. Amendment of section 1 — by the insertion after the definition of “administrative body” of the following definition: <ul style="list-style-type: none"> <li>“ ‘Board’ ” means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998);</li> </ul> </li> <li>2. Amendment of section 16 — <ul style="list-style-type: none"> <li>(a) by the substitution in subsections (1)(a), (1A) and (6) for the words “A competent authority” of the words “The Board”, and</li> <li>(b) by the substitution in subsections (1)(b) (4) and (5) for the words “competent authority” of the word “Board”, and</li> <li>(c) by the substitution in subsection (1)(b) for the words “Director-General of that province” of the words “chief executive officer of the Board”.</li> </ul> </li> <li>3. Amendment of section 17 — <ul style="list-style-type: none"> <li>(a) by the substitution in subsections (1) and (4) for the words “A competent authority” and “a competent authority” of the words “The Board” and “the Board” respectively, and</li> <li>(b) by the substitution in subsections (2), (3)(a) and (b), (5) and (6) for the words “competent authority” of the word “Board”;</li> <li>(c) by the substitution in the proviso to subsection (6) for the word “his” of the word “its”, and</li> <li>(d) by the substitution for subsection (7) of the following subsection: <ul style="list-style-type: none"> <li>“(7) The chief executive officer of the Board must designate as many of the Board’s employees as may be necessary to assist a management advisory committee in the administrative work connected with the performance of the functions of the committee: Provided that where the control and management of a protected natural environment has been assigned to another local authority or government institution in terms of section 16(6) the chief executive officer of such local authority or government institution must designate as many employees of the relevant local authority or government institution as may be necessary to assist a management advisory committee with the said administrative work: Provided further that with the approval of the Board such administrative work may be performed by any person other</li> </ul> </li> </ul> </li> </ol>

ACT	AMENDMENT OF ACT
	<p>than such an employee at the remuneration and allowances which the competent authority with the concurrence of the Minister of State Expenditure may determine.”.</p> <p>4. Amendment of section 28A — by the substitution in subsections (1), (2), (3), (4), and (5) for the words “a competent authority” of the words “the Board”.</p> <p>5. Amendment of section 32 — (a) by the insertion in subsection (1) after the words “a competent authority” of the words “the Board”, and (b) by the insertion in subsection (3), after the words “competent authority” of the word “Board”.</p> <p>6. Section 35 is amended in subsection (2), by the substitution for the words “officer or employee” of the words “employee of the Board”.</p> <p>7. Amendment of section 41A — by the insertion in subsection (1) after the words “a competent authority” of the words “or the Board”.</p>



**SCHEDULE 3**

<b>ACT</b>	<b>AMENDMENT OF ACT</b>
The Sea Shore Act, 1935 (Act 21 of 1935), as assigned in terms of Proclamation No. R.27, 1995 of 7 April 1995.	<ol style="list-style-type: none"> <li>1. Section 1 of the Act is amended by the insertion before the definition of “high-water mark” of the following definition:  “ ‘Board’ means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998);”</li> <li>2. Section 3 of the Act is amended by the substitution for the word “Minister” wherever it appears, of the word “Board”.</li> <li>3. Section 11 of the Act is amended by the substitution for subsection (1) of the following subsection:  “(1) The Board may delegate to any of its employees the powers conferred on it by section 3(1) or (2), but shall not thereby be divested of its powers so delegated, and may modify or withdraw any decision of any such employee.”</li> </ol>

## SCHEDULE 4

ACT	AMENDMENT OF ACT
<p>Mountain Catchment Areas Act, 1970 (Act 63 of 1970), as assigned in terms of Proclamation No. R.28, 1995 of 7 April 1995.</p>	<p>1. Amendment of the Act —</p> <p>(a) by the substitution for the word “Minister” in sections 6 (except subsection (3)(b)), 7, 9, 10 and 12 of the word “Board, and</p> <p>(b) where applicable in any of the sections referred to in paragraph (a), by the substitution for the word “he” or “him” of the word “it”.</p> <p>2. Amendment of section 1 —</p> <p>(a) by the insertion after the definition of “advisory committee” of the following definition:</p> <p>“ ‘Board’ means the Western Cape Nature Conservation Board established in terms of section 2 of the Western Cape Nature Conservation Board Act, 1998 (Act 15 of 1998)”, and</p> <p>(b) by the deletion of the definition of “Director-General”.</p> <p>3. By the substitution for section 2A of the following section:</p> <p>“The Board may, for the purposes of the definition of any area by it under section 2, cause beacons to be erected on the land concerned at places designated by the Board.”</p> <p>4. Amendment of section 6 —</p> <p>(a) by the substitution in subsection (2)(c) for the word “chairman” of the word “chairperson”, and</p> <p>(b) by the substitution for subsection (7) of the following subsection:</p> <p>“(7) If a member of an advisory committee —</p> <p>—</p> <p>(a) resigns;</p> <p>(b) is, without the permission of the chairperson of the advisory committee concerned, absent from two consecutive meetings of such committee, or</p> <p>(c) is removed from office under section (5), that member must vacate his or her office.”.</p> <p>5. Amendment of section 8 —</p> <p>(a) by the substitution in subsection (1) for the word “Director-General” of the word “Board”, and</p> <p>(b) by the substitution in subsection (3), for the words “Director-General” of the word “Board” and in paragraph (b) of that subsection for the words “he deems” and “known to him” of the words “it deems” and “known to it”, respectively.</p>

<b>ACT</b>	<b>AMENDMENT OF ACT</b>
	<p>6. Amendment of section 9 by the substitution for the word "Director-General" of the word "Board".</p> <p>7. The following section is substituted for section 17: "The Board may delegate to any of its employees all or any of the powers conferred on it by this Act, other than the powers referred to in section 2A."</p>

# CAPE ACTION PLAN FOR THE ENVIRONMENT

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# STRATEGY

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**PREPARED FOR:**  
WWF (South Africa)

**PREPARED BY:**  
CAPE Project Team

May 2000



*World Wide Fund for Nature*



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*Information on the CAPE Project is also available on the WWF-South Africa website [www.panda.org.za](http://www.panda.org.za) under “mega projects”.*

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## DEFINITIONS AND ABBREVIATIONS USED IN THIS REPORT

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**Biodiversity:** This is understood to comprise both patterns (species, habitats, etc.) and the ecological and evolutionary processes that underpin these.

**Effectively Conserved:** Biodiversity is maintained by effective management which achieves explicit, transparent and scientifically defensible reservation targets for both patterns and processes.

**Perverse incentives:** Incentives that drive unsustainable behaviour by subsidizing inappropriate actions.

**Priority areas:** These are identified on the basis of high irreplaceability (i.e. areas that are essential for achieving reservation targets), high vulnerability to processes that threaten biodiversity or functional importance, and are practically implementable. They should be rapidly and strategically incorporated into the conservation system, in order not to compromise the overall conservation goal.

**Protected areas:** An area of land/sea specially dedicated to the protection of biological diversity and of natural and associated cultural resources and managed through legal or other means.

**The conservation system:** This comprises all areas subject to some form of conservation action, including statutory, non-statutory and co-operative agreement reserves and other conservation measures.

**Enhancing co-operative governance:** When role players (including institutions, communities and individuals) are aligned around a common vision, policy, roles and responsibilities and decision-making processes, thus leading to effective management.

CAPE	Cape Action Plan for the Environment
CFK	Cape Floral Kingdom, which includes rivers, wetlands, estuaries and the marine environment, as well as the terrestrial environment.
GEF	Global Environment Facility
SDW	Strategy Development Workshop, held from 16-18 February 2000
WWF-SA	World Wide Fund for Nature: South Africa.

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*Please note that the terms “themes” and “projects” used in earlier drafts of the strategy, have been changed to “components” and “activities” respectively, to be in accordance with GEF terminology.*

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## 1. INTRODUCTION

The biodiversity of the Cape Floral Kingdom (CFK) (Figure 1) is globally renowned. It is particularly well known for its plant life - of its 9 000 plant species, 6 000 are found nowhere else on earth. For its size, it is not only the most species-rich of the world's six floral kingdoms, but also the most threatened, making it a globally important biodiversity plant "hotspot". The marine, freshwater and estuarine systems are also important with high levels of endemism (i.e. species that are only found in this area). For example, of the 11 000 species of marine animals recorded along South African shores, 3 500 are endemic.

Threats to the future of this unique area come from the spread of invasive alien plants and fish, expanding agriculture and urbanisation, pollution and over-extraction of water, over-exploitation of specific species and soil erosion. As a consequence of these threats at least 1 400 plant species are now threatened and several heavily exploited marine species, such as linefish and abalone (perlemoen), have declined to dangerously low levels. Freshwater fish can be used as an indicator of the health and natural functioning of river systems. Of the 19 freshwater fish species indigenous to the CFK, 14 are listed as threatened and 12 as endangered. This paints a bleak picture for the host of freshwater organisms that are less visible.

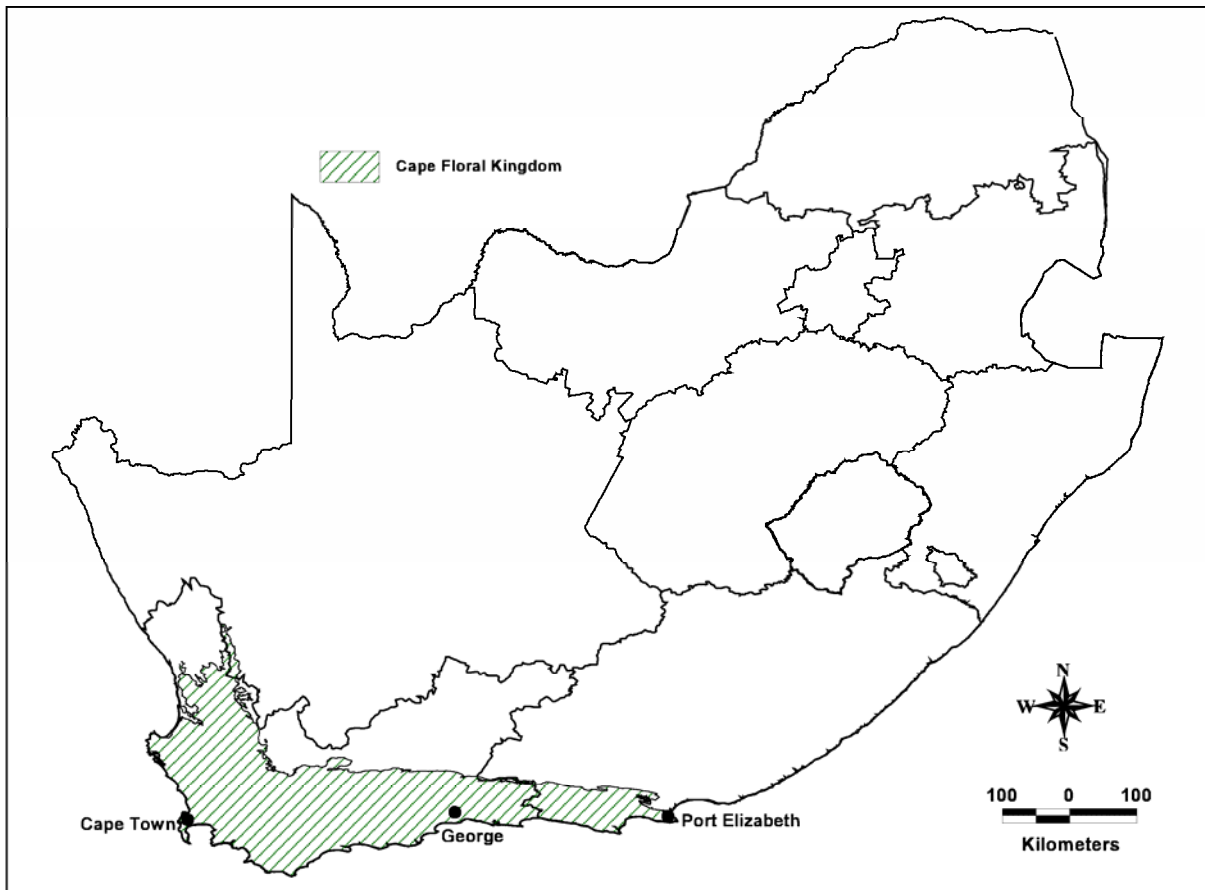


Figure 1: Extent of the Cape Floral Kingdom – of the six floral kingdoms of the world, this is the only one located entirely within one country

## What is CAPE?

The Cape Action Plan for the Environment, or CAPE, is a two-year project that aims to develop a strategic plan for the conservation of biodiversity, both terrestrial, marine and freshwater, in the Cape Floral Kingdom. CAPE is funded by the Global Environmental Facility in recognition of the international importance of the need to protect the biodiversity of the CFK.

The project is managed by WWF-SA in partnership with national and provincial government, universities, non-government organisations (NGOs) and other stakeholders. The aims of the CAPE project are to:

- identify the priorities for conservation on the basis of biodiversity and threats;
- develop a long-term strategy and vision;
- draft a 5-year action plan, with priority activities; and
- identify potential funding sources for these activities.

## Why do we need a strategy?

The CAPE project comprises three modules. The first two modules provide a situation assessment of the terrestrial, marine and freshwater components of the CFK. The third module covers the legal, policy, institutional, financial, social and economic aspects, and integrates the findings of Modules 1 and 2 with these “human” aspects. This report, the strategy for CAPE, builds on the situation assessment undertaken in these three modules. The purpose of this strategy document is to articulate clearly the desired outcome of CAPE and includes a vision, goal and objectives. The strategy will form the basis for the development of the more detailed implementation programme to be developed in consultation with implementation agencies. The implementation programme will detail the practical steps required to achieve the objectives of CAPE.

The emphasis CAPE places on the development of a coherent strategy is in line with recent trends in international finance. There has been a change in the approach to the funding of conservation from grants to investments, from projects to programmes, from short term to long-term initiatives and from the funding of *ad hoc* projects to the funding of well conceived projects linked to an overall goal-directed strategy.

A Strategy Development Workshop was held with key roleplayers from 16 – 18 February 2000. This provided the basis for this strategy. The results of the Workshop are contained in the Strategy Development Workshop Report, which is available on request, and includes:

- List of participants and workshop invitation
- Workshop Programme
- Approach to Strategy Development Process
- Strategy components

Strategy development is an iterative and ongoing process. As more information becomes available, so the emphasis might change. This strategy should therefore be seen as living document open to ongoing re-evaluation and revision.

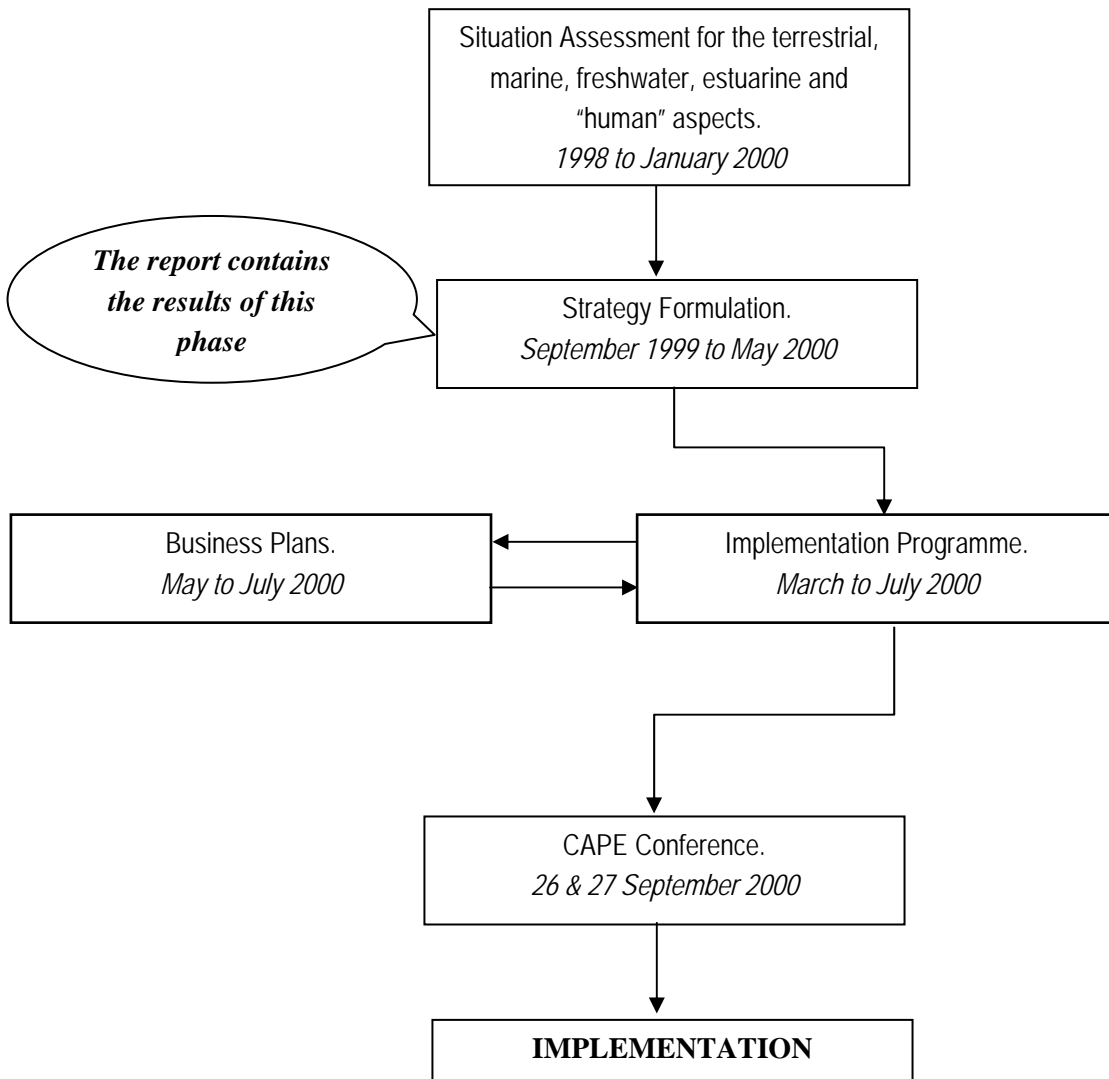


**What is preventing the conservation of biodiversity?**

The situation assessment undertaken in Module 3 identified four key overarching areas of difficulty which could obstruct the implementation of CAPE. These can be summarised as follows:

- There are a multitude of laws and policies that indirectly impact on biodiversity outside formally protected areas. They are not coordinated into any cohesive framework, are not implemented consistently, and biodiversity conservation is often incidental to the main aim of the legislation or policy.
- Declining funding and decreasing capacity is reducing the ability of implementing agencies, including conservation agencies, to conserve biodiversity effectively.
- There is some, but insufficient, collaboration between government agencies whose mandate impacts on the conservation of the CFK.
- There are insufficient incentives to encourage communities and resource users to support biodiversity and conservation in the CFK.

**FIGURE 2: APPROACH TO THE CAPE PROJECT**



## 2. VISION FOR CAPE

The purpose of the CAPE vision is to create a mental image of the desired future for the Cape Floral Kingdom. This vision should act as our compass and tell us where we want to be.

**The vision for CAPE is:**

*We, the people of South Africa, are proud to be the custodians of our unique Cape Floral Kingdom, and share its full ecological, social and economic benefits now and in the future.*

Examples of indicators that we have achieved this vision include:

- The natural areas in the Cape Floral Kingdom and along its shores are not only being conserved, but are also being extended through restoration.
- The natural areas of the Cape Floral Kingdom provide sustainable use and good economic return to the people of the area, creating jobs and economic opportunities.
- The realisation of the uniqueness of the Cape Floral Kingdom underpins all planning and development, maintaining the integrity of the landscape for the benefit of our children and the people of the world.
- The Cape Floral Kingdom, including its rivers and wetlands, and the seas around it are providing sustainable opportunities for recreation and spiritual rejuvenation for both visitors and residents.
- Tourists are attracted to South Africa to experience the incredible natural beauty and biodiversity of the Cape Floral Kingdom and the seas around its shores.
- The catchments of the Cape Floral Kingdom are providing sustainable supplies of good clean water for the people who live in the region.
- People of the Cape Floral Kingdom grow fynbos in their gardens and along road verges and islands, and delight in showing them off to their friends. Street traders sell the plants of the Cape Floral Kingdom on street corners to a market that readily buys them.

## 3. GOAL FOR CAPE

The goal or target for CAPE describes the new reality that has been achieved as a result of successful implementation of the strategy. The goal is a desired future state. The goal is specific about WHAT has to be achieved, WHEN it has to be achieved and WHO will be impacted. We need to be able to say “we have arrived” when we reach our goal; *i.e.* it should be measurable.

**The goal for CAPE is:**

*By the year 2020, the natural environment and biodiversity of the Cape Floral Kingdom are effectively conserved, restored wherever appropriate, and delivering significant benefits to the people of the region, in a way that is embraced by local communities, endorsed by government and recognised internationally.*

## 4. COMPONENTS FOR CAPE

The strategy is structured into eight broad components. These were derived from the situation assessment and strategy development process. Three of the components are cross-cutting, and five are sector-specific.

The cross-cutting components are:

- Strengthening institutions
- Enhancing co-operative governance
- Promoting community involvement.

The sector-specific components are:

- Strengthening on and off-reserve conservation
- Conserving biodiversity and natural resources in catchments
- Supporting integrated land-use planning
- Improving the sustainability of resource use
- Promoting sustainable nature-based tourism.

## 5. OBJECTIVES FOR CAPE

This section outlines the objectives for CAPE, *i.e.* the things that have to be achieved or in place for CAPE to reach its goal. The section starts with the cross-cutting components and then briefly outlines the sector-specific components. Each component starts with a brief summary of the main obstacles or issues to be addressed in that component. This provides background to the need for the component. Thereafter, the goal and objectives are provided. This section is supported by detailed strategies for each component, which are available on request.

### 5.1 Strategies for cross-cutting components

Three cross-cutting components comprise the necessary conditions for achieving the goal for CAPE (Figure 3).

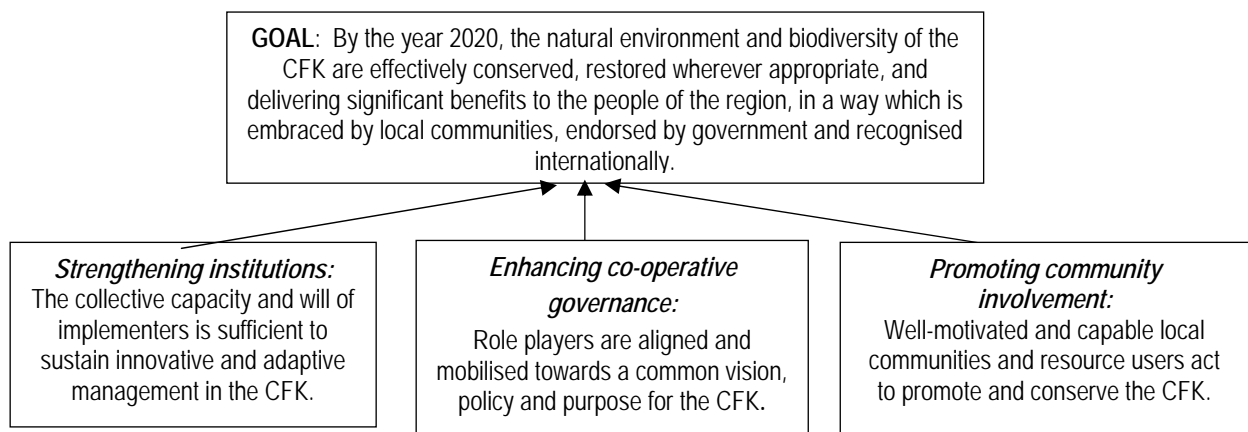


Figure 3: The three main necessary conditions (cross-cutting components) to achieve the goal for CAPE

### 5.1.1 *Strengthening institutions*

*Main obstacles or issues to be addressed in this component:*

- Laws and policies which impact on biodiversity conservation are not pulled together into a cohesive framework and biodiversity conservation is often incidental to their main aim;
- Many sectoral laws and policies do not explicitly recognise biodiversity or promote appropriate action;
- There is a lack of law enforcement capacity and compliance monitoring leading to poor enforcement;
- Declining funding, loss of research and management expertise and demotivation of staff are reducing the ability of conservation agencies to effectively conserve biodiversity; and
- No strategic approach is being adopted to training and capacity building within the nature conservation sector.

**The goal for the institutions component is:**

***The collective capacity and will of implementers is sufficient to sustain innovative and adaptive management in the CFK.***

To achieve this goal, the following objectives must be met:

#### ***Objective 1.1 There is political will to support biodiversity conservation.***

This will require that:

- Links between the conservation of the CFK and social upliftment (including job creation and poverty alleviation) are demonstrated clearly.
- There is a shared understanding of the social, economic and ecological value of biodiversity amongst all roleplayers.
- Politicians are lobbied by an electorate that is informed and concerned about conservation issues.
- Political credibility is created through demonstrating success in the implementation of CAPE.
- There is international recognition for South Africa's contribution towards the preservation of global biodiversity.

#### ***Objective 1.2 Government agencies have the authority, capacity and will to take action.***

The following direct requirements for enabling government agencies to exercise their biodiversity conservation responsibilities have been identified. They are:

- Sectoral policies need to make explicit reference to biodiversity values and ecological sustainability as underlying principles for sustainable development.
- Government agencies need sufficient resources. These will need to be provided through aligning relevant government budgets with conservation priorities as well as through effectively mobilising additional sources of local and international funding.

- Strategies for capacity building within provincial conservation agencies must be implemented.
- Other government agencies will need to understand the importance of biodiversity conservation. This will require effective conservation awareness programmes, as well as a better understanding of the economic, social and ecological value of biodiversity.
- Government agencies will need to be held accountable for their responsibilities, which will be assessed through the implementation of effective performance measures.
- The judicial system will need to support enforcement on behalf of implementing agencies.
- An integrated framework of laws, procedures and action plans that enable and regulate the conservation and use of biodiversity must be in place. (This is the same as Objective 2.2 and the necessary requirements to achieve this are described under Objective 2.2.)

***Objective 1.3 An agency is identified to lead biodiversity conservation in the CFK.***

This will require that:

- Enabling legislation is put in place to regulate the conservation and sustainable use of biodiversity.
- Legislative and executive competencies at both national and provincial level are analysed and rationalised through appropriate assignments and delegations, and through co-operative governance agreements.
- An implementing agency (or agencies) must be identified to coordinate biodiversity conservation programmes and account for the "State of Biodiversity" in the CFK.

***Objective 1.4 A sufficient, independent, well-trained corps of environmental and related professionals supports implementers.***

This will require that:

- Research institutions retain and enhance their capacity to undertake basic research on pattern and process in the CFK.
- Tertiary education institutions develop professional and management skills for biodiversity conservation.

**5.1.2 *Enhancing co-operative governance***

*Main obstacles or issues to be addressed in this component:*

- ˘ Lack of a holistic vision for biodiversity conservation in the CFK.
- ˘ Lack of an integrated legal and land-use planning framework for all sectors including nature conservation.
- ˘ Insufficient collaboration between government agencies whose mandate impacts on the conservation of the CFK.
- ˘ A plethora of institutions engaging with communities at a local level regarding the management of natural resources.

**The goal for the co-operative governance component is:  
*Role players are aligned and mobilised towards a common vision, policy  
and purpose for the conservation of the CFK.***

There are two key supporting objectives to enhance co-operative governance:

***Objective 2.1 Collaboration between implementers in pursuit of complementary goals.***

This requires that:

- ˘ Collaboration should be supported by removing institutional barriers.
- ˘ The benefits of collaboration are realised.
- ˘ Collaboration arrangements are formalised.
- ˘ A CFK-wide inter-sectoral development review panel is established which ensures that decision-making takes biodiversity conservation into account.

***Objective 2.2 We have in place an integrated framework of laws, procedures and action plans that enable and regulate the conservation and use of biodiversity in the CFK.***

Three direct requirements for developing an integrated legal and policy framework have been identified:

- ˘ Appropriate laws and policies are being implemented effectively. In particular, there is a need for framework legislation which has the protection of biodiversity as its primary aim.
- ˘ Appropriate sectoral plans, Integrated Development Plans and conservation management plans are in place.
- ˘ Clear policy guidelines are developed. These are built on a bio-regional strategic planning framework, provincial environmental policies which clearly articulate conservation goals, and sectoral policies which explicitly recognise and address biodiversity issues.

Several elements have been identified to support a bio-regional strategic planning framework for the CFK. Firstly, Integrated Development Planning in the CFK needs to be informed by conservation priorities. This is underpinned by planning coordination between government agencies, agreements on conservation priorities and a well-managed and accessible information system. The information system itself requires a range of supportive elements including sufficient information technology (IT) capacity and a strategy to guide IT, effective research capacity and a regular monitoring programme. Effective research capacity, in turn, will need to be underpinned through securing funding for priority research, establishing a forum for prioritising, coordinating and reviewing research and developing a broad range of multidisciplinary research skills.

### 5.1.3 *Promoting community involvement*

*Main obstacles or issues to be addressed in this component:*

- Limited public awareness and understanding of the importance and value of biodiversity conservation and little community involvement in nature conservation activities.
- The presence of barriers to communities deriving benefits from biodiversity conservation.
- Unclear system of property rights which is, in many cases, resulting in unregulated open access to resources.
- Many of the costs resulting from the impacts of human activities on biodiversity are not borne by the party causing the impact.
- Perverse subsidies are resulting in the destruction of natural resources.

**The goal for the community involvement component is:**  
*Well motivated and capable local communities and resource users  
act to promote and conserve the CFK.*

Ensuring the support of local communities and resource users is a critical component of meeting the overall goal and requires that the following objectives are met:

***Objective 3.1 Local communities are aware of, interested in and committed to the conservation of the CFK.***

Committed local communities are developed through a strategic environmental education programme; through providing access to a range of recreational and economic opportunities associated with the CFK; through demonstrating the links between conservation of the CFK and social upliftment (including job creation and poverty alleviation); and through formalised participation in conservation decision-making.

***Objective 3.2 Local communities actively participate in the conservation of the CFK.***

Community participation is supported by implementing a strategic capacity building programme; formalising participation in conservation decision-making; and rationalising statutory institutions for natural resource management at a local level to ensure the efficient use of peoples' time.

***Objective 3.3 Resource users are motivated and enabled to manage natural resources in an ecologically and socially sustainable manner.***

Resource users are motivated and enabled to manage resources sustainably through ensuring that biodiversity conservation provides them with some direct benefits; enabling local communities to exploit economic opportunities; and establishing mechanisms to balance demand with supply. These in turn require a strategic capacity building programme for communities; establishing an appropriate property rights regime; providing incentives and removing disincentives for conservation; and quantifying sustainable resource use levels.

## 5.2 Strategies for the sector-specific components

In addition to the strategies for the above cross-cutting components, a strategy was developed for each of the five sector-specific components. These components are:

- Strengthening on and off-reserve conservation
- Conserving biodiversity and natural resources in catchments
- Supporting integrated land-use planning
- Improving the sustainability of resource use
- Promoting sustainable nature-based tourism.

The following sections provide a summary of the strategy developed for each sector-specific component.

### 5.2.1 *Strengthening on and off-reserve conservation*

*Main obstacles to be addressed in this component:*

- Rapidly escalating threats to biodiversity, especially novel forms of land-use, in areas of high irreplaceability.
- Severe lack of capacity to coordinate strategic and systematic conservation planning initiatives.
- Lack of resources and capacity to manage conservation areas for biodiversity.
- Lack of resources for strategic interventions such as the purchase of priority areas, rapid biodiversity assessments and legal challenges.
- Few mechanisms to secure conservation outside formally protected areas.

**The goal for the reserve conservation component is:**

***By 2020, an effectively managed system of conservation areas, land-uses and ownership that is representative of the Cape Floral Kingdom and marine biodiversity, is implemented by landowners and the responsible agencies.***

There are five objectives which need to be achieved in order to reach this goal of a well-managed, representative protected area network incorporating private and public land, and aquatic systems:

1. National and provincial government need to develop and adopt an appropriate conservation policy framework.
2. Mechanisms need to be developed and in some cases strengthened, to secure adequate biodiversity conservation in formally-protected areas.
3. Simultaneously, new mechanisms need to be developed to secure conservation in areas outside formally protected areas using tools including land swapping, covenants and tradable development rights to achieve this.
4. In all protected area systems, funding sources should be linked to priorities to ensure effective biodiversity conservation.



5. It is also imperative that the relevant statutory authorities have the capacity to implement appropriate legislation and incentive mechanisms in partnership with civil society to achieve effective biodiversity conservation.

Underpinning the adoption of a bio-regional conservation policy framework and the development of supportive mechanisms for alternative approaches to conservation, needs to be the allocation of adequate government funding and provision of suitable research support. It is crucial that these initiatives are supported by government at all levels and have as partners enthusiastic communities who understand the economic benefits of well-managed protected areas.

If tangible conservation incentives were in place, communities would be motivated to promote co-operative governance and close working relationships with implementing agencies. Involved and motivated communities would need to be further supported by a strong legal framework and clear policy guidelines which guide conservation and biodiversity-friendly land-use.

The identification, and establishment of priority conservation areas needs to be an ongoing process which is supported by implementing agencies which have sufficient capacity for both effective conservation assessment and innovative adaptive management. Such interventions would depend on the agreement of conservation priorities in terms of both biodiversity pattern and process, and would need to be supported by a capacity for planning and conservation research by the implementing agencies.

Time frames applicable to obtaining the goal are as follows:

- All new conservation areas for management interventions identified and planned at a fine scale by 2006.
- Highly threatened and irreplaceable sites (terrestrial) and key marine protected areas secured under some form of conservation management by 2010.
- Terrestrial protected areas which achieve process targets, including key mega-conservation reserves and corridors are established and being implemented by 2010.
- Conservation reserve networks and marine protected areas complete with effective management by 2020.

## 5.2.2 *Conserving biodiversity and natural resources in catchments*

Catchment management is usually understood to relate to those aspects of land management that impact on water resources in rivers, streams and wetlands. These rivers, streams and wetlands integrate the cumulative effects of management, which are reflected in the quality and quantity of water. The achievement of goals in terms of water quality and quantity will only be possible if activities within a catchment are managed in an integrated way.

The major obstacles which currently hamper the management of water resources, and the protection of the biodiversity that sustains them include:

- The uncontrolled spread of invasive alien plants.

- Inappropriate fire regimes.
- Uncoordinated land-use planning.
- Lack of recognition and protection for sensitive areas (e.g. wetlands and riparian zones).
- Unsustainable land-use practices (e.g. grazing regimes).
- Pollution.
- Over-extraction of water.

**The goal for the catchment management component is:**

*By the year 2020, the communities that benefit from catchments are fully aware of and understand the importance of integrated catchment management and the role biodiversity plays in providing ecosystem services. As a result, institutions and communities work together to ensure that appropriate management is in place.*

Management of all of these aspects requires the establishment of integrated programmes run by a coordinating body responsible for all aspects of catchment management. Such a coordinating body would need to provide a forum for the collaboration of the authorities and communities around the implementation of sustainable management at a catchment level. South Africa's new water law makes provision for the establishment of catchment management agencies (CMAs), whose main purpose will be to manage water resources in defined areas through co-operative governance. CMAs could potentially have a major influence on the management of natural areas and their biodiversity, carried out in the interests of protecting water resources, as well as on rivers and wetlands through the quantification and protection of an ecological reserve as required by the law. Implementation would also need to be supported by an appropriate legal and judicial framework and by communities which are actively involved in implementation. Catchment Management Agencies can facilitate and, practically, play a leading role in such a body.

In order to motivate communities to be actively involved, clear incentives are needed, which would in turn promote sustainable practices. These should be placed within a framework of a strategic plan which provides clear guidelines for long-term sustainability. In order to develop and implement the strategic plan there must be sufficient trained capacity in communities and management agencies. There is a particular requirement to improve integrative capacity, as currently practitioners tend to be specialists located in separate institutions. Communities need to be motivated to act sustainably, as well as to lobby the politicians to acquire sufficient resources. This motivation would have to be informed by a knowledge of the value of biodiversity and the role it plays in ecosystem function.

### **5.2.3 Supporting integrated land-use planning**

*Main obstacles to address in this component:*

- One of the key physical threats to the conservation of biodiversity in the Cape Floral Kingdom (CFK) is uncoordinated land transformation. This land transformation is occurring primarily through the expansion of farming (e.g. the clearing of veld for the cultivation of crops), coastal urban development and forestry.

- The consequences of uncoordinated land transformation include inappropriate land-use and the fragmentation of landscapes. This reduces the conservation value of land near protected areas.

**The goal for land-use planning component is:**

*By December 2002, planning and environmental policy and legislation are used to ensure integrated and informed decision-making, which supports the conservation of biodiversity.*

A number of objectives need to be achieved before it is possible to attain the goal of using planning and environmental policy and legislation to ensure informed decision-making, which supports biodiversity. The description below refers to the strategy map which follows. The objectives indicated on the map should be read from the top block, downwards.

Achieving the goal is directly dependent on two conditions. Firstly, any conflicts between sound environmental management and the rights of landowners must be resolved. A means of proactively addressing this conflict is through using the principles of bio-regional planning as the basis for Integrated Development Plans (IDP), particularly the spatial components of IDPs. In the Western Cape, for example, this would mean integrating the principles of bio-regional planning into the sub-regional IDPs to be developed by the new District Municipalities and into the IDPs developed at the Local Municipality level. These IDPs should then form the strategic framework which guide local authority decisions concerning development control applications such as rezonings. On a provincial level, bio-regional planning principles should be integrated into the provincial strategic planning.

Conflicts between the conservation of biodiversity and existing development rights could be resolved through negotiation processes. This may involve, for example, discussions between the developer and the local authority on the most appropriate site layout, taking environmental concerns and sustainable resource utilisation into account.

Secondly, it is necessary to ensure that political decision-making processes are guided according to sound planning and environmental management principles. Three requirements to ensure that this objective is achieved are identified. Firstly, government authorities must have the necessary financial resources and competency to address environmental issues and to undertake planning processes such as Integrated Development Planning at the provincial and local level. These authorities should work in cooperation with all spheres of government in an efficient way. Such cooperative governance arrangements would be required for the effective integration of environmental management and planning that is needed, for example, in the development of IDPs based on the principles of bio-regional planning.

Thirdly, communities must be empowered and enabled to participate in environmental management and planning in a coordinated manner that optimises their resources. And, thirdly, the planning and environmental professionals must practice according to an agreed set of professional and ethical standards. This is necessary to provide common ground which accommodates a variety of philosophical standpoints.

In order for authorities and communities to achieve the above objectives, information systems and legislative frameworks must be in place to support decision-making. The current lack of integration and coordination between different spheres of government and various policies and pieces of legislation needs to be addressed. This requires a simplified legislative framework, which guides and regulates planning and environmental management. In addition, a reliable decision support system is required which is used by all and support processes such as Integrated Development Planning. This means that the system must be well researched, accessible and the information must be continually updated with changing circumstances.

All of these objectives are underpinned by the need to have an informed and responsive political body. This is important, as political decision-making is at the centre of planning and environmental management processes.

#### 5.2.4 *Improving the sustainability of resource use*

*Main obstacles to be addressed in this component:*

- Increased demand for resources, accompanied by a reduction in resource stocks due to demand for land, exotic invasions and genetic pollution, and overexploitation.
- Lack of scientific knowledge on harvested species and biological communities.
- The existing and potential economic value of natural resources is not well understood and communities and users lack appreciation of the intrinsic and ecological value of natural resources.
- Lack of stewardship of natural resources and of incentives to use resources sustainably.
- Lack of institutional capacity to manage resources, which is exacerbated by poor policy implementation and weak legal infrastructure.
- Politicians influence decisions for short term political gain rather than in the interests of long term sustainability.

**The goal for the sustainable resource use component is:**

***By the year 2020, the natural resources of the CFK are sustainably utilised in such a way that maximises benefits to society without compromising the ecological integrity of the CFK.***

Three main objectives need to be met in order to achieve the goal. Firstly, depleted resource stocks must be allowed to recover, and further degradation prevented, through curtailing the spread of alien invasions, genetic pollution and the use of overexploited resources. Secondly, communities must be engendered with sense of stewardship and empowerment, through participation, knowledge (entrepreneurial and managerial) and well-defined user rights and management responsibilities. Thirdly, benefits of resource use should be maximised, and excessive demand reduced, through incentive measures and training aimed at increasing the efficiency of resource use (e.g. by adding value) and reducing dependence on scarce resources through economic empowerment.

Meeting the last two objectives listed above will hinge on the formation of community forums which are representative of appropriate groups, and which are eager to collaborate with conservation agencies. Through these forums it will be possible to set in place the education and training programmes required to meet the above objectives, and to allocate user rights and responsibilities among communities, with their full participation.

The establishment of community forums and the recovery of stocks will in turn depend on the establishment of an effective legal and institutional framework which provides the supporting legislation. Community forums will also only work if community members perceive the benefits of achieving sustainable management of resources, and if relevant conservation and management institutions are prepared and able to work with communities.

In order to encourage government agencies to develop new approaches to resource management (the previous objective listed above), and in order to effect legal and institutional changes, it will be necessary to create a political will that drives, or does not hinder, the process.

Both political and community willingness will be dependent on those individuals understanding the benefits of using resources in an optimal, sustainable way. This understanding, as well as an understanding of the incentives that encourage or discourage sustainable use will be a vital input into designing an appropriate legal and institutional framework which uses economic and financial incentives as an effective approach.

In order to understand the current and future benefits of resource use, and to identify optimal strategies for use, it will be necessary to understand the status, current production, and production potential of exploited and unexploited species, under different management scenarios. This is also a necessary step in identifying the species that are already under threat or overexploited.

The time frame for achieving this goal is that sustainable use practices should be in place by 2010, allowing maximum benefits to be realised by 2020.

### **5.2.5 *Promoting sustainable nature-based tourism***

*Main obstacles to be addressed in this theme:*

- No institutional strategic framework with clear allocation of roles, responsibilities and coordination of activities.
- Poorly developed criteria for development planning to ensure sustainability, which leads to over-exploitation and degradation of the asset base (e.g. coastal dune development).
- Failure to identify and promote new tourism opportunities.
- Lack of an enabling framework for involvement of previously disadvantaged individuals with host communities. These communities lack knowledge, capacity and power to develop tourism opportunities. This is compounded by a lack of access to finance for potential new entrants to the industry.
- Lack of a range of products that are suited to a broad range of markets, including poorer groups.

- Current visitor perception is one of a lack of security.
- Current marketing efforts are fragmented and do not create a CFK "brand".

**The goal for the nature-based tourism component is:**

*By 2020 a measurable contribution is being made to the sustainability of the natural resource base of the Cape Floral Kingdom by the tourism industry that utilises those resources. Through offering a broad range of appropriately linked nature-based products, the tourism industry is attracting visitors to the Cape Floral Kingdom, thereby providing: sustainable benefits to communities; increased incentives for the ongoing conservation of the biodiversity of natural resources; a contribution to the costs of managing the natural resource base of the industry and associated cultural artifacts; a stimulus to the regional economy; and a world-class experience for tourists.*

In order to achieve this goal, the following four requirements must be met. Firstly, a strategic planning framework for tourism development must exist, with agreement from all key players on roles and responsibilities together with a mechanism to support the overall co-ordination of the industry. This framework must ensure that benefits flow to the beneficiaries identified in the goal.

Secondly, all spheres of government need to develop and maintain appropriate infrastructure in prime tourism areas. This must be supported by an effective strategy between the public and private sector to address safety of tourists and the local and national perceptions of the risks to tourists visiting South Africa.

Thirdly, new entrants must be successfully participating in the tourism industry. This will depend on the following supporting conditions: incentives to encourage investment in new tourism enterprises; hospitality awareness programmes for host communities; accessibility of the natural resource base to tourist entrepreneurs; mechanisms to support entry of new investors to the tourist industry; training programmes for host communities; mechanism for financial support to new entrepreneurs particularly at a local community level; business training programmes for new entrepreneurs; and access to marketing structures for new entrepreneurs.

To achieve the above, tourism planning structures are needed that motivate for the provision of a broad range of interlinked attractions or activities to cater for all socio-economic groups. In addition, tourism awareness programmes must be implemented to alert South Africans to the contribution of tourism to the economy of the country and the potential role that communities can play to support successful tourism.

And fourthly, the tourism industry must be making a measurable contribution to the maintenance of biodiversity in the CFK. This must be informed by ongoing monitoring of the impact of the tourism industry upon the natural and social environment, with actions being taken where necessary to stop or reverse negative impacts.

## 6. IMPLEMENTING THE STRATEGY

### 6.1 Coordination

It is recommended that a long term Steering Committee is appointed to ensure the implementation of CAPE. This committee will need the support of the lead agencies responsible for the bulk of implementation. The primary role of this committee is to provide a forum for integration and collaboration of community and institutional activities aligned with CAPE. Wherever possible, the strategy should be internalized by implementing agents. The success of CAPE depends as much on the extent to which existing energies and funds are redirected and aligned as it does on attracting additional resources.

### 6.2 Activity selection

The Steering Committee will need a set of activity selection criteria to ensure alignment of activities with CAPE as well as a transparent, consistent and objective approach. The key criteria are alignment with the strategy and funding and sustainability of activities. For each of these criteria, screening questions are recommended:

#### (i) *Alignment*

- Does the activity show clear alignment with the vision, goal and objectives of CAPE?
- Which of the cross-cutting components does the activity best address?
- Which of the sector-specific components does the activity best address?

#### (ii) *Funding and sustainability*

- Are the benefits of the activity sustainable?
- Are there existing initiatives with which this activity has positive relationships?
- Has the activity potential to leverage additional support?
- Does the activity have potential to act as a role model?
- Does the activity have local community support?
- Is the activity in line with government policies and priorities?
- Is the activity GEFable?
- Could the activity use foreign expertise?

### 6.3 Draft list of activities

Initial ideas for activities were developed by participants at the Strategy Development Workshop and in subsequent inputs and discussions. In addition, criteria for activity selection were developed in consultation with the stakeholders involved in the strategy process. These criteria were used by the CSIR team to refine the list of activities. This list was then evaluated and prioritized by the CAPE Working Group, which consists of key implementing agencies. The resulting draft list of activities is provided in Appendix 1 and will be refined and further developed in the Implementation Programme phase in collaboration with potential implementing agencies. The activities that have thus far been identified by the CAPE Working Group as priorities are underlined.

#### **6.4 Next steps (refer to the process diagram in Figure 2)**

The strategy outlined in this report constitutes phase 2 of CAPE, and will guide the next phases. In phase 3, an Implementation Programme will be developed, which will incorporate Business Plans for priority activities. The Implementation Programme will contain aspects related to implementation not included in the Strategy, such as institutional arrangements, financing and allocation of resources. The Implementation Programme will be presented at the CAPE Conference in September 2000, and will form the basis for securing funding for the selected activities and aligning available resources.



## APPENDIX 1: DRAFT LIST OF ACTIVITIES

### *CROSS-CUTTING COMPONENTS*

#### **1. *Strengthening Institutions***

- 1.1 Establishment of a mechanism and funding strategy for sustainable implementation of the CAPE project
- 1.2 Institutional strengthening in the Eastern Cape
- 1.3 Developing an appropriate legal and policy framework for biodiversity conservation in the CFK
- 1.4 Reviewing the system for enforcing environmental laws impacting on biodiversity conservation in the CFK
- 1.5 Institute ongoing monitoring of the State of Biodiversity
- 1.6 Improving the ability of key NGOs and 'non-conservation' government agencies to support the conservation of the CFK
- 1.7 Developing capacity for biodiversity management

#### **2. *Enhancing Co-Operative Governance***

- 2.1 Collaborative strategic bio-regional planning
  - development and maintenance of an integrated CAPE database and production of appropriate outputs
  - implementation within agencies
  - integrative training
- 2.2 Support for the development of effective CMAs by expanding their brief to include biodiversity

#### **3. *Promoting Community Involvement***

- 3.1 Formalising local participation in marine resource management (need a detailed plan to link with activities under 7 - *sustainability of resource use*)
- 3.2 An environmental education process focused on the value of biodiversity of the CFK is supported and developed (need a detailed plan to link with 5.7 and 4.3)
- 3.3 Development of appropriate incentives and removal of disincentives for biodiversity conservation in the CFK
- 3.4 Enabling communities to sustainably exploit economic opportunities from biodiversity conservation in the CFK (eg. tourism and fynbos products)

### *SECTOR SPECIFIC COMPONENTS*

#### **4. *Strengthening On and Off Reserve Conservation***

- 4.1 Interventions to establish reserves and off reserve conservation measures for priority areas (particular priorities include lowlands, mega-reserves and marine protected areas)

- 4.2 Fine scale biodiversity research and conservation planning to support conservation interventions in priority areas
- 4.3 Institutional tools and mechanisms, including testing cooperative management models and developing incentives
- 4.4 Land and ownership interventions and programs, focusing on the redistribution of government land
- 4.5 Database Management, supporting 2.1 (bio-regional planning) and the maintenance of Red Data Books

**5. *Conserving Biodiversity and Natural Resources in Catchments***

- 5.1 The development of an effective co-ordinating body for integrated catchment management – use a case study on the ground which includes the establishment of an effective body and the development and implementation of a local management plan for the conservation of biodiversity
- 5.2 Identification and development of mechanisms, including incentives, to encourage sustainable catchment management practices, particularly for sensitive areas outside of formally conserved land
- 5.3 Research on the role of biodiversity in underpinning ecosystem functioning in the context of catchment management
- 5.4 Research on the economic value of biodiversity in catchments
- 5.5 The development of capacity through support to existing initiatives aimed at clearing invasive alien plants and managing fires
- 5.6 The management of water demand to relieve pressure on water resources in rivers and to protect the water reserve

**6. *Integrated Land Use Planning***

- 6.1 Develop an accessible, current and reliable decision-support system which is an input into bio-regional planning and Integrated Development Planning. This should include the development of transparent criteria or guidelines for the conservation of biodiversity, based on bio-regional planning and the outcomes of CAPE.
- 6.2 Provide recommendations for simplifying legislation and develop teams to monitor its implementation. This should include identifying the overlaps between the roles and responsibilities of government authorities and provision of recommendations for cooperative governance and the more efficient use of resources and skills.
- 6.3 Build capacity within government to undertake Integrated Development Planning which is based on the principles and application of bio-regional planning. This should include training courses, and possibly the provision of specialist environmental expertise on the local government Integrated Development Planning Committees.
- 6.4 Project to ensure that information on development projects is accessible to communities in order to facilitate their involvement and contribution to environmental management.

**7. *Improving the Sustainability of Resource Use***

- 7.1 Develop a cluster of research activities aimed at establishing the stocks and productivity of resources, determining the effects of harvesting on stocks and productivity, and finally, establishing sustainable management strategies
- 7.2 Determine existing and potential economic value of harvested resources, and determine economically optimal strategies for exploitation
- 7.3 Investigate the economic incentives that encourage or discourage sustainable use
- 7.4 Develop and implement educational courses and road shows to take to users, politicians, policymakers and enforcers
- 7.5 Develop willingness and capacity within management institutions to work with communities
- 7.6 Analyse existing legal and policy framework, as well as law enforcement, and explore how it can be enhanced to support sustainable resource use
- 7.7 Establish appropriate community forums, following an investigation of various models for community participation.
- 7.8 Develop entrepreneurial skills and improve economic conditions within communities to optimise sustainable use of resources and economic development.
- 7.9 Institutional assessment for the Directorate of Nature Conservation in the Eastern Cape Department of Economic Affairs, Environment and Tourism.
- 7.10 Marine Protected Area finalisation and implementation

**8. *Promoting Sustainable Nature Based Tourism***

- 8.1 A research programme to identify and support community-based tourism initiatives
- 8.2 A research programme to identify nature-based tourism opportunities within the CFK
- 8.3 Development of a strategy to encourage local government participation in tourism development
- 8.4 Development and implementation of a holistic ecotourism strategy, involving local government, local communities, government and the tourism industry in the process
- 8.5 Development of a programme to create interlinked tourism "theme" routes marketed under a CFK "brand" for ecotourism throughout the CFK
- 8.6 Development of a strategy to increase tourism research capacity through collaboration between Tourism Boards, universities, technikons and private and public research bodies.

**CAPE PENINSULA NATIONAL PARK  
INTEGRATED ENVIRONMENTAL MANAGEMENT SYSTEM**

*Final Draft*  
**Strategic Management Plan  
2000 – 2004**

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# 1. Introduction

## 1.1 Background

An Integrated Environmental Management System (IEMS) is being developed for the Cape Peninsula National Park<sup>1</sup>. The Initial Environmental Review<sup>2</sup> identified organisational, strategic and operational issues that need to be taken into account during the process of developing the IEMS. The Management Policy for the Cape Peninsula National Park (CPNP), developed together with all stakeholders between May 1999 and March 2000, details the intent and commitment of Park Management and stakeholders to a course of action that will enable the realisation of the vision for the Park. The diagram below indicates relationship between this document, namely the Strategic Management Plan, and the other components within the overarching structure of the IEMS.

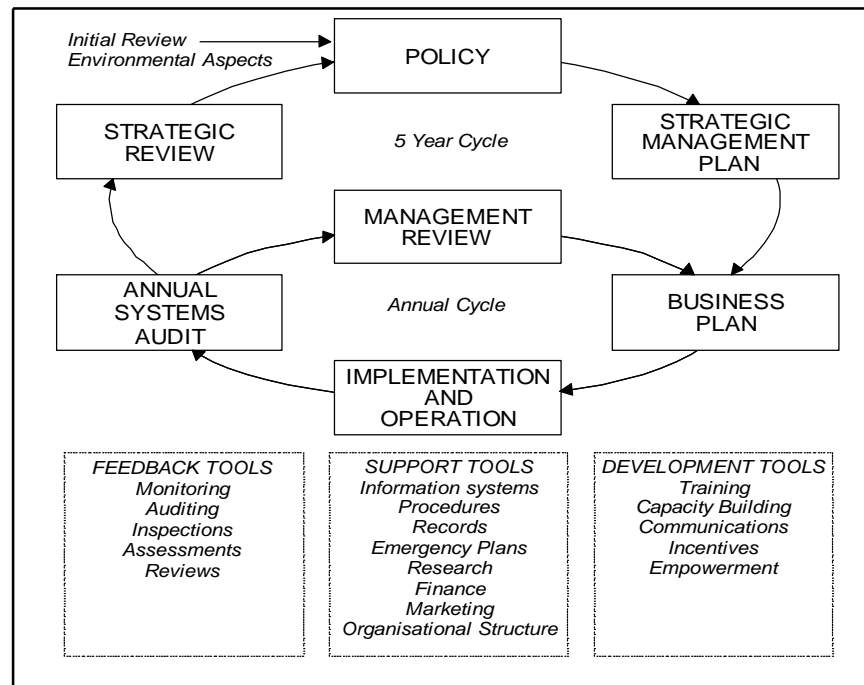


Figure 1: Structure of the Integrated Environmental Management System

<sup>1</sup> The CPNP-IEMS project is being funded by the Global Environment Facility

<sup>2</sup> The document's full title is *Cape Peninsula National Park Integrated Environmental Management System: An Initial Environmental Review*.

## 1.2 Purpose of the Strategic Management Plan (SMP)

The SMP indicates where the Park Management Team intends to focus its efforts in the next five years. It does not identify every operation required in terms of the Policy or by crises that may arise, but prioritises proactive strategies. Drawing on the Initial Environmental Review, the Management Policy, stakeholder inputs and intensive working sessions with the Park Management Team a set of *Key Result Areas* have been prioritised for the organisation for the next five years. Rather than detailing all operational and potential reactive courses of action in the next five years the SMP focuses on strategic priorities. It details a plan of implementation for each *Key Result Area*. A *Key Result Area* is a priority area of action for the Park.

The SMP together with the Management Policy provide a framework for action. The priority given to actions included in the SMP must be understood in the context of a comprehensive Policy. The Policy guides the Park Management Team and stakeholders in reacting to issues as they arise. While planning for some emergencies, e.g. fires, is part of the SMP, it remains possible that unforeseen disasters could disrupt the prioritisation set out here.

Each *Key Result Area* is directed by a *strategic objective* for which *strategies* have been developed. Each strategy will be implemented through a set of *actions* and will result in a number of *deliverables*. The implementation of the strategies by the *implementing department(s)* will be monitored using *indicators* within a set *time-frame*. The Park Manager is ultimately responsible for all activities of the Park, and plays a supervisory role for all implementing departments. The *Key Result Areas* are introduced by brief statements of the SANP corporate approach, the current situation for CPNP and the strategic intent.

It is important to note that the SMP is not a spatial management plan in that it does not specify actions for individual areas of the Park. Furthermore, it is not the purpose of the SMP to detail operational issues, unless these are identified as having strategic importance.

The SMP provides broad guidance on operational impact management, which will be implemented through detailed procedures developed for the IEMS.

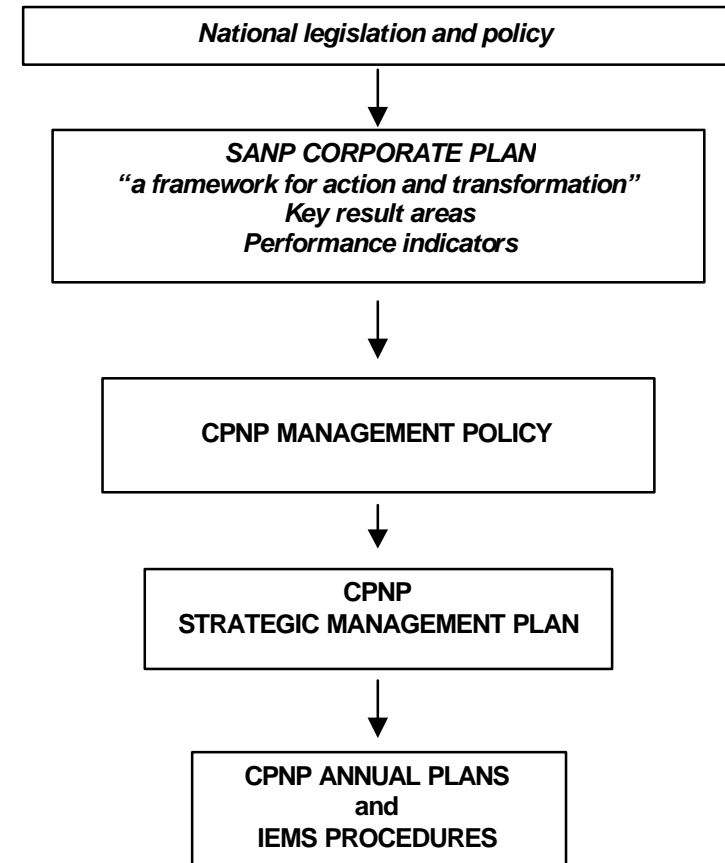


Figure 2: Relationship of IEMS products

### 1.3 Process of Developing the Strategic Management Plan

The Park Management Team identified *Key Result Areas* through a facilitated analysis of the Management Policy. Common Ground Consulting in consultation with the Park Management Team have compiled the draft SMP for discussion by the Joint Discussion Forum. Once the Forum has met to discuss this document, it will be amended and made available to stakeholders. The Joint Discussion Forum will meet once more to discuss the document, prior to finalisation and ratification through Cape Peninsula and South African National Parks structures.

## 2. Annual planning

Annual Business Plans will be guided by the Strategic Management Plan in that major effort should be directed towards priority activities that support the strategic objectives of the *Key Result Areas*. Annual planning will be an internal process.

## 3. Supporting Procedures and Training

Procedures that support the implementation of the Strategic Management Plan and enable policy objectives to be met are being developed together with the staff of the Cape Peninsula National Park. Besides the need to specify procedures for the management of environmental impacts resulting from operations, there are a number of documents and data sets that need to be accessible to staff on a daily basis. Ensuring that access to and training in the use of these documents, procedures and data sets are a further component of the IEMS.

## 4. Key result areas

### 4.1 Park Establishment

Park establishment is guided by the objective of the Corporate Plan, when it states that the SANP must ensure that national parks represent the widest possible spectrum of biodiversity, significant habitats, natural processes and associated cultural resources [CP: CD1].

It is desirable to manage the natural and cultural resources of the Cape Peninsula in a co-ordinated and consolidated way. The aim of Park establishment is to bring all possible land within the CPPNE under a single management authority and to establish a marine component of the Park. Currently, the CPNP manages about 70% of the CPPNE. The CPNP will also seek to manage land outside of the CPPNE that is of particular conservation value.

The CPNP will make use of many mechanisms to include land into the Park. Land may be contracted into the Park, donated, purchased or incorporated according to agreed principles. While proactively pursuing the inclusion of priority land, the Park will also need to respond, as pieces of land become available. Marine areas will be identified and a Marine Protected Area established through a public process.

#### *To establish the Park*

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementing Department
Consolidate all possible land within the CPPNE, as well as other identified conservation-worthy areas adjacent to and contiguous with the Park under the management control of the CPNP	<ul style="list-style-type: none"> <li>• Compile an inventory of all land to be incorporated into the Park</li> <li>• Identify criteria for inclusion of land</li> <li>• Prioritise land for inclusion</li> <li>• Compile strategic lists of private and public land inside and outside of the CPPNE</li> <li>• Consolidate private &amp; public land under CPNP management control through, for example, the following mechanisms: Contracting in, donation, purchase or incorporation according to agreed principles</li> <li>• Explore CPNP's future involvement in the administration of the CPPNE</li> </ul>	Proclamation of land within the CPPNE	Number of hectares of conservation-worthy private and public land identified according to the criteria declared as National Park	Year 1 - 5	Park Development & Planning
Establish a marine component	<ul style="list-style-type: none"> <li>• Employ a marine co-ordinator</li> <li>• Identify criteria for establishing boundaries for the Marine Protected Area (MPA)</li> <li>• Undertake public process to establish new MPA</li> <li>• Establish zoning for MPA</li> <li>• Develop management plan for MPA</li> </ul>	Proclamation of MPA MPA management plan		Year 1 - 3	Park Development & Planning Social Ecology



## 4.2 Proactive Conservation Planning and Development

The SANP encourages each park to develop zonings for management areas. These plans should establish each park's visitor use potential and ensure that the impact of tourism does not threaten biodiversity or cultural values [CP: PM1.6 and 1.7].

Inappropriate development and visitor activities threaten the sustainability of the Park. Other than the Use Zone Map, no broadly acceptable framework for conservation development planning exists. At the same time, there are sites requiring urgent attention to prevent degradation. The potential exists to proactively plan for and pursue development and conservation initiatives that will ensure the long-term sustainability of the Park.

Clear planning principles will guide the formulation of a Conservation Development Framework (CDF) for the Park. The CDF will identify use zones, based on a review of the existing Use Zone Map and baseline data on biodiversity and cultural significance. The CDF will develop guidelines for land management and development appropriate for each zone. It will provide a framework for visitor management. Based on this framework, planning for local areas will be undertaken.

### *To plan proactively for conservation development*

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Prepare the Conservation Development Framework (CDF)	<ul style="list-style-type: none"> <li>Finalise process for development of Conservation Development Framework (CDF)</li> <li>Undertake a credible stakeholder involvement process</li> <li>Develop planning principles (within the guidelines set by the CPNP Management Policy) to underpin the CDF.</li> <li>Develop baseline of environmental opportunities and constraints</li> <li>Update baseline information of the Use Zone Map</li> <li>Finalise Conservation Development Framework</li> </ul>	Broadly accepted CDF		Year 1	Park Development & Planning Environmental Management Social Ecology
Prepare local area plans	<ul style="list-style-type: none"> <li>Prioritise local areas for planning</li> <li>Develop work programme to address all priority local area planning</li> <li>Complete planning for priority local areas</li> <li>Review existing local area plans</li> </ul>	Local area plans, EIA reports (where required)		Years 1- 3	Park Development & Planning Environmental Management Social Ecology Commercial Development & Tourism

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Implement local area plans	<ul style="list-style-type: none"> <li>Identify priority local areas for implementation</li> <li>Undertake required conservation and development activities for local areas</li> </ul>	Construction & operational EMPs		Years 1- 5	Park Development & Planning Environmental Management Social Ecology Commercial Development & Tourism
Initiate and participate in proactive and reactive initiatives for co-ordinated planning and development of the Park and its surrounds	<ul style="list-style-type: none"> <li>Engage with relevant authorities and private landowners</li> <li>Actively participate in processes affecting land-use of the Park and its surrounds, e.g. urban edge study, rezonings, structure plans, Catchment Management Plans.</li> </ul>	Information included in monthly reports on CPNP involvement in broader planning process		Year 1 - 5	Park Development & Planning Environmental Management

### 4.3 Research and Monitoring

The national Corporate Plan identifies the need to create and maintain centralised data warehouses, that gives users the scientific and technical data they require [CP: IT5]. For all key result areas, indicators should be established and tracked. SANP policy is to identify the natural resources in national parks and to develop proposals for their protection [CP: CD2].

Monitoring is essential to adapt CPNP management plans and activities to changing circumstances. Two key areas for monitoring are biodiversity and visitor management.

Conservation of biodiversity resources is a core activity of the CPNP, and will require monitoring against accurate baseline information. Establishing a profile of visitors, their numbers, uses and impacts on the Park will be a second major focus of the monitoring programme. In addition to the focal areas, the monitoring programme will provide information needed to meet strategic objectives and guide day to day operations.

***To establish a research and monitoring programme***

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Research, document and maintain information on biodiversity	<ul style="list-style-type: none"> <li>Identify indicators for biodiversity monitoring</li> <li>Identify gaps in information.</li> <li>Develop research programme aimed at gathering/consolidating data on biodiversity</li> <li>Engage local research institutes to collaborate on priority research projects</li> <li>Solicit research funding support</li> </ul>		Biodiversity indicator results  Number of research programmes	Year 1-5	Environmental Management Park Development & Planning
Develop targeted monitoring programmes that support strategic objectives	<ul style="list-style-type: none"> <li>Develop monitoring programme to evaluate efficacy of alien clearing</li> <li>Develop monitoring programme for fire management</li> <li>Maintain records on faunal and floral elements</li> <li>Maintain information on visitor numbers, profile and usage</li> <li>Develop indicators to monitor and evaluate social delivery</li> <li>Document social ecology 'best practice'</li> <li>Collaborate with local authorities on fresh-water systems research and monitoring</li> </ul>	Fire records Monitoring programmes Fauna and flora records Visitor information Alien clearing records	Refer to alien clearing, fire management, biodiversity, visitor management indicators	Year 1 - 5	Environmental Management Park Development & Planning Commercial Development & Tourism

**4.4 Invasive and non-invasive alien plant management**

The national Corporate Plan sets out the objective of protecting and enhancing environmental value through identifying key threats and implementing cost-effective means of averting these [CP: CD2].

Invasive alien plants are a key threat to the long-term conservation of biodiversity on the Cape Peninsula. In addition, dense stands of alien trees are a major fire hazard to the surrounding urban area and to Park infrastructure.

The management of alien plants has been identified as a priority for the CPNP. This has been supported by grant funding from the Global Environment Facility. The Park aims to manage aliens with minimum negative environmental effects and maximises social benefits by involving disadvantaged contractors in alien clearing. The Park's efforts will be complemented by the activities of local, provincial and national authorities and private landowners within their areas of control.

***To manage invasive and non-invasive alien plants***

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Remove all woody seed-bearing adult invasive alien plants from within the CPPNE and sustain a follow-up programme	<ul style="list-style-type: none"> <li>Review priority areas for clearing</li> <li>Plan for follow up on post fire recruitment of burnt areas</li> <li>Plan for follow-up on cleared areas</li> <li>Develop and initiate model for establishing a price for clearing alien vegetation, taking into account socio-environmental variables</li> <li>Train staff, contractors and volunteers</li> <li>Implement clearing plans through skilled management staff, contractors and volunteers</li> </ul>	Follow-up programmes	<p>Number and distribution of hectares cleared</p> <p>Price per hectare cleared (initial and follow-up)</p> <p>Time since last component cleared</p>	Year 1 - 5	Environmental Management Social Ecology Park Development & Planning
Avoid or minimise all negative environmental impacts associated with clearing invasive plants	<ul style="list-style-type: none"> <li>Ensure efficient use of herbicide</li> <li>Identify negative environmental impacts</li> <li>Institute mitigatory measures, e.g. where herbicide use is necessary, ensure efficiency through effective procedures</li> </ul>	Effective procedures	Recorded loss of species	Year 1 - 5	Environmental Management
Undertake accurate monitoring, evaluation and recording of invasive plant clearing and follow-up programmes.	<ul style="list-style-type: none"> <li>Establish criteria for evaluation of alien clearing success</li> <li>Maintain and update database of alien clearing</li> <li>Encourage research institutes to sustain research into aliens and their control</li> <li>Monitor before and after clearing and follow-up programmes</li> </ul>	Alien clearing records	Alien clearing histories	Year 1 - 5	Environmental Management Park Development & Planning
Communicate impacts and responsibilities of clearing to landowners and public	<ul style="list-style-type: none"> <li>Clarify legal responsibilities of landowners</li> <li>Encourage removal of aliens on private land</li> <li>Negotiate rates incentives / penalties for non-removal of invasive aliens</li> </ul>	Number of effective communications: newsletters, press releases etc.	Percentage of private landowners on sustained follow-up programmes	Year 1 – 5	Environmental Management Social Ecology CD&T (Communications)

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Manage non-invasive alien plants, particularly in the context of historical and cultural landscapes and recreational areas	<ul style="list-style-type: none"> <li>Plan to manage non-invasive alien plants associated with defined cultural and historical landscapes at a local area level</li> <li>Maintain non-invasive trees planted for recreational purposes, only where they are in harmony with the strategic objectives of the Park</li> <li>Phase out areas only used for timber production</li> <li>Review fire breaks planted with non-invasive alien plants</li> </ul>	Number of local areas planned and managed		Year 1 – 5	Environmental Management Social Ecology

#### 4.5 Fire management

Fire is an essential feature in maintaining fynbos ecosystems. Fire frequency has increased to a level that it is a threat to the long-term conservation of the biodiversity of some areas of the Cape Peninsula. The presence of dense stands of alien plants significantly contributes to the intensity of wildfires and the general management of the fire regime. People living close to the urban edge are concerned when fires burn in the Park, whether they are accidental wildfires or part of a fire management programme.

The Park will strive to maintain a mosaic of vegetation communities of different ages, shaped by fire. In order to achieve this ecological objective and to protect urban areas against wildfires, a fire management plan will be developed. The fire management plan will detail procedures and protocols for wildfires and control burns, assess maintenance procedures (e.g. fire-breaks and infrastructure), staff capacity and training, inter-agency co-operation, biodiversity conservation determinants for control burns, legal responsibilities, information management and communication.

##### *To manage fire*

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Plan and implement controlled burns where necessary	<ul style="list-style-type: none"> <li>Review fire-history records</li> <li>Assess the need and plan for controlled burns</li> <li>Identify areas burned too often</li> </ul>		Mosaic of vegetation of varying ages	Year 1 - 5	Environmental Management
Develop and implement a Fire Management Plan	<ul style="list-style-type: none"> <li>Develop procedures and protocols for wildfires and control burns</li> <li>Assess maintenance procedures (e.g. fire-breaks and infrastructure)</li> <li>Assess and develop staff capacity and training</li> <li>Develop inter-agency co-operation during fires</li> <li>Collaborate with local authorities and landowners for the removal of alien trees from the urban edge</li> </ul>	Fire Management Plan  Fire fighting infrastructure  Firebreaks	Distribution of vegetation ages	Year 1- 5	Environmental Management Park Development & Planning

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
	<ul style="list-style-type: none"> <li>Identify biodiversity conservation determinants for control burns</li> <li>Determine and meet legal responsibilities</li> <li>Assess and enforce recreational fire-free zones for the Park</li> <li>Acquire the necessary infrastructure and equipment for fire management</li> <li>Implement fire protection measures for CPNP and local authority infrastructure</li> <li>Form Fire Protection Association(s)</li> <li>Explore registration of CPNP as a local authority i.t.o. National Veld and Forest Fire Act (1998)</li> </ul>		Frequency and extent of wildfires		
Maintain accurate fire history records for all areas of the Park	<ul style="list-style-type: none"> <li>Update fire history records</li> <li>Develop monitoring programme for post-fire recruitment of aliens.</li> </ul>	Fire history		Year 1 – 5	Environmental Management Park Development & Planning
Promote the awareness of visitors and the general public on the periphery of the Park regarding their responsibilities in protecting their properties and the Park from accidental fires.	<ul style="list-style-type: none"> <li>Establish and communicate legal responsibility regarding fire to land owners and neighbours</li> <li>Develop public communication campaign</li> </ul>	Records of communications	Property damage due to wildfires	Year 1 - 5	Environmental Management Social Ecology CD & T (Communications)

#### 4.6 Cultural heritage resources management

The SANP Corporate Plan commits the national organisation to identify cultural resources within parks and devise strategies for managing these resources in collaboration with local communities [CP: SE 1.7].

The Cape Peninsula represents different “places” for different people and relates to the psyche of people, myths and legends, histories and experiences, social and cultural traits and philosophical and ideological values. However, different cultural heritage resources have not received the same emphasis as biodiversity in the past either within the South African National Parks system or on the Cape Peninsula. Responsibilities regarding the management of cultural heritage resources are now defined within the National Heritage Resources Act (1999).

An essential part of managing cultural heritage resources is their rediscovery, research and documentation. This is seen as a priority for the CPNP over the next few years. Linking the Park's cultural heritage resources to their broader cultural context and their integration into the management of all aspects of park management are further immediate challenges.

***To manage cultural heritage resources***

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Identify, research and document information on tangible and intangible cultural heritage resources associated with the CPNP	<ul style="list-style-type: none"> <li>Form cultural heritage working group</li> <li>Audit tangible and intangible heritage resources</li> <li>Collect and document oral information</li> <li>Develop a framework for interpretation</li> <li>Compile comprehensive spatial and non-spatial database on cultural heritage resources</li> </ul>	Database of cultural and heritage resources Framework for interpretation		Year 1 - 2	Social Ecology Park Development & Planning
Manage existing tangible and intangible cultural heritage resources	<ul style="list-style-type: none"> <li>Develop overarching cultural heritage resources management plan</li> <li>Take steps to manage impacts on tangible cultural resources</li> <li>Identify priorities for restoration, stabilisation and rehabilitation, and integrate with CDF and local area plans</li> <li>Prepare site-specific management plans where required</li> <li>Restore priority sites</li> </ul>	Site-specific management plans		Year 2 - 5	Park Development & Planning Social Ecology Environmental Management
Develop materials, methods and facilities that develop an appreciation and respect for the diverse cultures and spiritual significance associated with the Park	<ul style="list-style-type: none"> <li>Identify and prioritise the development of education facilities and materials</li> <li>Develop educational materials and facilities</li> </ul>	Interpretative facilities and materials		Year 2 - 5	Social Ecology CD&T

#### 4.7 Community partnerships and benefits

The SANP Corporate Plan has a strong emphasis on the identification of development of community partnerships and benefits. SANP have undertaken to develop and nurture good relations with communities adjacent to national parks, and to take full account of local cultural values and resources in park development and management [CP: SE1].

Relationships of the CPNP with the broader Park Community are essential to the sustainability of the Park. The Park's neighbours need to derive benefits from the Park if they are to support it, in particular disadvantaged communities. The development of community partnerships relies on identifying areas of action that can result in sustainable relationships between the Park and surrounding communities. Placed in a metropolitan area, the Park has a great opportunity to promote meaningful involvement of volunteers.

To create a broader Park community, the CPNP will communicate effectively with stakeholders and develop relationships based on mutual respect and trust with communities and interest groups. Building on existing volunteer programmes and using the Park for environmental education will add to the sense of partnership. In terms of community benefits, the Park will identify and facilitate the delivery of benefits to adjacent and broader communities. Such benefits could include community access to Park opportunities educational, recreational use, economic opportunities, and cultural interpretation. The specific focus for the delivery of direct benefits must be with disadvantaged communities.

#### *To promote community partnerships and benefits*

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Create effective mechanisms for on-going communication with stakeholders.	<ul style="list-style-type: none"> <li>Develop CPNP communication strategy</li> <li>Maintain stakeholder database</li> <li>Explore alternative communications mechanisms (publications, TV, Radio etc)</li> </ul>	Communicati on strategy Newsletter  Stakeholder database Record of Communicati ons		Year 1-2	Social Ecology CD&T (Communication)
Develop mutually beneficial partnerships with communities and interest groups.	<ul style="list-style-type: none"> <li>Identify potential partnerships</li> <li>Work in partnership with existing structures</li> <li>Set up new partnerships in collaboration with interested and affected parties</li> </ul>	Partnerships and joint projects		Year 1 –5	Social Ecology CD&T (Communications) Environmental Management
Develop volunteer programmes.	<ul style="list-style-type: none"> <li>Identify areas for volunteer involvement</li> <li>Develop volunteer programme</li> </ul>	Volunteer programmes Training records of volunteers		Year 2 - 5	Social Ecology Environmental Management



Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Develop an effective community education and awareness strategy	<ul style="list-style-type: none"> <li>Ensure that visitor centres can be used as sites for experiential learning</li> <li>Develop links with environmental education networks to facilitate the development of education programmes</li> <li>Develop a Park file, linked to the school curriculum and linked to the web page, for teachers on how to use the Park as a learning resource</li> <li>Provide training for teachers</li> </ul>	Visitor centres with interpretive facilities  Teacher training courses	Number of participating educators	Year 1- 5	Social Ecology Park Development & Planning Commercial Development & Tourism
Identify and enable access on an equitable basis to sustainable direct and indirect economic and other benefits derived through the Park.	<ul style="list-style-type: none"> <li>Facilitate mechanism of accessing the Park for disadvantaged communities</li> <li>Assess the feasibility of developing the participation of neighbouring communities in conservation and tourism.</li> <li>Determine criteria for awarding contracts and benefits with emphasis on disadvantaged persons</li> <li>Provide support to Park contractors to become independent businesses</li> <li>Develop sustainability indicators for community projects</li> </ul>	Criteria for awarding contracts  Sustainability indicators	Profile of those accessing Park opportunities (compared to social and economic profile of the region)	Year 1 -5	Social Ecology Environmental management CD&T

#### 4.8 Co-operative governance

The Constitution of the Republic of South Africa Act (No 108 of 1996) regulates the relationship between SANP and national, provincial and local government. Section 40 binds these authorities to co-operative governance. The SANP is committed to formalising the involvement of civil society and other authorities within Park Committees [CP: SE1].

Implementing co-operative governance principles is a priority for the CPNP but is also a challenge given the diverse set of interests. As the Park is located in a metropolitan context, it is essential that co-operative relationships with all spheres of government and stakeholders contribute to the attainment of the vision and goals of the CPNP. The roles and responsibilities of the various authorities overlap, e.g. land use planning.

For the CPNP, developing co-operative governance systems will need to focus on improving relationships with government bodies and stakeholders. Participation in policy decisions and review of progress will happen through a representative and accountable Park Committee.

***To promote co-operative governance***

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Support a representative & accountable Park Committee with policy, review, monitoring and advisory functions	<ul style="list-style-type: none"> <li>Seek clarity on TOR of PC</li> <li>Request timeous nomination procedure for new PC</li> <li>Plan for review of IEMS by PC</li> <li>Submit monthly reports to PC</li> </ul>	TOR Minutes of PC meetings  Reports		Year 1 - 5	Management Team CD&T, Communications, Social Ecology, Environmental Management Park Development & Planning
Nurture co-operative relationships with local and provincial authorities and stakeholders.	<ul style="list-style-type: none"> <li>Develop and maintain bilateral forums</li> <li>Develop local advisory/community forums where required</li> </ul>	Bilateral Forum records		Year 1 - 5	Park Development & Planning Social Ecology Environmental Management CD&T
Manage Park - CMA cross-boundary impacts	<ul style="list-style-type: none"> <li>Identify and prioritise issues</li> <li>Develop action and response plans to manage cross-boundary impacts</li> <li>Collaborate on response plans for emergencies and disasters</li> </ul>	Emergency response plans		Year 1 - 5	Park Development & Planning Social Ecology Environmental Management CD&T
Co-operate with local authorities in defining and maintaining the urban edge and transitional zones	<ul style="list-style-type: none"> <li>Participate in finalisation of Urban Edge Study</li> <li>Investigate determination of transitional zones and management guidelines</li> <li>Participate in investigation of Biosphere Reserve concept</li> </ul>	Urban Edge with management guidelines		Year 1 - 5	Park Development & Planning Environmental Management
Improve the management of municipal infrastructure in the Park.	<ul style="list-style-type: none"> <li>Develop guidelines for the upgrading and maintenance of municipal infrastructure within the Park</li> </ul>	Guidelines Formal agreement with local authority		Year 1	Environmental Management Park Development & Planning
Communicate with the public to improve management of the Park-CMA interface.	<ul style="list-style-type: none"> <li>Identify priority issues for communication</li> <li>Communicate with the public</li> </ul>	Communications dealing with Park-CMA interface		Year 1 - 5	Social Ecology Environmental Management CD&T

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Involve relevant stakeholders in decisions where their interests are affected.	<ul style="list-style-type: none"> <li>Develop and apply criteria for involvement of stakeholders in strategic decision-making</li> <li>Initiate public involvement processes / communications to elicit stakeholder comment on strategic decision-making</li> </ul>	Criteria Public involvement processes or communications		Year 1 - 5	CD&T (communications) Social Ecology

#### 4.9 Financial sustainability

In terms of the new SANP business strategy, all parks are now expected to operate as independent business units [CP: PM2], while making a contribution to the Head Office to offset overhead costs. National parks are expected to provide a high level of internal and public accountability for the use of resources through the use of accounting systems [CP: Fin2].

For the first few years of its life the Park will have the support of external funding from international and local authority sources over and above support received from the national body and the income it generates itself. External funding is expected to last through 2003 (e.g. Global Environment Facility support). The revenue side is contrasted with the high investment demand to establish the Park and significant operation costs to support visitor activities and alien clearing. Local authorities currently support the Park with funding of around R10 million per annum. This funding may cease to exist after 2003.

By 2003, and if the large grant contributions from the GEF and local authorities are not sustained, the CPNP will need to find a further R15 - 30 million per annum in order to cover its capital and operational budgets. To become financially sustainable, the Park will need to diversify its sources of income, increase revenue and improve financial management. Possible sources of increased revenue include grant funding, donations, tourism admission fees and revenues from commercial ventures.

#### *To ensure financial sustainability*

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Ensure financial accountability and align financial management system with that of the SANP system	<ul style="list-style-type: none"> <li>Facilitate an annual independent audit of CPNP financial records</li> <li>Provide relevant financial information to field management</li> <li>Facilitate access to audited statements by the public</li> </ul>	Audited statements publicly accessible		Year 1 - 5	Financial Management

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Improve the management of financial resources	<ul style="list-style-type: none"> <li>Align charges with markets</li> <li>Reduce expenditure by improving efficiency</li> <li>Prepare accurate and realistic annual budgets in consultation with management team that are in line with the SMP objectives</li> <li>Provide monthly financial reports timeously by cost centre</li> <li>Identify opportunities for outsourcing functions where this is most cost-effective</li> </ul>	Annual budgets Monthly budget reports	Charges for Park services  Human resources costs as % of budget  Number and type of outsourced functions	Year 1 - 5	Financial Management CD&T Park Development & Planning Social Ecology Environmental Management
Develop a robust and diverse income base	<ul style="list-style-type: none"> <li>Identify sources of potential income: Grant funding and donations, entry tariffs, commercial developments, sponsorships, merchandising and product development, royalties from concessionaires, season tickets, etc.</li> <li>Develop procedure for environmental control in developing income base</li> <li>Support the establishment of trust funds for CPNP to receive grants and donations</li> </ul>		Profile of income sources  Financial sustainability	Years 1 - 5	Management Team Financial Management CD&T
Actively market resources and services	<ul style="list-style-type: none"> <li>Develop marketing strategy</li> <li>Develop marketing materials</li> </ul>	Number of marketing initiatives	Level of awareness of Park resources and services	Year 1 - 5	Financial Management CD&T

#### 4.10 Visitor management and services

The SANP encourages appropriate access to tourism opportunities in parks that are based on ecological and cultural resources [CP: CT1]. Understanding the ecological and cultural-based tourism market, and providing a unique experience and high level of service are further objectives of the Corporate Plan [CP: CT2].

Cape Town is South Africa's most popular tourist destination. The CPNP is well known for its biodiversity, scenic beauty, unspoiled coastline, environmental education possibilities, and recreational opportunities. In 1999, a South African Tourism Board international market survey revealed that 38% of all overseas tourists to South Africa visit sites within the CPNP. The CPNP plays an important social role as a recreational resource for residents as well. The challenge is to provide a high level of service and to manage visitors in such a way that protects the resource that attracted them in the first place.

Underpinning the management of the CPNP is the maintenance of a balance between ecological, social and economic needs. In order to manage visitors effectively, the CPNP must ensure that: economic needs are met through visitor enjoyment (i.e. generating revenue); broader social needs are addressed (i.e. access to recreational, educational and employment opportunities); and, ecological protection is ensured (i.e. the basis of the tourism industry, natural and cultural resources, is protected).

***To manage and service visitors***

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Plan for and manage visitor facilities	<ul style="list-style-type: none"> <li>Monitor and manage visitor numbers and their environmental impact</li> <li>Plan for and develop visitor facilities within CDF and local area plans</li> <li>Monitor visitor numbers</li> <li>Survey visitor opinions</li> </ul>	<p>Visitor survey results</p> <p>Visitor facilities</p>	Visitor impacts	Years 1-5	CD&T Park Development & Planning Social Ecology Environmental Management
Rationalise, develop and maintain the road, footpath, and bridle and bicycle path systems in the Park	<ul style="list-style-type: none"> <li>Review road, footpath, bridle and bicycle path system in Park</li> <li>Prioritise path and road development, decommissioning and maintenance</li> <li>Develop path specifications and establishment and maintenance costs</li> <li>Regular inspections of public footpaths</li> <li>Prepare schedule of road repair and reconstruction requirements</li> <li>Evaluate signage in terms of needs and aesthetics</li> <li>Implement signage system</li> <li>Develop contractor capacity</li> </ul>	<p>Revised map of path and road systems</p> <p>Signage and road maintenance schedule</p>	Condition of path and road systems	Years 1-3	CD&T Park Development & Planning Environmental Management
Strive to ensure visitor safety	<ul style="list-style-type: none"> <li>Outsource security management</li> <li>Appoint and train volunteers</li> <li>Establish collaborative relationships with policing authorities</li> <li>Liaise with local authorities and stakeholders on security issues</li> </ul>		Number of reported crime incidents	Year 1 – 5	Environmental Management Social Ecology
Promote and manage access to the Park	<ul style="list-style-type: none"> <li>Set management guidelines for different use zones</li> <li>Provide season ticket and special user discounted rates to enable equitable access</li> <li>Monitor pay access points and control access where required</li> <li>Identify areas requiring special management strategies and protection from visitor use</li> <li>Facilitate access for disadvantaged groups on request</li> </ul>	<p>Mechanisms for discounted access</p> <p>Use Zone</p> <p>Map with management guidelines</p>	<p>Visitor numbers</p> <p>Profile of users</p> <p>Profile of discount opportunities</p>	Years 2-4	CD&T Park Development & Planning Social Ecology Environmental Management Financial Management

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Manage visitor activities	<ul style="list-style-type: none"> <li>Determine and manage appropriate activities for different zones and local areas through CDF process</li> <li>Train visitor management staff to regulate and assist visitors of the Park</li> <li>Develop volunteer programme for visitor management</li> <li>Provide visitor information and signage</li> <li>Identify and register all organised user groups and develop Codes of Conduct</li> <li>Identify and manage impacts associated with different uses</li> </ul>	CDF Training records Volunteer programme Interpretive signage Codes of Conduct Register of user groups	Adherence to codes of conduct	Year 1 - 5	Park Development & Planning Social Ecology Environmental Management CD&T

#### 4.11 Commercial operations management

The Corporate Plan encourages the involvement of the private sector in the provision of tourism services. Managing the impact of commercial tourism operations is also a key objective of Park management [CP: PM 1.2, 1.6, 1.7, 1.12].

Commercial operators potentially offer an important source of income for the Park, but at the same time their operations can have negative environmental impact. Three major categories of commercial operators associated with the CPNP are contractors, leaseholders and operators.

While ensuring the protection of biodiversity and cultural resources, the CPNP will seek opportunities for the involvement of small, medium and micro-enterprises and disadvantaged communities in commercial operations. Furthermore, operators and leaseholders can contribute to Park income through the establishment of agreements for the payment of registration fees or a percentage of income.

#### *To manage commercial operators*

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Manage environmental impact of all commercial operators in the Park	<ul style="list-style-type: none"> <li>Develop and enforce Code of Conduct for all commercial operators in the Park</li> <li>Monitor commercial operators in the Park.</li> <li>Limit/prevent commercial operators in sensitive areas.</li> <li>Limit number of commercial operators where necessary</li> <li>Evaluate performance of commercial operators, including their impact on visitor experience</li> </ul>	Code of Conduct	Adherence to code of Conduct Level of environmental impact of commercial operators Visitor experience	Year 1 -5	CD&T Social Ecology Environmental Management Financial Management

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Release commercial opportunities in an equitable manner	<ul style="list-style-type: none"> <li>Focus on SMME's in the release of commercial opportunities</li> <li>Identify opportunities for commercial operations through franchising, subcontracting, community-driven enterprises, joint ventures, apprenticeships and employment</li> </ul>		Variety and number of opportunities released to SMME's	Year 1 - 5	CD&T Social Ecology Environmental Management Financial Management
Manage contractors	<ul style="list-style-type: none"> <li>Identify opportunities for the involvement of contractors</li> <li>Develop base of emerging contractors through training</li> <li>Develop specifications (cost, method and environmental performance) for all contract activities</li> </ul>	Contract specifications Database of contractors	Variety and number of opportunities offered to contractors  Profile and skills of contractors	Year 1 - 5	CD&T Social Ecology Environmental Management Financial Management
Manage leaseholders within the Park	<ul style="list-style-type: none"> <li>Identify opportunities to involve disadvantaged individuals as leaseholders</li> <li>Ensure adequate contribution of profits to Park from leaseholders</li> <li>Develop environmental performance components to contracts</li> <li>Develop EMPs for concessionaires where appropriate</li> </ul>	Contract specifications EMPs	% of income derived from leaseholders  Profile of leaseholders	Year 1 - 5	CD&T Social Ecology Environmental Management Financial Management
Manage commercial operators in the Park	<ul style="list-style-type: none"> <li>Complete inventory of operators in the Park</li> <li>Establish registration system, including collection of fees</li> <li>Develop and enforce Codes of Conduct and where appropriate, implement environmental performance contracts for operators in the Park</li> <li>Where the Park allows access to sensitive areas, formalise agreements with operators</li> <li>Monitor operators</li> <li>Restrict access by operators where necessary</li> </ul>	Inventory of commercial operators Code of conduct Formal contracts or agreements	Adherence to codes of conduct	Year 1 - 5	CD&T Social Ecology Environmental Management Financial Management

#### 4.12 Institutional development

The SANP aims to achieve a people complement that is effective in meeting the organisation's needs that draws on the potential and capacity of a diverse and talented community [CP: HR1]. The Corporate Plan requires parks to operate as efficient business units [CP: PM2.1].

Institutional development supports all of the other strategic objectives of the Park. Essential parts of developing the CPNP as an organisation are staff development and training and developing a learning organisation.

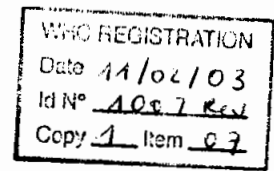
Priorities in institutional development are the implementation of a training system for staff, contractors and volunteers, the implementation of an employment equity plan, structural transformation, and the implementation of the IEMS. The implementation of the IEMS enables continual improvement through implementation, review and adaptation. The IEMS will also ensure that the environmental impacts associated with operations of the Park are avoided where possible or minimised.

***To ensure institutional development***

Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Train staff, contractors and volunteers	<ul style="list-style-type: none"> <li>Identify training needs</li> <li>Develop training programme</li> <li>Implement training programme</li> <li>Maintain training records</li> <li>Evaluate performance of staff, contractors and volunteers</li> </ul>	Training records	Performance evaluations	Year 1 - 5	Financial Management Social Ecology Environmental Management
Implement an employment equity strategy.	<ul style="list-style-type: none"> <li>Identify employees from disadvantaged communities within the Park with potential for fast-tracking</li> <li>Encourage promotions from within staff</li> <li>Direct employment drives at disadvantaged groups</li> </ul>	Park staff representative of regional community	Profile of Park staff	Year 1 - 5	Financial Management Environmental Management
Review current organisational staff structure to ensure effective implementation of the Management Policy	<ul style="list-style-type: none"> <li>Review and change, if necessary, current staff structure</li> <li>Establish competence criteria for key functions</li> </ul>	Organogram  Job descriptions  Performance appraisals		Year 1 - 3	Financial Management
Implement IEMS	<ul style="list-style-type: none"> <li>Implement plans</li> <li>Apply procedures</li> <li>Monitor performance</li> <li>Annual Systems audits</li> <li>Review of system and policy on a five year basis</li> <li>Update legal information</li> </ul>	Plans Procedures Monitoring records Audits Review Up to date legal information		Year 1 – 2	Park Development & Planning Social Ecology Environmental Management CD&T Financial Management



Strategies	Actions	Deliverables	Indicators	Time-frame	Implementation
Identify and manage operational impacts resulting from operations and develop and update management procedures in order to avoid or minimise such impacts.	<ul style="list-style-type: none"> <li>Identify operational impacts</li> <li>Develop management procedures</li> <li>Update management procedures where necessary</li> </ul>	List of operational impacts Procedures		Year 1 – 3	Environmental Management Park Development & Planning CD&T Social Ecology
Investigate the development of a Park-specific set of regulations in accordance with the National Parks Act.	<ul style="list-style-type: none"> <li>Maintain up-to-date information on all aspects and applications of the National Parks Act, including feedback on operations undertaken in terms of the Act</li> <li>Recommend modification of the legislation as appropriate, to meet the current needs to the Park and with input from Park Committee</li> <li>Develop recommendations to SANP Directorate for writing Park-specific regulations</li> </ul>	Gazetted set of regulations for CPNP		Year 1 – 3	Park Development & Planning
Ensure that data required to inform management decisions are effectively integrated and accessible	<ul style="list-style-type: none"> <li>Establish and maintain a GIS-based database of Park information to facilitate strategic and operational decision-making</li> <li>Develop user-friendly applications for Park staff</li> <li>Create a computer network infrastructure integrating SANP corporate and CPNP requirements</li> <li>Provide ongoing technological support to optimise the Park's efficiency</li> </ul>	Park database Applications Network Hardware and system		Year 1 – 5	Park Development & Planning



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09/01/2003

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## WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

### THE CAPE FLORAL REGION (SOUTH AFRICA) ID N°: 1007 REV

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**Background:** In 1999 the Cape Floristic Region - Phase 1: Cape Peninsula Protected Natural Environment was nominated by South Africa for World Heritage status. The 24<sup>th</sup> session of the World Heritage Bureau referred the nomination in June 2000 requesting the State Party to “ensure that the core area of the Cape Peninsula Protected Natural Environment is under one effective and consolidated management regime. The Bureau also encouraged the State Party to complete the preparatory work associated with Phase 2 of the Cape Floristic Region nomination and to submit this when the boundaries of the complementary areas within the CFR are finalised.” The Phase 2 nomination was submitted in January 2002, but returned to the State Party to be combined in a single nomination with the Cape Peninsula National Park. The present nomination responds to these recommendations.

#### 1. DOCUMENTATION

- i) **IUCN/WCMC Data Sheet:** 14 references
- ii) **Additional Literature Consulted:** Cowling, R. M. 1990. Diversity components in a species-rich area of the Cape Floristic Region. **Journal of Vegetation Science** No. 83. pp 699-710; Cowling, R. M. and Holmes, P. M. 1992. Flora and Vegetation in **Ecology of Fynbos**. Cowling, R. M. (ed.); Cowling, R. M. & Hilton-Taylor, C. 1994. Patterns of plant diversity and endemism in southern Africa: An overview in **Strelitzia** No. 1. pp 31-52; Cowling, R. M. & P. M Holmes. 1992. Endemism and speciation in a lowland flora from the Cape Floristic Region in **Botanical Journal of the Linnean Society** No. 47. pp 367-383; Cowling, *et al.* 1996. The Cape Peninsula South Africa: physiographical, biological and historical background to an extraordinary hotspot of biodiversity in **Biodiversity and Conservation** No. 5. pp 527-550; Davis, S. D. and Heywood, V. H. 1994. **Centres of Plant Diversity: A guide and strategy for their conservation**. Oxford University Press; Goldblatt, P. and Manning, J. C. 1999. **Cape flora – A conspectus of the Cape flora of South Africa**; Groombridge, B. 1992. **Global Biodiversity – Status of the Earth's Living Resources**. Chapman and Hall; Myers, N. 1990. The Biodiversity Challenge: Expanded hot-spot analysis. **The Environmentalist**. No. 10. pp 243-255. Richardson, *et al.* 1996. Current and future threats to plant diversity on the Cape peninsula, South Africa in: **Biodiversity and Conservation**. No. 5. pp 607-648; Mittermeier R. *et al.* 1999. **Hotspots – Earth's biologically richest and most endangered terrestrial regions**. Conservation Intl. 431p.; U. of California. 2003. Mediterranean Climate Regions. (poster); Gelderblom C.M. 2003. Turning strategy into action: implementing a conservation action plan in the Cape Floristic Region. **Biological Conservation**. 112; Dallman, P. R. 1998. **Plant Life in the World's Mediterranean Climates**. Oxford University Press.
- iii) **Consultations:** 7 external reviewers; comments from ICOMOS. Relevant officials from federal and provincial nature conservation agencies.
- iii) **Field Visit:** David Sheppard, February, 2000; Jim Thorsell, September, 2003.

#### 2. SUMMARY OF NATURAL VALUES

The Cape Floral Region (CFR) is located in the southwest corner of South Africa in the Cape Province. The nominated site of eight clusters extends from 50km south of the City of Cape Town northwards 210km to the Cederberg and 450km northeast to the Swartberg. The 553,000 ha nominated cluster of eight sites together form a representative sample of the eight

phytogeographic centres of the CFR. The eight sites and their sizes are shown in Table 1 below

**Table 1: The eight clusters making up the Cape Floral Region**

Cape Peninsula National Park	17,000 ha
Cederberg Wilderness Area	64,000 ha
Groot Winterhoek Wilderness Area	26,000 ha
Boland Mountain Complex	113,000 ha
De Hoop Nature Reserve	32,000 ha
Boosmansbos Wilderness Area	15,000 ha
Swartberg Complex	112,000 ha
Baviaanskloof Protected Area	174,000 ha
<b>Total area</b>	<b>553,000 ha</b>

Elevations range from 2077m in the Groot Winterhoek to sea level in the De Hoop Nature Reserve. Peaks such as Table Mountain form a scenic backdrop to the Western Cape, and much of the area is characterised by rugged mountain passes, rivers, rapids, cascades and pools. The Region has a semi-Mediterranean climate of cool wet winters and hot dry summers in the west with summers tending to be rainier in the east. Rainfall varies markedly with topography between 300-500mm in the lowlands to 1000-3300mm in the mountains where clouds and fog can persist and snow falls in winter.

The CFR has been called the world's 'hottest hot-spot' for plant diversity and endemism and has been designated as one of the IUCN World Centres of Plant Diversity. Although the smallest of the world's six principal floristic regions and in a temperate zone, it has a degree of species richness comparable with most tropical hotspots. In less than 0.5% of the area of Africa it has nearly 20% of its flora and in less than 4% of the area of southern Africa it has nearly 44% of the sub-continental flora of 20,367 species. Nearly 69% of its vascular plant species do not occur naturally anywhere else in the world. Within its 90,000 km<sup>2</sup> area there are 8,996 plant species and 988 genera, roughly half of all genera in South Africa. These include five endemic and two sub-endemic families and 1435 (70%) of all southern African threatened species. There is also a very high species-to-genus ratio of 9:1. Within the CFR, the southwest has the most diverse flora, and of these species the Cape Peninsula has almost half, with 25% of the flora of the whole CFR. This pattern of species richness is exceptional for this climatic type, not only in a single habitat but over changes of taxa with changes in habitat (*beta* diversity) and in changes of taxa in similar habitats over changes in geographic area (*gamma* diversity).

There are some 6,191 endemic species in the CFR. The Cape Peninsula has 2285 species of plants, 90 being endemic. The Cederberg has 1778, including an endemic cedar. The Boland Mountain Complex has 1600 plant species, 150 being endemic, and none of the sites has less than 1100 species. The richness is due to the wide variety of macrohabitats and microhabitat mosaics resulting from the range of elevations, soils and climatic conditions, including the co-existence of winter-rainfall species with summer-rainfall species from further east. The flora is also characterised by concentrations of relict endemics and massive still-active speciation due to its isolation in an area of very long established climatic stability which has generated the enormous diversity. The flora of each nominated area is sufficiently distinct to justify representation of the region by several sites, each of which is large enough to preserve the genetic viability of its types of diversity and to accommodate large-scale natural processes such as fire and drought. Eight phytogeographic centres of endemism have been distinguished in the Cape Floral Region, each of which is represented within the nominated site.

The distinctive flora of the CFR which comprises 80% of its floristic richness, is a sclerophyllous shrubland known as *fynbos* (fine bush), a fine-leaved vegetation adapted to both the Mediterranean type of climate and to periodic fires, and defined by the location or dominant species. Its three main components are heaths, *Proteaceae*, reedlike *Restionaceae*

and geophytes (bulb-plants), including many *Iridaceae*. Plant variety is based on soil types which vary from predominantly coarse, sandy, acidic nutrient-poor soils, to alkaline marine sands and slightly richer alluvials. There are pockets of evergreen forest in fire-protected gorges and on deeper soils; in the east are valley thickets and succulent thickets, which are less fire-dependent, and in the drier north, low succulent Karoo shrubland.

Four other characteristics of the CFR of global scientific interest are: (1) the responses of the plants to fire, (2) seed dispersal by ants and termites, (3) the high level (83%) of plant pollination by insects, mainly beetles and flies and (4) its linkages to Gondwanaland allowing reconstruction of the flora's ancient connections. Adaptation to fire include geophytes which sprout from underground and seed storage both underground and in the canopy, some species requiring fire for germination. Ants take the seeds to eat the lipid deposits; about 28% of the Region's flora, including over half of the *Proteaceae*, is dispersed by them. Most of the shrubs so dispersed are both endemic and threatened species but the latter lack a way of regenerating after fire. Pollination and nutrient-cycling by termites, and termite-mound communities are notable and the region has very high levels of bird- and mammal-pollinated plants.

### 3. COMPARISONS WITH OTHER AREAS

The CFR is located within the Cape Schlerophyll Biogeographical Province (Udvardy, 1975). In view of its unique floristic values, it is also recognised as a floral kingdom of its own - The Cape Floristic Kingdom. There are no natural World Heritage sites within either the Biogeographical Province or the Cape Floristic Kingdom. The CFR is among the highest biodiversity "hot spots" in the world, based on plant diversity and endemism. Table 2 shows the numbers of endemic species present in 18 "Hot Spots" (Groombridge, 1992). This clearly indicates the pre-eminent position of the Cape Region. Eleven of these 18 "Hot Spots" contain World Heritage sites.

**Table 2: Numbers of endemic species present in 18 "Biodiversity Hot Spots"**

Region	Higher Plants	Mammals	Reptiles	Amphibians	Swallow-tail Butterflies
Cape Region (South Africa)	6,000	15	43	23	0
Upland western Amazonia	5,000	-	-	c. 70	-
Atlantic coastal Brazil	5,000	40	92	168	7
Madagascar	4,900	86	234	142	11
Philippines	3,700	98	120	41	23
Borneo (north)	3,500	42	69	47	4
Eastern Himalaya	3,500	-	20	25	-
SW Australia	2,830	10	25	22	0
Western Ecuador	2,500	9	-	-	2
Colombian Chocó	2,500	8	137	111	0
Peninsular Malaysia	2,400	4	25	7	0
Californian floristic province	2,140	15	15	16	0
Western Ghats (India)	1,600	7	91	84	5
Central Chile	1,450	-	-	-	-
New Caledonia	1,400	2	21	0	2
Eastern Arc Mts (Tanzania)	535	20	-	49	3
SW Sri Lanka	500	4	-	-	2
SW Cote d'Ivoire	200	3	-	2	0
<b>TOTAL</b>	<b>49,955</b>	<b>375</b>	<b>892</b>	<b>737</b>	<b>59</b>

The CFR has one fifth of all the plant species of Africa, despite occupying less than 0.5% of the continent's area. The CFR has globally significant endemism levels and includes five

endemic families; by comparison the whole of southern Africa has only 12 endemic families. It has a high level of dependency, with almost 6,000 of the 8,500 plant species being endemic to the region. One of the eight clusters, the Cape Peninsula National Park, with 4,651 plant species and a level of endemism of 31.9%, has plant biodiversity unparalleled in other temperate biodiversity "hotspots" and compares favourably with other sites either on or proposed for the World Heritage List for their botanical values. In recognition of these levels of biodiversity and endemism, the CFR has been identified as a Global Centre of Plant Diversity. It is the pre-eminent area of the world's five mediterranean climate regions which in total account for 2% of the earth's land area but account for 16% of the world's plant species.

As Table 3 indicates, the CFR has by far the highest species density (plant species per sq. km.) and species rarity than any of the other mediterranean-type climate regions.

**Table 3 : Plant Diversity and Rarity (Source: Dallman, 1998)**

Region	Area, km <sup>2</sup> millions	Plant species, thousands	Species Density*	Percent Rare or Endangered
World	148	250	1.7	10
Europe	5.7	14	2.5	11
Australia	7.6	22	2.9	10
USA	9.4	20	2.1	8
California	0.41	5.1	12	23
Cape Region	0.09	8.6	94	27
SW Australia	0.31	8.0	26	24

\*thousands of plant species per million km<sup>2</sup>

In conclusion, the CFR is distinctive in terms of its species diversity which is amongst the highest in the world. The floral diversity compares favourably with that found in some areas of the neotropical forests. The CFR also has much higher levels of plant diversity and levels of endemism than other mediterranean-type climate regions (1.7 times that of southwest Australia, 2.2 times that of California and the Mediterranean basin and 3.3 times the diversity of Chile). Only the islands of New Zealand, Hawaii and Madagascar have higher levels of endemism.

#### **4. INTEGRITY**

##### **4.1. Management and Planning Framework**

The nominated areas are managed under a region-wide conservation framework, the Cape Action for People & the Environment (CAPE) Project, established with assistance from the GEF in 2000. CAPE coordinates the work of national, provincial and local authorities and private landowners to promote the protection of biodiversity by integrating social, financial and conservation initiatives. Acts and legal instruments affecting the area include the World Heritage Convention Act, National Environmental Management Act, Environment Conservation Act, National Water Act, Conservation of Agricultural Resources Act, Mountain Catchment Areas Act, National Heritage Resources Act, National Forests Act, National Veld and Forest Fire Act, the Sea-shore Act, the Marine Living Resources Act, Wetlands Conservation Bill, the Biodiversity White Paper and the National Coastal Management Bill. Since 1995 the well funded Working for Water Programme has dealt with alien plant infestation and has been a major source of support for Park management.

Not all of the individual protected areas in the eight clusters have completed management plans but those that do not are currently in preparation.

## 4.2. Boundary Issues

### Cape Peninsula National Park

Apart from the Boland Mountain Complex which is surrounded by mostly rural land uses, six of the clusters have satisfactory boundaries and are bordered by other conservation lands. The situation in the Cape Peninsula National Park (CPNP), however, has potential for various boundary conflicts. Here there is considerable urban interface with Greater Cape Town and this poses significant challenges for conservation management, particularly in relation to control of access, alien species and fire. The urban edge has now been clearly defined, legislation enforced and much consolidation of ownership has taken place over the past 5 years. These efforts are continuing and there are currently proposals to develop natural corridors between sectors of the park at Noordhoek wetlands and between the high altitude zones and the coast. South African National Parks (SANP) and the City Council of Cape Town along with the many other stakeholders are making commendable progress in rationalising boundaries of the park as envisioned in the management plan and policy documents and in response to IUCN concerns expressed in the 2000 evaluation.

### Kirstenbosch National Botanical Garden

It is noted that the Kirstenbosch National Botanical Garden (KNBG) is included in the nomination. KNBG covers approximately 200ha (out of the total nominated area of 550,000ha) and is focused on research and public education relating to *fynbos* vegetation. It includes significant infrastructure (restaurant, car parks, visitor centres, etc). There is no other Botanic Garden in the world which is included within a natural World Heritage site although some are included under cultural criteria. IUCN considers the KNBG an exceptional case and that it should be included within the nominated site, for the following reasons: (a) it is managed in an integrated way with the surrounding core area of the CPNP; (b) its research and public outreach programmes relate to and support the objectives of the nominated site; and (c) important biodiversity is included within its boundaries.

## 4.3 Integrity Issues

Human activities have had a significant impact on the biodiversity of the Cape Peninsula, since first European settlement in 1652. Urbanisation and agriculture have substantially transformed most of the original area of natural vegetation. Lowland vegetation has been most affected, although almost half of the transformation has occurred in only one of the 15 recognised vegetation types. However, other vegetation types have also been affected and, specifically, vegetation at higher altitudes has been impacted by alien species. Human population pressures on biodiversity are expected to grow and will particularly affect the Cape Peninsula portion of the nomination. The current population within the Cape Peninsula region of 3.5 million is projected to grow to 6.2 million by 2020. This growth poses the most significant challenge to the long-term integrity of the area, particularly through increasing pressures for access and urban development, and an increasing incidence of human induced fire. A number of innovative measures are being taken by the responsible management agencies to address social issues which are critical to the long-term survival of the site.

Five major threats to integrity are:

- Fire

The management of fire is a major issue within the CFR particularly in the CPNP. This issue was given particular prominence with a major fire in 2000 which burnt approximately 40% of the Cape Peninsula National Park. Fire is a natural component of the *Fynbos* Biome but the fire incidence is greatly increased within the CPNP, due to the proximity to the larger urban centre of Cape Town. Increasing fire incidence is also related to the presence of alien invasive species. SANP has initiated a controlled burning programme for the CPNP which includes: fire regimes which maintain biological diversity; maintenance of fire breaks along the urban edge; and development of fire education programmes. Fire management is a major issue in all other clusters as well and both the Western Cape Nature Conservation Board and



the Eastern Cape Directorate of Environmental Affairs have adequate measures in place to manage fires.

- Invasive Species

Alien plants pose the most severe threat for the continued existence of *Fynbos* ecosystems. Invasive species have invaded large areas of the nominated area particularly coastal habitats. All three responsible agencies are investing considerable efforts into the management of invasive species and significant external resources have been mobilised through the Working for Water Programme.

- Staff and Budget

The resources available for conservation management of the site are substantial. Resources available are increasingly complemented from other sources, including from the Global Environment Facility (GEF), conservation NGOs, tourism revenues and the private sector. Recently, the National Botanical Institute also received substantial funding from Norway and the Critical Ecosystems Partnership Fund to prevent the extinction of indigenous plants in the Cape Floral Region. Each of the protected areas in the nomination has at least one Reserve Manager and a varying number of support staff.

- Tourism and Infrastructure Development

The CFR, particularly in proximity to Cape Town, is a tourist destination for many international as well as local visitors. There is significant development around and within the CPNP reflecting its location adjacent to the city of Cape Town. Pressures for additional development are significant. Most of the other components of the nomination are not overused at this time but, with World Heritage recognition, visitation will grow in the future. These issues are being addressed in the individual management plans for each cluster.

- Climate Change

Predictive models to forecast potential effects of climate change have been prepared for the CFR and all the clusters. A warmer climate and a shifting rainfall regime will certainly have effects on the flora. Six of the eight units are large with steep altitudinal gradients and all are surrounded by other conservation lands. These will help alleviate the effects of climate change and a monitoring system is in place to detect what these effects will be.

## 5. ADDITIONAL COMMENTS

### 5.1. Serial sites

When serial sites, such as this one, are evaluated IUCN poses a standard set of 3 questions:

- **What is the justification for the serial approach?** Most of the natural habitat in the CFR has been transformed during 400 years of European settlement. An “archipelago” of relatively natural islands of original vegetation still exists. These separate islands combine to display a wide range of biodiversity that make up the CFR. The collection of all eight clusters adds up in a synergistic manner to present the biological richness and evolutionary story of the CFR.
- **Are the separate elements of the site functionally linked?** Each of the clusters in the CFR nomination has evolved in similar climatic and geological conditions. Many species overlaps occur between the different units while each also has a particular suite of species depending on variations in geology, rainfall, soil type and elevation. Indeed, the definition of the clusters emerged from a comprehensive ecological survey undertaken by the CAPE project which identified the optimal set of sites. This ensured that the areas nominated were indeed linked and provided coverage of the *Fynbos* Biome.

- **Is there an overall management framework for all the units?** This framework is provided under the umbrella of CAPE. Although three management regimes have responsibility for the different clusters, CAPE serves to assist in providing the CFR database and in coordinating activities of stakeholders. At the national level, the World Heritage Convention Act provides the national framework and provision to establish an advisory body for each of the sites.

The CFR nomination is thus appropriately considered a serial site. It is similar in concept to the Central Eastern Rainforest of Australia World Heritage site, also a serial site containing eight clusters (but only one-fifth the size).

## 5.2. Other comments

The current name of the nominated area: "The Cape Floral Region" does not reflect the true geographical extent of the nomination and the State Party should be requested to consider an alternate name such as "Cape Floral Region Protected Areas" to ensure conformity with other serial sites on the World Heritage List.

As in most natural areas in the region there is a considerable record of previous human settlement in the nominated sites. For this reason, ICOMOS has requested that their comments be included as follows:

*"The nomination stresses that although the protected areas are not being proposed as cultural properties, all show evidence of early occupation by humans from the Early Stone Age, and are rich in rock art dating back over 5000 years. The cultural history of the nominated areas, as reflected in caves, burial sites and remains of houses, bears evidence to almost continuous occupation by people from at least 250,000 years ago up to the last 50-200 years.*

*The dossier draws attention to the way people have functioned as agents for ecological change and outlines the history of human interaction with nature in the region since people arrived 'about one million years ago'. Of particular significance is that fact that San hunter-gatherers, who appeared in the area in the late Stone Age, (around 20,000BP) and practiced controlled burning to encourage fresh plants for gathering, were still living in some of the nominated areas until as recently as 1978.*

*The Cape Peninsula National Park contains one of the best-known landmarks of South Africa. Table Mountain, looming over Cape Town has become an icon for the city, and arguably now has worldwide recognition for its association with South Africa.*

*The cultural qualities of the nominated sites are very strong, particularly for what they reveal about the pre-colonial history of the area, and for the specific iconic value of Table Mountain. For these reasons, it is suggested that it would be desirable if the State Party might consider in the future re-nominating these sites as cultural landscapes."*

## 6. APPLICATION OF WORLD HERITAGE CRITERIA

The Cape Floral Region has been nominated under natural criteria (ii) and (iv).

### Criterion (ii) Ecological processes

The Cape Floral Region is considered of outstanding universal value for representing ongoing ecological and biological processes associated with the evolution of the unique *Fynbos* biome. These processes are represented generally within CFR and captured in the eight nominated clusters. Of particular scientific interest are the plant reproductive strategies including the adaptive responses to fire of the flora and the patterns of seed dispersal by insects. The pollination biology and nutrient cycling are other distinctive ecological processes found in the site. The CFR forms a centre of active speciation where interesting patterns of endemism and adaptive radiation are found in the flora. IUCN considers that the nominated

site meets this criterion.

#### **Criterion (iv) Biodiversity and Threatened Species**

The Cape Floral Region is one of the richest areas for plants than for any similar sized area in the world. The number of species per genus within CFR (9:1) and per family (52) are among the highest given for various species-rich regions in the world. The species density in CFR is also amongst the highest in the world. It displays the highest levels of endemism at 31.9 % and it has been identified as one of the world's 18 biodiversity hot spots. IUCN considers that the nominated site meets this criterion.

The CFR has areas of high natural beauty and aesthetic importance, including Table Mountain, Cape Point and the coast of the De Hoop. However, these are secondary values to its floral ones.

### **7. RECOMMENDATION**

IUCN recommends the World Heritage Committee to **inscribe** the Cape Floral Region under natural criteria (ii) and (iv). A revised formal name of the site should be requested from the State Party.

The Committee may wish to commend the State Party for the progress made in preparing the management plans for the various clusters. The Committee may also wish to commend the State Party for their innovative work under CAPE and other projects to build public support for conservation of the area. The State Party should be encouraged to carefully consider developing innovative socio-economic programmes for poverty alleviation as well as public education and outreach.

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## CANDIDATURE AU PATRIMOINE MONDIAL - ÉVALUATION TECHNIQUE DE L'UICN

### Région florale du Cap d'Afrique du Sud (Afrique du Sud) ID N°1007 REV

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**Contexte:** En 1999, l'Afrique du Sud a proposé la Région floristique du Cap: 1<sup>ère</sup> étape: Milieu naturel protégé de la péninsule du Cap pour inscription sur la Liste du patrimoine mondial. À sa 24<sup>e</sup> session, en juin 2000, le Bureau du patrimoine mondial a différé la proposition en demandant à l'État partie: «*d'accélérer les travaux pour garantir que la zone centrale de l'ANPPC soit placée sous un régime de gestion efficace et consolidé. Le Bureau a encouragé l'Etat partie à terminer le travail préparatoire associé à la phase 2 de la proposition de la RFC et à le soumettre lorsque les limites des zones complémentaires de la RFC seront établies.*» La deuxième étape de la proposition a été soumise en janvier 2002 mais renvoyée à l'État partie afin d'être compilée en une seule proposition avec le Parc national de la péninsule du Cap. La présente proposition est une réponse à ces recommandations.

#### 1. DOCUMENTATION

- i) **Fiches techniques UICN/WCMC** : 14 références
- ii) **Littérature consultée** : Cowling, R. M. 1990. Diversity components in a species-rich area of the Cape Floristic Region. **Journal of Vegetation Science** No. 83. pp 699-710; Cowling, R. M. and Holmes, P. M. 1992. Flora and Vegetation in **Ecology of Fynbos**. Cowling, R. M. (ed.); Cowling, R. M. & Hilton-Taylor, C. 1994. Patterns of plant diversity and endemism in southern Africa: An overview in **Strelitzia** No. 1. pp 31-52; Cowling, R. M. & P. M Holmes. 1992. Endemism and speciation in a lowland flora from the Cape Floristic Region in **Botanical Journal of the Linnean Society** No. 47. pp 367-383; Cowling, *et al.* 1996. The Cape Peninsula South Africa: physiographical, biological and historical background to an extraordinary hotspot of biodiversity in **Biodiversity and Conservation** No. 5. pp 527-550; Davis, S. D. and Heywood, V. H. 1994. **Centres of Plant Diversity: A guide and strategy for their conservation**. Oxford University Press; Goldblatt, P. and Manning, J. C. 1999. **Cape flora – A conspectus of the Cape flora of South Africa**; Groombridge, B. 1992. **Global Biodiversity – Status of the Earth's Living Resources**. Chapman and Hall; Myers, N. 1990. The Biodiversity Challenge: Expanded hot-spot analysis. **The Environmentalist**. No. 10. pp 243-255. Richardson, *et. al.* 1996. Current and future threats to plant diversity on the Cape peninsula, South Africa in: **Biodiversity and Conservation**. No. 5. pp 607-648; Mittermeier R. *et.al.* 1999. **Hotspots – Earth's biologically richest and most endangered terrestrial regions**. Conservation Intl. 431p.; U. of California. 2003. Mediterranean Climate Regions. (poster); Gelderblom C.M. 2003. Turning strategy into action: implementing a conservation action plan in the Cape Floristic Region. **Biological Conservation**. 112; Dallman, P. R. 1998. **Plant Life in the World's Mediterranean Climates**. Oxford University Press.
- iii) **Consultations** : 7 évaluateurs indépendants ; commentaires d'ICOMOS. Fonctionnaires compétents des agences fédérale et provinciale de conservation de la nature.
- iv) **Visite du site** : David Sheppard, février 2000 ; Jim Thorsell, septembre 2003.

#### 2. RÉSUMÉ DES CARACTÉRISTIQUES NATURELLES

La Région florale du Cap (RFC) qui se trouve dans la province du Cap, au sud-ouest de l'Afrique du sud, se compose de huit unités et s'étend de 50 km au sud de la ville de Cape Town, sur 210 km en direction du nord, jusqu'à Cederberg et sur 450 km en direction du

nord-est, jusqu'à Swartberg. Ces huit unités, qui couvrent au total 553 000 ha, sont un échantillon représentatif des huit centres phytogéographiques de la RFC. Les huit sites et leur superficie figurent au tableau 1 ci-dessous.

**Tableau 1: Les huit unités qui forment la Région florale du Cap**

Parc national de la péninsule du Cap	17 000 ha
Zone de nature sauvage de Cederberg	64 000 ha
Zone de nature sauvage de Groot Winterhoek	26 000 ha
Complexe de montagne de Boland	113 000 ha
Réserve naturelle De Hoop	32 000 ha
Zone de nature sauvage de Boosmansbos	15 000 ha
Complexe de Swartberg	112 000 ha
Aire protégée de Baviaanskloof	174 000 ha
<b>Superficie totale</b>	<b>553 000 ha</b>

L'altitude va du niveau de la mer (Réserve naturelle De Hoop) à 2077 m dans la Zone de nature sauvage de Groot Winterhoek. Des pics tels que la Table Mountain servent de toile de fond panoramique à l'ouest de la province du Cap et une bonne partie de la région est caractérisée par des cols escarpés, des rivières, des rapides, des cascades et des mares. Le climat est semi-méditerranéen avec des hivers frais et humides et des étés chauds et secs dans l'ouest, alors que les étés tendent à être davantage pluvieux dans l'est. Les précipitations varient fortement selon la topographie, de 300 à 500 mm dans les plaines jusqu'à 1000 à 3300 mm dans les montagnes où les nuages et le brouillard peuvent persister et où il y a des chutes de neige en hiver.

La RFC a été surnommée le «point chaud le plus chaud» du monde pour la diversité et l'endémisme des plantes, et désignée par l'UICN comme un des centres mondiaux de diversité végétale. Bien qu'il s'agisse de la plus petite des six principales régions floristiques du monde et qu'elle se trouve en zone tempérée, sa richesse en espèces est comparable à celle de la plupart des «points chauds» ou centres de diversité biologique tropicaux du monde. D'une superficie inférieure à 0,5% de celle de l'Afrique, la RFC compte près de 20% de la flore et, sur moins de 4% de la superficie de l'Afrique australe, près de 44% de la flore subcontinentale, riche de 20 367 espèces. Près de 69% de ses espèces de plantes vasculaires n'existent nulle part ailleurs au monde à l'état naturel. Dans ses 90 000 km<sup>2</sup>, on trouve 8996 espèces de plantes et 988 genres, en gros la moitié de tous les genres d'Afrique du Sud. Ceux-ci comptent notamment cinq familles endémiques et deux familles sous-endémiques, ainsi que 1435 (70%) de toutes les espèces menacées d'Afrique australe. Le rapport espèces-genre est également très élevé (9:1). Dans la RFC, c'est le secteur sud-ouest qui compte la flore la plus diverse et la péninsule du Cap compte près de la moitié des espèces, avec 25% de la flore de toute la RFC. Cette richesse en espèces est exceptionnelle pour ce type climatique, non seulement dans un seul habitat mais aussi du point de vue des changements de taxons pour des changements dans l'habitat (diversité *beta*) et du point de vue des changements de taxons dans des habitats semblables pour des changements dans la zone géographique (diversité *gamma*).

Dans la RFC, il y a quelque 6191 espèces endémiques. La péninsule du Cap compte 2285 espèces de plantes dont 90 endémiques. Le Cederberg en a 1778, y compris un cèdre endémique. Le Complexe de montagne de Boland a 1600 espèces de plantes dont 150 endémiques et aucun des sites n'a moins de 1100 espèces. La richesse est due à la grande diversité des macro-habitats et des mosaïques de micro-habitats résultant de la gamme des élévations, des sols et des conditions climatiques, y compris de la coexistence d'espèces pluviales d'hiver et d'espèces pluviales d'été dans les secteurs plus à l'est. La flore est aussi caractérisée par des concentrations d'espèces endémiques reliques et une spéciation massive, toujours active en raison de son isolement dans une région où la stabilité climatique installée depuis longtemps a généré cette énorme diversité. La flore de chaque unité proposée est suffisamment distincte pour justifier une représentation de la région par plusieurs sites, chacun étant suffisamment grand pour préserver la viabilité génétique de ses types de diversité et pour supporter des processus naturels à grande échelle tels que les

feux et la sécheresse. Dans la RFC, on distingue huit centres phytogéographiques d'endémisme et chacun est représenté dans le site proposé.

La flore particulière de la RFC, qui constitue 80% de sa richesse floristique, est une brousse sclérophylle connue sous le nom de *fynbos* (brousse fine), une végétation au feuillage fin adaptée à la fois à un climat de type méditerranéen et à des incendies périodiques et définie par sa localisation ou par les espèces dominantes. Ses trois éléments essentiels sont des *Proteaceae*, des *Restionaceae* ressemblant à des roseaux et des géophytes (plantes à bulbes) y compris de nombreuses *Iridaceae*. La diversité végétale est fonction des types de sols qui varient de sols surtout grossiers, sableux, acides et pauvres en nutriments, à des sables marins alcalins et à des sols alluviaux légèrement plus riches. Il y a des poches de forêts sempervirentes dans des gorges à l'abri du feu et sur les sols plus profonds; à l'est, il y a des fourrés de vallée et des fourrés succulents moins dépendants du feu et dans le nord, plus sec, les arbustes succulents à port bas du Karoo.

Parmi les quatre autres caractéristiques de la RFC qui sont d'intérêt scientifique mondial, on peut citer: 1) la réaction des plantes au feu, 2) la dispersion des graines par les fourmis et les termites, 3) le niveau élevé (83%) de pollinisation des plantes par les insectes, essentiellement des coléoptères et des mouches et 4) ses liens au Gondwana, qui permettent de reconstituer les lignages anciens de la flore. L'adaptation au feu se traduit notamment par la présence de géophytes qui jaillissent du sous-sol et le stockage des graines à la fois dans le sous-sol et dans la canopée, certaines espèces ayant besoin du feu pour germer. Les fourmis prélèvent les graines pour consommer les dépôts de lipides; environ 28% de la flore de la région, y compris plus de la moitié des *Proteaceae*, sont dispersés par les fourmis. La plupart des arbustes ainsi dispersés appartiennent à la fois à des espèces endémiques et à des espèces menacées mais ces dernières n'ont pas la capacité de se régénérer après les incendies. La pollinisation et le recyclage des matières nutritives par les termites et les communautés de termites sont remarquables et la région présente des niveaux très élevés de plantes pollinisées par les oiseaux et les mammifères.

### 3. COMPARAISON AVEC D'AUTRES SITES

La RFC est située dans la Province biogéographique sclérophylle du Cap (Udvardy, 1975). Pour ses valeurs floristiques uniques, elle est également reconnue en tant que royaume floristique à part entière – le Royaume floristique du Cap. Il n'y a pas de bien naturel du patrimoine mondial, que ce soit dans la Province biogéographique ou dans le Royaume floristique du Cap. La RFC est parmi les centres de diversité biologique les plus importants du monde pour la diversité et l'endémisme des plantes. Le tableau 2 présente le nombre d'espèces endémiques que l'on trouve dans 18 centres de diversité biologique (Groombridge, 1992). La position dominante de la région du Cap est évidente. Onze de ces 18 centres de diversité biologique contiennent des biens du patrimoine mondial.

**Tableau 2: Nombre d'espèces endémiques présentes dans 18 centres de diversité biologique**

Région	Plantes supérieures	Mammifères	Reptiles	Amphibiens	Papilionidés
Région du Cap (Afrique du Sud)	6000	15	43	23	0
Amont de l'Amazonie occidentale	5000	-	-	c. 70	-
Brésil côtier atlantique	5000	40	92	168	7
Madagascar	4900	86	234	142	11
Philippines	3700	98	120	41	23
Bornéo (nord)	3500	42	69	47	4
Himalaya oriental	3500	-	20	25	-
Sud-ouest Australie	2830	10	25	22	0
Ouest de l'Équateur	2500	9	-	-	2
Chocó colombien	2500	8	137	111	0

<b>Péninsule Malaise</b>	2400	4	25	7	0
<b>Province floristique de Californie</b>	2140	15	15	16	0
<b>Ghats occidentaux (Inde)</b>	1600	7	91	84	5
<b>Chili central</b>	1450	-	-	-	-
<b>Nouvelle-Calédonie</b>	1400	2	21	0	2
<b>Monts de l'Arc oriental (Tanzanie)</b>	535	20	-	49	3
<b>Sud-ouest Sri Lanka</b>	500	4	-	-	2
<b>Sud-ouest Côte d'Ivoire</b>	200	3	-	2	0
<b>TOTAL</b>	<b>49 955</b>	<b>375</b>	<b>892</b>	<b>737</b>	<b>59</b>

La RFC possède un cinquième de toutes les espèces de plantes d'Afrique alors qu'elle occupe moins de 0,5% de la superficie du continent. La RFC présente des taux d'endémisme importants au plan mondial et cinq familles endémiques. Par comparaison, l'ensemble de l'Afrique australe n'a que 12 familles endémiques. Elle présente un niveau de dépendance élevé avec près de 6000 des 8500 espèces de plantes endémiques de la région. Une des huit unités, le Parc national de la péninsule du Cap, avec 4651 espèces de plantes et un taux d'endémisme de 31,9% possède une diversité biologique végétale sans égale parmi tous les centres tempérés de la diversité biologique et se compare favorablement avec d'autres sites qui sont, soit sur la Liste du patrimoine mondial, soit proposés pour inscription en raison de leurs valeurs botaniques. Compte tenu de ce niveau de diversité biologique et d'endémisme, la RFC est reconnue comme un centre mondial de diversité végétale. C'est la zone la plus éminente des cinq régions climatiques méditerranéennes du monde qui, au total, comptent 2% de la superficie émergée de la terre mais 16% des espèces de plantes de la planète.

Comme l'indique le tableau 3, de toutes les régions de climat de type méditerranéen, c'est la RFC qui possède, et de loin, la plus grande diversité spécifique (nombre d'espèces de plantes au km<sup>2</sup>) et le niveau de rareté le plus élevé pour les espèces.

**Tableau 3: Diversité et rareté des plantes (Source: Dallman, 1998)**

Région	Superficie, millions km <sup>2</sup>	Espèces de plantes, milliers	Densité des espèces*	Pourcentage d'espèces rares ou en danger
<b>Monde</b>	148	250	1,7	10
<b>Europe</b>	5,7	14	2,5	11
<b>Australie</b>	7,6	22	2,9	10
<b>États-Unis</b>	9,4	20	2,1	8
<b>Californie</b>	0,41	5,1	12	23
<b>Région du Cap</b>	0,09	8,6	94	27
<b>S-O de l'Australie</b>	0,31	8,0	26	24

\* milliers d'espèces de plantes par million de km<sup>2</sup>.

En conclusion, la RFC se distingue du point de vue de la diversité des espèces qui est parmi les plus élevées au monde. La diversité de la flore se compare favorablement à celle de certaines régions de forêts néotropicales. La RFC présente également des niveaux plus élevés de diversité des plantes et d'endémisme que les autres régions de climat de type méditerranéen (1,7 fois celle du sud-ouest de l'Australie, 2,2 fois celle de la Californie et du bassin méditerranéen et 3,3 fois la diversité du Chili). Seules les îles de Nouvelle-Zélande, d'Hawaï et de Madagascar présentent des niveaux d'endémisme plus élevés.

## **4. INTÉGRITÉ**

### **4.1 Cadre de gestion et de planification**

Les unités proposées sont gérées dans un cadre de conservation à l'échelle de la région, le projet Cape Action for People & the Environment (CAPE), établi avec l'aide du FEM, en 2000. CAPE coordonne les travaux des autorités nationales, provinciales et locales et des propriétaires privés afin de promouvoir la protection de la diversité biologique en intégrant des initiatives sociales, financières et pour la conservation. Les lois et les instruments juridiques qui ont une influence sur la région comprennent la loi sur la Convention du patrimoine mondial, la loi nationale sur la gestion de l'environnement, la loi sur la conservation de l'environnement, la loi nationale sur l'eau, la loi sur la conservation des ressources agricoles, la loi sur les zones de bassins versants montagnards, la loi nationale sur les ressources du patrimoine, la loi nationale sur les forêts, la loi nationale sur le Veld et les incendies forestiers, la loi sur le littoral marin, la loi sur les ressources biologiques marines, la loi sur la conservation des zones humides, le Livre blanc sur la diversité biologique et la loi nationale sur la gestion du littoral. Depuis 1995, le Programme «Working for Water», bien financé, traite les infestations de plantes exotiques et est une source d'appui majeur pour la gestion du Parc.

Toutes les unités de l'ensemble ont entrepris la rédaction de plans de gestions : certains sont terminés, d'autres non.

### **4.2 Les limites**

#### Parc national de la péninsule du Cap

À part le Complexe de montagne de Boland qui est entouré de terres essentiellement rurales, six des unités présentent des limites satisfaisantes et sont bordées par d'autres terres réservées à la conservation. Toutefois, la situation du Parc national de la péninsule du Cap (PNPC) pourrait susciter différents conflits frontaliers. Il y a, en effet, une interface urbaine considérable avec le grand Cape Town et cela pose de graves difficultés pour la gestion de la conservation, notamment en ce qui concerne le contrôle de l'accès, les espèces exotiques et les incendies. Les limites urbaines sont désormais clairement définies, la législation est appliquée et le régime foncier a été considérablement consolidé depuis cinq ans. Ces efforts se poursuivent et il existe actuellement des propositions de mise en place de corridors naturels entre les secteurs du Parc situés dans les zones humides de Noordhoek et entre les zones de haute altitude et la côte. South African National Parks (SANParks) et la municipalité de Cape Town ainsi que les nombreux acteurs font des progrès remarquables du point de vue de la rationalisation des limites du Parc telle qu'elle est envisagée dans le plan de gestion et les documents directifs ainsi qu'en réponse aux préoccupations exprimées par l'UICN dans l'évaluation de 2000.

#### Jardin botanique national de Kirstenbosch

Il faut noter que le Jardin botanique national de Kirstenbosch (KNBG) est inclus dans la proposition. Il couvre environ 200 ha (sur une superficie proposée de 550 000 ha) et se consacre à la recherche et à l'éducation du public en ce qui concerne la végétation du *fynbos*. Il comprend une infrastructure importante (restaurants, parkings, centres d'accueil des visiteurs, etc.). Il n'existe pas d'autre jardin botanique au monde qui soit inclus dans un bien naturel du patrimoine mondial bien que certains soient inscrits au titre des critères culturels. L'UICN considère que le KNBG est un cas exceptionnel et qu'il devrait être inclus dans le site proposé pour les raisons suivantes: a) il est géré de manière intégrée avec la zone centrale environnante du Parc national de la province du Cap; b) ses programmes d'information du public et de recherche sont directement liés aux objectifs du site proposé et les soutiennent; et c) il contient, dans ses limites, une diversité biologique importante.

### **4.3 Intégrité**

Les activités humaines ont eu des incidences importantes sur la diversité biologique de la péninsule du Cap depuis la construction du premier établissement européen en 1652. L'urbanisation et l'agriculture ont fortement modifié la majeure partie de la végétation



naturelle d'origine. La végétation de plaine est celle qui a été le plus affectée bien que près de la moitié des transformations ait touché un seul des 15 types de végétation reconnus. Toutefois, d'autres types de végétation ont aussi été affectés et la végétation de plus haute altitude, en particulier, a subi les impacts d'espèces exotiques. Les pressions de la population humaine sur la diversité biologique devraient s'accroître et toucher particulièrement le secteur de la péninsule du Cap. Actuellement, la région de la péninsule du Cap compte 3,5 millions d'habitants et devrait en compter 6,2 millions d'ici à 2020. Cette croissance est la plus grande menace pour l'intégrité à long terme de la région, notamment en raison des pressions croissantes pour l'accès et le développement urbain et l'incidence accrue des incendies provoqués par l'homme. Diverses mesures novatrices ont été prises par les agences de gestion responsables en vue de résoudre les problèmes sociaux qui sont déterminants pour la survie à long terme du site.

Les cinq principales menaces pour l'intégrité sont:

- Le feu

La gestion du feu est un des principaux problèmes pour la RFC et en particulier le Parc national de la Province du Cap. Cette question a été particulièrement mise en évidence par un grave incendie qui, en 2000, a brûlé environ 40% du Parc national de la péninsule du Cap. Le feu est un élément naturel du biome du *fynbos* mais l'incidence des incendies s'est fortement accrue dans le Parc en raison de la proximité du grand centre urbain qu'est Cape Town. L'augmentation de l'incidence des incendies est également due à la présence d'espèces exotiques envahissantes. SANParks a entamé un programme de brûlage contrôlé pour le Parc national de la Province du Cap qui comprend: des régimes du feu pour maintenir la diversité biologique; l'entretien de coupe-feu le long des limites urbaines; la mise en place de programmes d'éducation sur le feu. La gestion du feu est une question centrale pour toutes les autres unités. Le Conseil de la conservation de la nature de l'ouest de la province du Cap et la Direction des affaires de l'environnement de l'est de la province du Cap ont mis en place des mesures adéquates pour gérer les incendies.

- Espèces envahissantes

Les plantes exotiques exercent la menace la plus grave pour l'existence permanente des écosystèmes du *fynbos*. Les plantes envahissantes ont recouvert de vastes régions du site proposé, en particulier les habitats côtiers. Les trois agences responsables déploient des efforts considérables de gestion des espèces envahissantes et des ressources extérieures importantes ont été mobilisées dans le cadre du Programme «Working for Water».

- Personnel et budget

Les ressources disponibles pour la gestion de la conservation du site sont substantielles. Les ressources disponibles sont de plus en plus complétées par d'autres sources, y compris le Fonds pour l'environnement mondial (FEM), les ONG de la conservation, les revenus du tourisme et le secteur privé. Récemment, le National Botanical Institute a reçu un financement important de la Norvège et du Critical Ecosystems Partnership Fund pour empêcher l'extinction de plantes autochtones dans la Région florale du Cap. Chacune des aires protégées de la proposition dispose d'un gestionnaire de la Réserve au moins et d'un nombre variable de personnel d'appui.

- Tourisme et développement de l'infrastructure

La RFC, notamment à proximité de Cape Town, est une destination touristique pour de nombreux visiteurs locaux et internationaux. Le développement est important aux alentours et à l'intérieur du Parc national de la Province du Cap, ce qui reflète son emplacement à proximité de la ville de Cape Town. Les pressions de développement sont importantes. La plupart des autres éléments de la proposition ne sont pas encore surutilisés mais, dès que l'ensemble sera reconnu au titre du patrimoine mondial, le nombre de visites augmentera. Toutes ces questions sont traitées dans les plans de gestion individuels de chaque unité.

- Changements climatiques

Des modèles de prévision des effets potentiels des changements climatiques ont été préparés pour la RFC et toutes les unités. Il est clair qu'un climat plus chaud et un régime de précipitations modifié auront des effets sur la flore. Six des huit unités sont de grande taille avec un gradient altitudinal important et toutes sont entourées par des terres consacrées à la conservation. Ces facteurs permettront d'alléger les effets des changements climatiques et un système de suivi est en place pour détecter les effets.

## 5. COMMENTAIRES ADDITIONNELS

### 5.1 Justification d'une approche sérielle

Lorsqu'il s'agit d'évaluer des sites sériels, comme celui-ci, l'UICN pose trois questions:

- **Comment l'approche sérielle se justifie-t-elle?** La majeure partie de l'habitat naturel de la RFC a été transformée depuis l'installation des Européens, il y a 400 ans. Un «archipel» d'îlots relativement naturels de végétation originale persiste. Ces îlots séparés présentent, ensemble, la vaste gamme de la diversité biologique qui compose la RFC. Les huit unités mises ensemble s'associent de manière synergique pour illustrer la richesse biologique et l'histoire de l'évolution de la RFC.
- **Les éléments séparés du site sont-ils liés sur le plan fonctionnel?** Chacune des unités de la proposition concernant la RFC a évolué dans des conditions climatiques et géologiques semblables. Beaucoup d'espèces se retrouvent dans toutes les unités mais chaque unité possède aussi un ensemble particulier d'espèces qui est fonction de variations dans la géologie, les précipitations, le type de sol et l'élévation. En réalité, la définition des unités a émergé d'une étude écologique complète entreprise par le projet CAPE qui a identifié l'ensemble optimal de sites. En conséquence, les sites proposés sont effectivement liés et couvrent le biome du *fynbos*.
- **Existe-t-il un cadre de gestion globale pour toutes les unités?** Ce cadre existe, sous l'égide du CAPE. Bien que trois régimes de gestion soient en place pour les différentes unités, CAPE aide à fournir la base de données de la RFC et à coordonner les activités des personnes concernées. Au niveau national, la loi sur la Convention du patrimoine mondial offre un cadre national et des dispositions utiles pour établir un organe consultatif pour chacun des sites.

La proposition concernant la RFC est donc, à juste titre, un site sériel. Le concept est semblable à celui du Bien du patrimoine mondial des Réserves de forêts ombrophiles centre-orientales de l'Australie, qui est également un site sériel comprenant huit unités (mais qui ne couvre qu'un cinquième de la taille du site proposé).

### 5.2. Autre commentaires

Le nom actuel du site proposé: «Région florale du Cap» ne reflète pas la véritable étendue géographique de la proposition et l'État partie devrait être invité à envisager un autre nom tel que «Aires protégées de la Région florale du Cap» pour veiller à la conformité avec d'autres biens sériels inscrits sur la Liste du patrimoine mondial.

Comme dans la plupart des aires naturelles de la région, il y a des traces importantes d'anciens établissements humains dans le site proposé. Pour cette raison, l'ICOMOS a demandé que ses commentaires soient inclus comme suit:

*«Le texte de la proposition souligne que les aires protégées, tout en n'étant pas proposées en tant que biens culturels, témoignent toutes d'une occupation humaine ancienne, datant du début de l'âge de pierre et qu'elles sont riches en pétroglyphes qui ont plus de 5000 ans. L'histoire culturelle du site proposé, telle qu'on peut la découvrir dans les grottes, les sites de*

*sépulture et les vestiges de maisons témoigne d'une occupation humaine quasi continue, commencée 250 000 ans avant notre ère et qui a duré jusqu'à il y a 50 à 200 ans.*

*Le dossier attire l'attention sur le rôle de l'homme en tant qu'agent des changements écologiques et met en évidence l'histoire de l'interaction humaine avec la nature dans la région, depuis l'arrivée de l'homme 'il y a environ un million d'années'. Il est particulièrement important de noter que les chasseurs-cueilleurs San, apparus dans la région vers la fin de l'âge de pierre (vers 20 000 avant notre ère) et qui ont pratiqué le brûlage contrôlé afin de favoriser la régénérescence des plantes qu'ils cueillaient, vivaient encore, en 1978, dans certains des sites proposés.*

*Dans le Parc national de la péninsule du Cap, il y a un des sites les plus représentatifs de l'Afrique du Sud : la Table Mountain qui domine Cape Town et qui est devenue emblématique de cette ville. Elle est, aujourd'hui, reconnue dans le monde entier comme un symbole de l'Afrique du Sud.*

*Les sites proposés ont des qualités culturelles très marquées, notamment en ce qu'ils révèlent de l'histoire précoloniale de la région et pour la valeur emblématique particulière de la Table Mountain. Pour toutes ces raisons, il serait souhaitable que l'État partie puisse envisager de présenter, à une date ultérieure, une nouvelle proposition d'inscription de ces sites en tant que paysages culturels.»*

## **6. APPLICATION DES CRITÈRES DU PATRIMOINE MONDIAL**

La Région florale du Cap est proposée au titre des critères naturels (ii) et (iv).

### **Critère (ii) : processus écologiques**

La Région florale du Cap est considérée comme une région de valeur universelle exceptionnelle car elle représente des processus biologiques et écologiques en cours associés à l'évolution du biome du *fynbos* qui est unique. Ces processus sont généralement représentés au sein de la RFC et présents dans les huit unités proposées. Les stratégies de reproduction des plantes, y compris leur capacité d'adaptation au feu et les structures de dispersion des graines par les insectes sont particulièrement intéressantes sur le plan scientifique. La biologie de la pollinisation et le cycle des matières nutritives sont d'autres processus écologiques distinctifs du site. La RFC est un centre de spéciation actif où l'on trouve, dans la flore, des structures intéressantes d'endémisme et de rayonnement adaptatif. L'UICN considère que le site proposé remplit ce critère.

### **Critère (iv) : diversité biologique et espèces menacées**

La Région florale du Cap est une des régions les plus riches pour les plantes comparée à des régions de taille semblable dans le monde. Le nombre d'espèces par genre au sein de la RFC (9:1) et par famille (52) est parmi les plus élevés en comparaison avec les autres régions riches en espèces du monde. La densité des espèces est aussi parmi les plus élevées du monde. On y trouve les taux d'endémisme les plus élevés (31,9 %) et c'est un des 18 centres (points chauds) de la diversité biologique au monde. L'UICN considère que le site proposé remplit ce critère.

La RFC contient des zones très importantes pour leur beauté naturelle et leurs caractéristiques esthétiques, notamment la Table Mountain, Cape Point et la côte de De Hoop. Toutefois, ces valeurs sont secondaires par rapport à l'importance de la flore.

## **7. RECOMMANDATION**

L'UICN recommande au Comité du patrimoine mondial **d'inscrire** la Région florale du Cap au titre des critères naturels (ii) et (iv). Il serait bon de demander à l'État partie de réviser le nom officiel du site.

Le Comité souhaitera peut-être féliciter l'État partie pour les progrès réalisés en vue de la préparation de plans de gestion pour les différentes unités. Le Comité pourrait aussi féliciter l'État partie pour son travail novateur dans le cadre de CAPE et d'autres projets pour renforcer l'appui du public à la conservation de la région. L'État partie devrait être encouragé à envisager l'élaboration de programmes socio-économiques novateurs pour alléger la pauvreté ainsi que pour l'éducation et l'information du public.