# WORLD HERITAGE

# PERIODIC REPORTING EXERCISE ON THE APPLICATION OF THE WORLD HERITAGE CONVENTION IN THE AFRICAN REGION

## SECTION II

## SECTION II : STATE OF CONSERVATION OF SPECIFIC WORLD HERITAGE PROPERTIES

[Copy this section for each site concerned by the reporting exercise]

(II.i) The twenty-ninth General Conference of UNESCO, in its decision regarding the application of Article 29 of the World Heritage Convention, invited the States Parties to submit reports on the application of the World Heritage Convention, including the state of conservation of the World Heritage properties located on their territories.

(II.ii) The primary documents in respect of each World Heritage property are the nomination dossier as it was submitted by the State Party and the decision of the World Heritage Committee regarding the inscription of the property on the World Heritage List.

(II.iii) The preparation of periodic state of conservation reports should involve those who are responsible for the day-to-day management of the property. For trans-boundary properties it is recommended that reports be prepared jointly by or in close collaboration between the agencies concerned. The preparation of periodic state of conservation reports could include expert advice from the Secretariat and/or the Advisory Bodies, if and when the State Party(ies) concerned so wish(es).

(II.iv) The first periodic report should update the information provided in the original nomination dossier. Subsequent reports will then focus on any changes that may have occurred since the previous report was submitted.

This section of the periodic report follows, therefore, the format for the nomination dossier.

(II.v) The state of properties included in the List of World Heritage in Danger is reviewed by the World Heritage Committee at regular intervals, in general once every year. This review concentrates on the specific factors and considerations that led to the inscription of the property on the List of World Heritage in Danger. It will still be necessary to prepare a complete periodic report on the state of conservation of these properties.

(II.vi) This section should be completed for each individual World Heritage property. States Parties are invited to provide information under the following headings:

## II.1. Introduction

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| a | State Party | ZIMBABWE | 001 |
| b | Indicate the name of the property as inscribed on the World Heritage List | Name of the property<br>MANA POOLS NATIONAL PARK/SAPI AND CHEWORE SAFARI AREAS<br>~~VICTORIA FALLS/MOSI OA TUNYA~~ | 002 |
| c | Indicate the geographical co-ordinates to the nearest second | Localisation:<br>Latitude: 15°35' AND 16°30' SOUTH<br>Longitude: 29°00' AND 30°25' EAST | 003 |
| d | Date of inscription on the World Heritage List | 2 NOVEMBER 1984 | 004 |
| e | Organisation(s) or entity(ies) responsible for the preparation of this report.<br>Give the necessary details to enable possible contact. | Organisation: DEPARTMENT OF NATIONAL PARKS AND WILDLIFE MANAGEMENT<br>Person responsible: THE WARDEN (CELECKSON NDLOVU)<br>Address: MANA POOLS NATIONAL PARK, P.BAG 2061<br>City and post code: KAROI<br>Telephone: 263-063-533 OR 538<br>Fax: 263-04-724914/792782<br>E-mail: nationalparks@gta.gov.zw | 005<br>006<br>007<br>008 |
| f | Date of the report | 09 APRIL 2001 | 009 |
| g | Signature on behalf of the State Party | Surname and given name: KANHANGA E.N<br>Function: DIRECTOR. | 010 |

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## II.2. Statement of significance

*II.2.1.Information provided at the time of inscription*

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| a | At the time of inscription of a property on the World Heritage List, the World Heritage Committee indicates its World Heritage values by deciding on the criteria for inscription. Please indicate the justification for inscription provided by the State Party, | Justification for the inscription provided by the State Party<br>1. BEATIFUL SCENERY - VIEW OF VALLEY FLOOR A 500 METRES ABOVE SEA LEVEL, FROM THE ESCARPMENT 1000 METRES ABOVE SEA LEVEL<br>2. MANA POOLS FLOOD PLAIN.<br>3. HABITAT FOR ENDANGERED ANIMAL SPECIES Eg. BLACK RHINO AND ELEPHANT<br>4. LARGE AND DIVERSE POPULATIONS OF HERBIVORES RESIDENT IN THE LANDSCAPE<br>5. THE MUPATA GORGE (30 KM LONG) WHICH IS PART OF THE GREAT ~~VALLEY~~ RIFT VALLEY MARKS GEOLOGICAL FORMATIONS OVER A LONG PERIOD OF TIME. | |
| b | as well as the criteria according to which the Committee inscribed the property on the World Heritage List.<br><br>Circle the numbers of the relative criteria. | Criteria retained for the inscription:<br><br>Cultural criteria: i – ii – iii – iv – v – vi<br><br>Natural criteria: i – ii – iii – iv | |
| c | Observations made by the advisory body during evaluation | 1. NEED FOR LOWER ZAMBEZI AND LUANGWA VALLEY NATIONAL PARKS IN ZAMBIA TO GET EQUAL PROTECTION WITH MANA POOLS IN ORDER TO HAVE A SUFFICIENTLY LARGE CONSERVATION LANDSCAPE FOR ECOLOGICAL PROCESSES OF RIVERINE NATURE TO CONTINUE<br>2. FURTHER RESEARCH ON THE ECOLOGICAL EFFECTS OF THE REDUCTION IN FLOODING LEVELS IMPACT<br>3. MONITORING OF THE PROPOSED MUPATA GORGE DAM CONSTRUCTION | |
| d | Observations made by the World Heritage Committee at the time of inscription | ——— | |
| e | Reactions to these observations | 1. WE HAVE NOT HEARD ANYTHING ABOUT ZAMBIA'S LOWER ZAMBEZI NATIONAL PARK PRESENTATION FOR LISTING<br>2. MONITORING OF THE FLOODPLAIN ECOSYSTEM MONITORED.<br>3. THE MUPATA GORGE ~~DAM~~ REMAINS SILENT. | |

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*II.2.2. Update of the statement of significance*

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| a | In the view of the State Party, does the statement of significance adequately reflect the World Heritage values of the property? | YES ✓ / NO | |
| b | or is a re-submission necessary? This could be considered, for example, to recognise cultural values of a natural World Heritage property, or vice-versa. This may become necessary either due to the substantive revision of the criteria by the World Heritage Committee or due to better identification or knowledge of specific outstanding universal values of the property. | Is there cause to reconsider these values? YES / NO ✓<br>If YES, why? | |
| c | Another issue that might be reviewed here is whether the delimitation of the World Heritage Property, and its buffer zone if appropriate, is adequate to ensure the protection and conservation of the World Heritage values embodied in it. | Does the delimitation of the World Heritage property seem adequate: YES ✓ / NO<br>Does the delimitation of the buffer zone seem adequate YES ✓ / NO | |
| d | A revision or extension of the boundaries might be considered in response to such a review. | Ecological requirements of the site<br>Is the State Party considering asking for a revision of the boundaries: YES / NO ✓ | |
| e | If a statement of significance is not available or incomplete, it will be necessary, in the first periodic report, for the State Party to propose such a statement. The statement of significance should<br>• reflect the criterion (criteria) on the basis of which the Committee inscribed the property on the World Heritage List.<br>• It should also address questions such as: What does the property represent, what makes the property outstanding, what are the specific values that distinguish the property, what is the relationship of the site | New statement of significance:<br>STATEMENT OF SIGNIFICANCE IS AS PER WORLD HERITAGE COMMITTEE'S RECOMMENDATIONS OF CRITERIA ii, iii, iv OF NATURAL SITES<br>- A WIDE RANGE OF BIODIVERSITY COMPRISED OF HEALTHY POPULATIONS OF MAMMALIA, BIRD AND FISH SPECIES INCLUDING ENDANGERED ONES<br>- OUTSTANDING WILDERNESS VALUES AND BEAUTY OF THE ESCARPMENT TO VALLEY FLOOR VIEW AND BEUTIFUL FLOODPLAIN ALONG THE ZAMBEZI RIVER | |



- HOME TO ENDANGERED SPECIES LIKE BLACK RHINOCEROS, ELEPHANTS, PANGOLINS ETC. THOUGH RHINOS HAVE BEEN MOVED TO OTHER SAFER AREAS AFTER BEING THREATENED BY POACHING, IN ANTICIPATION TO BE RE-INTRODUCED LATER.
- THE PERENNIAL FLOWING ZAMBEZI RIVER AND ITS HABITATS FOR DIVERSY AQUATIC LIFE.

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| | with its setting, etc. Such statement of significance will be examined by the advisory body(ies) concerned and transmitted to the World Heritage Committee for approval, if appropriate. | | |

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## II.3. Statement of authenticity / integrity

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| a | Under this item it is necessary to review whether the values on the basis of which the property was inscribed on the World Heritage List, and reflected in the statement of significance under item II.2 above, are being maintained.<br><br>This should also include the issue of authenticity/integrity in relation to the property. | What was the evaluation of the authenticity / integrity of the property at the time of inscription?<br>- THE PROPERTY SATISFIED CONDITIONS FOR CRITERIA ii, iii, AND iv OF SECTION 44 a OF THE CONVENTION GUIDELINES (NATURAL HERITAGE PROPERTY)<br>- AN AREA OF SUPERLATIVE BEAUTY SCENERY<br>- HOME TO HEALTHY POPULATIONS OF SOUTH-CENTRAL MAMMAL SPECIES.<br>- VALLEY FLOOR SUPPORTS LARGE AREAS OF DECIDOUS THICKETS AND MOPANE WOODLANDS AND RIVERINE VEGETATION ALONG THE ZAMBEZI RIVER. | |
| b | What is the authenticity/integrity of the property at present? | Have there been changes in the authenticity / integrity since inscription?<br>YES / NO ✓<br><br>Are changes in the authenticity / integrity of the property foreseeable in the near future?<br>YES / NO<br>FADHERBIA albida CANOPY DWINDLING NATURALLY DUE TO AGE AND NO REPLACEMENT<br>What are the main causes of changes in the authenticity / integrity since inscription?<br>- ONE OF THE ENDANGERED SPECIES, THE BLACK RHINO HAVE BEEN TEMPORARILY REMOVED FROM SITE AS A MANAGEMENT MEASURE AGAINST THREAT FROM CROSS-BOARDER POACHING.<br>- THERE IS NO RE-GROWTH OF ~~FERRA~~ FADHERBIA ALBIDA TREE SPECIES WHICH PROVIDES MAIN FOOD RESOURCE FROM ITS PODS DURING THE DRY MONTHS IN THE MANA POOLS FLOOD PLAIN.<br>Modifications to the authenticity / integrity since inscription?<br><br>Nil | |
| c | Please note that a more detailed analysis of the conditions of the property is required under item II.6 on the basis of key indicators for measuring its state of conservation. | Have the values on the basis of which the property was inscribed been maintained?<br>YES / NO | |

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## II.4. Management

*II.4.1.Legal and institutional framework*

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| a | Under this item, it is necessary to report on the implementation and effectiveness of protective legislation at the national, provincial or municipal level and/or contractual or traditional protection as well as of management and/or planning control for the property concerned, | Ownership: ✓ State – Region – Private<br><br>Legal status:<br>- PROTECTED BY THE PARKS AND WILDLIFE ACT CHAPTER 20:14 (AS REVISED IN 1996)<br><br>Legal framework (national and local)<br>- STATE LAND PROTECTED AND CONSTITUTED TO PRESERVE AND PROTECT THE NATURAL LANDSCAPE AND SCENERY THEREIN AND TO PRESERVE AND PROTECT WILDLIFE AND PLANTS AND THE NATURAL ECOLOGICAL STABILITY OF WILDLIFE AND PLANT COMMUNITIES THEREIN FOR ENJOYMENT, EDUCATION AND INSPIRATION OF THE PUBLIC<br>Institutional framework (local)<br>ADMINISTERED FOR THE STATE BY THE DEPARTMENT OF NATIONAL PARKS AND WILDLIFE MANAGEMENT | |
| | | Agency(ies) responsible for the management:<br><br>Responsible: DEPARTMENT OF NATIONAL PARK AND WILDLIFE MANAGEMENT<br>Address: P.O BOX CY140, CAUSEWAY<br>Post code and city: HARARE, ZIMBABWE<br>Telephone: 263-04-792787-9/703376<br>Fax: 263-04-724914/792782<br>E-mail: nationalparks@gta.gov.zw | |
| b | as well as on actions that are foreseen for the future, to preserve the values described in the statement of significance under item II.2. | Actions foreseen to preserve the values for the future<br>- RHINO (DICEROS BICEROS) HABITAT IS PRESERVED FOR FUTURE RE-INTRODUCTION OF THE SPECIES AS PER MANAGEMENT PROGRAMME<br>- RESEARCH IS GOING ON, THOUGH WITH SOME FINANCIAL LIMITATIONS, TO WORK OUT HOW THE FADHERBIA ALBIDA CANOPY CAN BE RETAINED TO ENHANCE FOOD RESOURCE AND BEATIFUL SCENERY ON THE FLOODPLAIN.<br>- PRESSURES FROM HERBIVORES AND CARNIVORES ARE ALSO MONITORED | |

If necessary, add additional Information on a blank paper

*II.4.2. Management and planning*

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| a | The State Party should also report on significant changes in the ownership, legal status and/or contractual or traditional protective measures, management arrangements and management plans as compared to the situation at the time of inscription or the previous periodic report. | Under which authority is the property managed:<br>the site DEPARTMENT OF NATIONAL PARKS AND WILDLIFE MANAGEMENT<br>the region MASHONALAND WEST PROVINCE<br>central administration NATIONAL PARKS AND WILDLIFE MANAGEMENT.<br>Changes occured at the site since inscription with regard to : NIL<br>ownership<br>legal status<br>protective measures<br>boundaries<br>available resources |
| b | In such case, the State Party is requested to attach to the periodic report all relevant documentation, in particular legal texts, management plans and/or (annual) work plans for the management and maintenance of the property<br><br>Indicate the different plans relating to the property, prepared and/or implemented by different authorities (national, regional, local) and which have a direct influence on the way in which the property is developed, conserved, utilised or visited.<br>You may provide either a substantial summary of these plans, or significant extracts, or the complete plan in annex to this form. | Registered plans relating to the property:<br>regional plan: NIL<br>local plan: ~~DRAFT MANA POOLS PLAN~~<br>conservation plan: DRAFT MANA POOLS PLAN<br>tourism development plan: CONTAINED IN THE DRAFT MANA POOLS PARK PLAN<br><br>etc. |

If necessary, add additional Information on a blank paper

*II. 4.3. Management plan of the site and statement of objectives*

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| a | The management plan is a basic tool for the management of the site designed to organise the conservation and to base the actions for development relative to the property. Brief extracts of the management plan could be cited and the plan could be joined in annex to the dossier. | Does a functional management plan exist: YES ✓ / NO<br>IN DRAFT PLAN<br>Is a management plan being prepared or updated : YES ✓ / NO<br>STARTED UNDER WORLD BANK PROJECT BUT HALTED BY FUNDS LACK.<br>~~NOT YET AT THIS STAGE BUT THIS IS PLAN IN PREPARATION OF FUTURE PLAN~~<br>Has the local community been consulted and informed about the management plan: YES / NO ✓<br>NOT YET AT THAT STAGE, BUT THIS IS PLAN IN PREPARATION OF FUTURE PLAN<br>Does the management plan take into account the available human resources: YES ✓ / NO<br><br>Does the management plan take into account the actual financial resources: YES ✓ / NO<br><br>Does the management plan include aspects of personnel training: YES ✓ / NO<br><br>Does the management plan include zoning and multiple uses of the site : YES ✓ / NO<br><br>Does the management plan take account of a delimited buffer zone : YES ✓ / NO<br><br>Does the management plan include regular monitoring actions of the site : YES ✓ / NO | |
| b | | Implementation of the management plan:<br><br>In accordance with specific legislation ✓<br><br>Agency responsible for the implementation:<br>Governmental institution ✓<br>NGO<br><br>Involvement of the local community in the implementation of the management plan : YES ✓ / NO | |

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| | | Evaluation of the management plan:<br>Periodicity: EVERY FIVE YEARS<br>Defined indicators: ANIMAL POPULATION / CANOPY COVER<br>Trained personnel: TRAININGS ORGANISED<br><br>Revision scheduled every ..5.. years | |
| c | (provide a copy of the plan in annex) | Financial support for the implementation of the management plan:<br>No financing foreseen<br>Financing guaranteed<br>National financing ✓<br>Bilateral financing<br>Intergovernmental financing<br><br>Obstacles to the implementation of the management plan :<br>Lack of funds ✓<br>Lack of trained personnel ✓<br>Administrative or legislative problems ✓<br><br>Date of implementation of the present management plan: 1990 | |
| d | Full name and address of the agency or person directly responsible for the property should also be provided. | Person responsible for the property :<br>Name : BRIGADIER E. ILANANGA<br>Function: THE DIRECTOR<br>Address: DEPARTMENT OF NATIONAL PARK AND WILDLIFE<br>Post code and city: P.O BOX CY140 CAUSEWAY, HARARE<br>Telephone: 263-04-792782-9<br>Fax: 263-04 724914/792782<br>E-mail: nationalparks@gta.gov.zw | |

If necessary, add additional Information on a blank paper

*II.4.4. Capacities in human and financial resources at site level*

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| a | The State Party should also provide an estimate of the site's human resources, | **Human resources**<br>Level of staff:<br>1. Management: 2 X WARDEN<br>4 X RANGERS<br>1 X TOURIST OFFICER<br>1 X HOUSEKEEPER<br>2. Managerial staff / engineers (number, role) :<br>2 X ECOLOGISTS } RESEARCH<br>2 X SCOUTS<br>3. Manpower (number, role) :<br><br>Guards X 93<br>Trackers X 12<br>Chauffeurs —<br>Secretaries X 3<br>Workers X 10<br>Unskilled workers X 40 | |
| b | and the financial resources available and necessary for the management of the property, | Regular financial resources:<br>PARKS AND WILDLIFE CONSERVATION FUND<br>Sources and level of financing:<br><br>Income generated directly by management:<br>Type - PARK USER CHARGES / TARRIFFS<br>Amount<br>Utilisation — MAINTAINANCE OF THE SITE AND ADMINISTRATION COSTS | |
| c | as well as an estimate of its personnel needs. | **Personnel training needs**<br><br>Observed shortcomings: INTERPRETATION OF ECOLOGICAL CHANGES/RESEARCH FINDINGS AND EFFECTIVE SKILLS ON ANTI-POACHING<br>Personnel training needs : 1. FURTHER SKILLS ON ECOLOGICAL MANAGEMENT.<br>2. PROJECTS PLANNING/MANAGEMENT<br>Types of training desired: 3. SUSTAINABLE UTILISATION<br>4. LAW ENFORCEMENT<br>5. DRUG LICENCING<br>6 INFORMATION TECHNOLOGY<br>7. ADMINISTRATION | |

If necessary, add additional Information on a blank paper

## II.4.5. *Additional information concerning protection and conservation*

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| a | Protection and conservation | Sources of expertise for the training in conservation and management techniques :<br>- EXPERTS.<br>- MUSHANDIKE WILDLIFE COLLEGE – ZIMBABWE<br>- OPEN UNIVERSITY OF ZIMBABWE<br>- NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY<br>- MWEKA COLLEGE- TANZANIA<br>- SOUTH AFRICAN WILDLIFE COLLEGE SOUTH AFRICA<br>Protection measures and means of implementation:<br>- ANTI-POACHING PATROLS<br>- EFFECTIVE LEGAL INSTRUMENTS THAT PROTECT THE PARK<br>- MAINTAINING FIREBREAKS FROM THREAT AREAS<br>- CONTROLLED DEVELOPMENTS WITHIN THE ESTATE<br>- ZONING THE PARK FOR VARIOUS ACTIVITIES.<br>Existing local programmes:<br>- RESEARCHES ON ELEPHANTS. PRESSURE ON WOODLANDS.<br>- RESEARCH ON FADHERBIA ALBIDA DWINDLING CANOPIES<br>- ANTI- POACHING OPERATIONS.<br>- DOING FIREGUARDS AND EARLY BURNINGS AS PER FIRE PLANS<br>~~- ANNUAL TOURISM~~<br>Policies and programmes for the safeguard of the site (status of implementation):<br>- DRAFT PARK PLANS FOR MANAGING THE PARKS<br>- LEGISLATION AND REGULATIONS.<br><br>Financing (origin, amount):<br>PARKS AND WILDLIFE FUND PROVIDES FUNDING FOR RECURRENT AND CAPITAL EXPENDITURE. |
| b | Technical assistance:<br><br>Indicate technical assistance from which the property has benefited, either from a United Nations agency, or from bilateral cooperation. | Technical assistance provided by the United Nations system: NIL<br><br>a. World Heritage Centre<br>b. UNESCO International Campaign<br>c. National and/or regional projects of the UNDP or another agency<br>d. Other assistance<br><br>Technical assistance provided by bilateral co-operation |

If necessary, add additional Information on a blank paper

*II.4.6. Scientific, technical and educational activities*

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| a | The State Party is also encouraged to provide information on scientific studies, | **Scientific studies**<br><br>Research facilities at the site:<br>Laboratories: ✓<br>Housing for researchers: ✓<br>Vehicles: ✓<br>Scientific equipment: ✓<br>Databases: ✓<br>Herbaria:<br>Zoological collections : ✓<br>Skilled personnel (technicians, laboratory staff) ✓ | |
| b | On research projects:<br>for each research programme carried out at the site, provide relevant information. | **Research and development programmes**<br>Name of the programme : 1. MONITORING PRESSURES ON VEGETATION FROM HERBIVORES. 2. LION AND PREDATOR/PREY RELATIONS RESEARCH<br>Agency(ies) sponsoring the research:<br>Participation of national and/or foreign teams:<br>Objectives of the programme:<br>Progress status:<br>Results obtained:<br>Publications:<br>Human resources involved: | |
| c | New management techniques: Including computerised management, as well as database management, access to the Internet or the creation of a Geographical Information System. | **New management techniques**<br><br>Availability of computer equipment:<br>Type WINDOWS '98<br>Capacity<br>Year<br><br>Possible access to the Internet: YES ✓ / NO<br><br>Operational access to the Internet: YES / NO ✓<br><br>Use of the E-mail: YES / NO ✓<br><br>Is there a Geographical Information System for the site: NO | |

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| | | planned? ✓ BUT NO OPERATIONAL<br>in progress?<br>operational ? | |
| d | Educational activities, if there are educational programmes aimed at schools | **Educational activities**<br><br>Does the site receive schools' visits? YES<br>How many? AVERAGE 10/YEAR<br><br>Are there educational programmes aimed at schools :<br>YES / NO ✓ NOTHING ON THE SITE RATHER THAN NATIONAL CAMPAIGN<br><br>Is there an environmental education policy: YES ✓<br>/ NO THROUGH OUR DEPARTMENTAL EXTENTION AND INTERPRETATION PROGRAMMES<br>Which themes, target public, means for implementation.<br>CONSERVATION AWARENESS SOCIAL GROUPS AROUND THE SITE eg. SCHOOLS, CLUBS, FARMERS AND TRADITIONAL GROUPS | |
| e | Public information activities and awareness building in direct relation to the property: indicate how the property's World Heritage values are transmitted to residents, visitors and the public. | **Public information and awareness building**<br>How are general public information activities organised?<br>THROUGH PUBLIC NOTICES, RADIO PROGRAMMES MEETINGS/LIAISON PAMPHLETS AND ADVERTISEMENTS BY TOUR OPERATORS AND ZIMBABWE TOURISM AUTHORITY<br><br>How are the World Heritage values transmitted to residents and visitors?<br>THROUGH SIGN POSTS, MEETINGS AND FLYERS | |

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*II.4.7. Diverse elements*

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| a | Other elements could be mentioned, for example:<br><br>• whether the site has a plaque identifying it as a World Heritage site;<br><br>• whether special events and exhibitions are organised;<br><br>• what infrastructures, welcome centre, site museum, special paths, guides, information material, etc. are available to the visitor;<br><br>• the impact of World Heritage inscription on the programmes and activities. | World Heritage logo plaque WORKING ON IT.<br><br>World Heritage property signs ON PLAN<br><br>Visitor information/interpretation centre ON PLAN FOR CONSTRUCTION. UNDER THE WORLD BANK PROJECT<br>Site museum N/A<br><br>Discovery paths SMALL TRACKS FOR GAME DRIVES AND HUNTING MAINTAINED<br>Hotel infrastructure (lodging, restaurant) THE SITE HAVE LODGES, CAMPING GROUNDS AND HUNTING CAMPS<br>Parking lot ✓<br><br>Toilets ✓<br><br>First aid and rescue station – SMALL CLINIC AT MANA POOLS<br>Ad hoc personnel and training received<br><br>Information material: leaflets, books, slides, videos, CD-ROMs, etc. TO DEVELOP MORE OF THESE<br><br>Open house days NIL<br><br>Special events or exhibitions – NOT DIRECTLY FOR THE SITE BUT NATIONAL PARKS IN GENERAL AT AGRICULTURAL SHOWS AND TOURISM EXHIBITIONS<br>Targeted communcation actions: radio, tv, press ✓<br><br>Impact of inscription on visitor numbers – UNCERTAIN<br><br>Other actions: | |
| b | Based on a management study of the property, the State Party might wish to consider whether a significant revision of the legislative and administrative texts governing the property could be advisable. | Is it necessary to revise the legislative texts governing the property:<br>YES / NO ✓<br><br>Is it necessary to revise significantly the administrative texts governing the property<br>THERE IS NEED TO ADD SOME CONTEXT RELATED TO WORLD HERITAGE MANAGEMENT | |

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| | YES / NO | |

If necessary, add additional Information on a blank paper

**Annexes** : Attach legal texts, management plans, work plans, information documents, etc.

## II.5. Factors affecting the property

*II.5.1.Degree to which the property is threatened*

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| a | Please comment on the degree to which the property is threatened by particular problems and risks.<br><br>Factors that could be considered under this item are those that are listed in the nomination format, e.g. development pressures, | **Development pressures:**<br><br>Visual integrity:<br><br>Sites – PRESSURE FOR MORE VISITOR SITES<br>Waste and refuse – INCREASE OF VISITORS LEADING TO MORE LITTER<br>Constructions<br>Buildings – MORE LODGES, TOILETS, OFFICES AND STAFF HOUSES<br>Badly integrated infrastructures<br>Illegal grazing and overgrazing – NOT IN THIS PARK<br>Wood cutting and clearing<br><br>Structural integrity:<br><br>Roads – PRESSURE FOR MORE ROADS TO NEW DEVELOPMENTS LIKE LODGES.<br>Dams → NO EFFECT AS OF NOW BUT POTENTIAL PROBLEM DUE TO DAM WALL FLOOD GATES WHEN WATER RISES<br>Mines → NO THREAT<br>Water pollution (type, source, scope, consequences, cost) OILS AND GASOLINE FROM RIVER BOATING<br>Air pollution (type, source, scope, consequences, cost) NIL<br>Earth pollution (type, source, scope, consequences, cost) LITTER FROM USED CONTAINERS FOR VISITORS' FOODS AND DRINKS<br>Disappearance or significant reduction of animal or Vegetal species NO EXCEPT FOR RHINO WHICH WAS THREATENED BY POACHING<br><br>Functional integrity:<br><br>Conservation of biological productivity<br>Conservation of diversity<br>Functioning of the cycles (water, etc.) – not threatened<br>CROCODILE AND CARMINE BEE EATERS NESTS GETS ~~BURNED~~ SUBMERGED UNDER WATER WHEN THE ZAMBEZI RIVER IS ON FLOOD. |
| b | environmental pressures | Environmental pressures:<br><br>Visual integrity: NONE<br><br>Modifications of the relief NONE<br>Modification of the vegetal cover MINIMAL |

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| | | Structural integrity:<br><br>Disappearance of significant reduction of animal or vegetable species NONE OTHER THAN THE BLACK RHINO<br>Reintroduction of animal or vegetable species NIL<br>Rehabilitation of ecosystems or natural environments NIL<br>Suppression of introduced animal or vegetable species NIL<br><br>Functional integrity:<br><br>Quality of the life sustaining systems ✓<br>Conservation of biological productivity ✓<br>Conservation of diversity ✓<br>Functioning of the cycles (water, etc.) ✓<br>Predictable climatic changes ✓ | |
| c | natural catastrophes and preparatory planning, | Natural threats and catastrophes (possible or real) concerning the site :<br><br>Earthquakes: NIL<br><br>Land slides: NO MAJOR LANDSLIDES OTHER THAN COLLAPSING ZAMBEZI RIVER BANKS WHEN WATER LEVELS ARE HIGH.<br>Avalanches :<br><br>Floods: ON SEASONS OF HEAVY RAINS KARIBA DAM WALL FLOODGATES GET OPENED AND FLOWS CAN BE WITNESSED DOWN ZAMBEZI RIVER<br>Droughts:<br>LAST SIGNIFICANT DROUGHT WAS IN 1991/2 SEASON<br>Fires: NATURAL AND WILD FIRES ARE MAINLY CONFINED TO THE ESCARPMENT AREA<br><br>Volcanoes: NIL<br><br>Others: NIL | |
| d | visitor/tourism pressures, | Tourism and its consequences: | |

Yearly visitor statistics:

Number of visitors per year AVERAGE 10 000 VISITORS (1995-2000) IN MANA POOLS
Origin of the visitors AMERICA, AFRICA, EUROPE, ASIA & AUSTRALIA
Evolution of visitor statistics over the years - CONSTANT FOR 6 YEARS
Annual income from tourism - FLUCTUATIONAL

Accessibility of the site (from the capital ?) - HARARE
- Distance - MANA POOLS - 400 km
  - CHEWORE NORTH - 800 km
  - SAPI/CHEWORE SOUTH - 450 km
- Paved roads - TARRED - CHIRUNDU - HARARE ROAD.
- Seasonal routes - CHEWORE NORTH SEASONAL AND OTHERS ACCESSIBLE THROUGHOUT THE YEAR
- Airports LOCAL AIRPORT IN KARIBA (150 Km)

ALL THE CAMPS, MANA POOLS, CHEWORE NORTH & SOUTH AND SAPI HAVE 1½ km STRETCH GRAVELLED AIRSTRIPS.

Circulation within the site:
for handicapped, NIL
for vehicles, BUSH TRACKS
according to the seasons DRY MONTHS (MAY - OCTOBER)

Pressures from tourism:
Collecting of samples (fauna, flora, objects) INSIGNIFICANT
Damage (trampling) INSIGNIFICANT
Waste management (dustbins, WC) FOOD AND DRINKS WASTE
Fires NIL

Tourist infrastructures:
Picnic areas, ✓
Halts, ✓
Waste bins, ✓
Path markers ✓
HUNTING CAMPS
etc..

What is the tourist capacity of the site?
- IF ALL FACILITIES ARE OCCUPIED FULL CAPACITY AT MANA POOLS, CAPACITY IS 482 PAYING VISITORS PER DAY
- IN CHEWORE AND SAPI 5 HUNTS PER DAY IN FULL HUNTING SEASON.

Can one speak of sustainable tourism?

YES ALL ACTIVITIES ARE SUPPORTED BY ECOLOGICAL MONITORING AND RESEARCH

| | | | |
|---|---|---|---|
| e | and the number of inhabitants. | **Relations with the neighbouring residents of the site**<br>Evaluation of the local population - NIL EXCEPT WORKING STAFF ONLY WITHIN THE PARK<br>Number of inhabitants living at the site,<br>Number of inhabitants living in the buffer zone (20 km) ± 10 000<br>Evolution since the creation of the site. - INCREASING<br><br>Geographical distribution of human habitats or the zones of illegal activity OTHER THAN A TSETSE RESEARCH CAMP THERE NO SETTLEMENTS WITHIN THE SITE<br>Villages (location, population) or encampments (duration)<br>Activities (cf. socio-économic considerations)<br><br>Cultural specificities of this population<br>THE KOREKORE PEOPLE HAVE SPARSELY LIVED IN THIS REGION FOR MANY CENTURIES<br><br>Socio-economic considerations<br>Main systems of production - SUBSISTENCE FARMING (CROP AND CATTLE REARING)<br>Use of natural resources at the World Heritage site (activities of the inhabitants with regard to the natural environment) CAMPFIRE ACTIVITIES ROLL ON ANIMALS SKILLING OVER FROM THE SITE.<br>Implications on sustainable development<br>Co-development contracts or agreements with the local population<br>Involvement of the local personnel in the site management<br><br>Specific problems of refugees<br>Causes NIL<br>Geographic origin<br>Number of refugees<br>Beginning of the phenomenon<br>Consequences<br>Solutions envisaged<br><br>Insecurity situations and consequences | |

Other factors affecting the property
Vandalism, theft, looting
Deforestation
Poaching ✓
Illegal grazing

Indicate steps taken to counteract these threats.
1. ANTI-POACHING PATROLS
2. CONSTRUCTED REFUSE COLLECTION BINS AT CAMPING/LODGES SITES AND INCINERATORS TO BURN IT. NON-BURNING AND NON-BIODEGRADABLE COMPONENTS ARE DISPOSED OF ACCORDINGLY.
3. MONITORING PROGRAMMES FOR APPARENTLY AFFECTED ANIMAL AND VEGETATION SPECIES.
4. MAINTAIN FIREBREAKS. 5. MEETINGS WITH LOCALS

Describe the evolution of each of these factors since the inscription of the site on the WH List (increase, stability, decrease)

POACHING - DECREASED AS COMPARED TO BEFORE 1990

Was the community involved in the nomination of the site to the World Heritage List:
YES / NO ✓

In what way?

If necessary, add additional Information on a blank paper

*II.5.2.Prevention of threats and natural and human pressures*

| | | |
|---|---|---|
| a | Considering the importance of forward planning and risk preparedness, provide relevant information on operating methods that will make the State Party capable of counteracting dangers that threaten or may endanger its cultural or natural heritage. Problems and risks to be considered could include earthquakes, floods, land-slides, vibrations, industrial pollution, vandalism, theft looting, changes in the physical context of properties, mining, deforestation, poaching, as well as changes in land-use, agriculture, road building, construction activities, tourism. Areas where improvement would be desirable, and towards which the State Party is working should be indicated.<br><br>This item should provide up-to-date information on all factors which are likely to affect or threaten the property. It should also relate those threats to measures taken to counteract them. | **Methods of counteracting threats and pressures**<br><br>Natural disasters:<br>Earthquakes:<br>Land slides:<br>Avalanches :<br>Floods:<br>THE DISTRICT CIVIL PROTECTION UNIT TAKES CONTROL OF THESE<br>Droughts: – ZAMBEZI RIVER PROVIDES WATER PERRENIALLY<br>Fires: – FIRELINES ARE MAINTAINED<br>Volcanoes: NIL<br>Others: NIL<br><br>Industrial pollution: – NIL<br><br>Vandalism, theft, looting: NIL<br><br>Industrial infrastructures:<br>Dams NONE WITHIN THE SITE<br>Mines – NIL<br>Electrical network NIL<br>Communications network (roads, railways, canals) CONTROL GATES ARE IN PLACE ALONG THE STATE ROAD THAT PASSES THROUGH THE PARK<br>Changes in land use<br><br>Pastoralism NIL<br><br>Poaching – DEPLOYING SCOUTS<br><br>Urbanism – NO TOWNS PLANNED WITHIN THE SITE<br><br>Tourism – REGULATED NUMBER OF VISITORS AND VEHICLES THAT CAN BE ON SITE PER TIME, (PARK PLAN LIMITS) |
| b | An assessment should also be given if the impact of these factors on the property is increasing or decreasing, | Evolution of the impact of these factors since the inscription of the site THERE HAS BEEN AN INCREASE OF SITES AND NUMBER OF VISITORS SINCE THE TIME OF INSCRIPTION ALTHOUGH THIS IS STILL BELOW THE ACCEPTED CAPACITY |
| c | and what actions to address them have been effectively taken or are | ENSURED THAT THESE INCREASES ARE WITHIN THE POLICY PLANS OF THE LANDSCAPE.<br>Actions taken to address them<br>DEVELOPMENT OF THE PLANS |

| | | | |
|---|---|---|---|
| | planned for the future. | Actions envisaged COMING UP WITH ~~AND~~ AN APPROVED PARK PLAN THAT WILL ACCOMMODATE ALL STAKE HOLDERS AND BE GUIDANCE TO ALL ACTIVITIES | |

If necessary, add additional Information on a blank paper

## II.6. Monitoring

| | | |
|---|---|---|
| a | Whereas item II.3 of the periodic report provides an overall assessment of the maintenance of the World Heritage values of the property, this item analyses in more detail the conditions of the property on the basis of key indicators for measuring its state of conservation.<br><br>If no indicators were identified at the time of inscription of the property on the World Heritage List, this should be done in the first periodic report. The preparation of a periodic report can also be an opportunity to evaluate the validity of earlier identified indicators and to revise them, if necessary. | **Previous monitoring exercises**<br>(periodic or reactive monitoring)<br>(give dates and results)<br><br>Is there regular monitoring of the site (yearly, for example): ✓<br>YES/NO<br><br>Periodic monitoring of flora resources:<br>frequency — YEARLY<br>methodology — USE SAMPLE PLOT ENCLOSURE<br>— CLINICAL OBSERVATION'<br>inventory<br>estimates<br>results<br><br>and/or<br><br>Periodic monitoring of the vegetable resources: ?<br>frequency<br>methodology<br>categories<br>results<br><br>and/or<br><br>Periodic monitoring of the fauna resources:<br>frequency — YEARLY<br>methodology — POPULATION SURVEYS, AERIAL OBSERVATION<br>inventory MONITORING<br>estimates<br>results<br><br>and/or<br><br>Landscape monitoring: NIL<br>frequency<br>methodology<br>categories<br><br>and/or |

| | | | |
|---|---|---|---|
| | | Monitoring of the constructions and buildings<br>ENVIRONMENTAL IMPACT ASSESSMENT DONE BEFORE ANY CONSTRUCTIONS<br><br>Human resources allocated for this monitoring<br><br>TWO ECOLOGISTS WITH ASSISTANTS<br><br>Associated material means | |
| b | Up-to-date information should be provided in respect of each of the key indicators. Care should be taken to ensure that this information is as accurate and reliable as possible, for example by carrying out observations in the same way, using similar equipment and methods at the same time of the year and day. | Key indicators for measuring the state of conservation<br><br>1. ANIMAL POPULATION<br>2. ZAMBEZI WATER LEVELS<br>3. BIRD SPECIES COUNT<br>4. CANOPY COVER<br>5. TOURISM STATISTICS | |
| c | Indicate which partners if any are involved in monitoring and describe what improvement the State Party foresees or would consider desirable in improving the monitoring system. | Monitoring partners - NGOs<br>- INDEPENDANT RESEARCHERS AND STUDENTS<br>- PATROL SCOUTS<br>Administrative provisions for organising the monitoring of the property<br>FUNDING THE MONITORING OF CONSERVATION INDICATORS<br>Evolution of the monitoring methodology | |
| d | In specific cases, the World Heritage Committee and/or its Bureau may have already examined the state of conservation of the property and made recommendations to the State Party, either at the time of inscription | Dates of the previous monitoring exercises:<br>NIL<br><br>Results of the previous monitoring exercises: | |

| | | | |
|---|---|---|---|
| | or afterwards. In such cases the State Party is requested to report on the actions that have been taken in response to the observations or recommendations made by the Bureau or Committee. | Actions taken in response to the observations / recommendations of the Committee/Bureau.<br><br>NA | |

If necessary, add additional Information on a blank paper

## II.7. Conclusions and recommended actions

| | | |
|---|---|---|
| a | The main conclusions under each of the items of the state of conservation report, but in particular as to whether the World Heritage values of the property are maintained, should be summarised and tabulated together with :<br>Main conclusions regarding the state of the World Heritage values of the property (see items II.2. and II.3. above) | Main conclusions concerning the Statement of significance of the site as a World Heritage property (see item II.2 above)<br>- THE SITE IS STILL SIGNIFICANT THOUGH THERE IS NEED FOR MORE SEARCH ON THE CULTURAL ASPECT OF THE SITE<br><br>Main conclusions concerning the Statement of authenticity / integrity of the property as a World Heritage property (see item II.3 above)<br>THE PROPERTY HAS GENERALLY MAINTAINED ITS STATE AND LAND USE AS PER WHAT IT WAS AT TIME OF INSCRIPTION |
| b | ncl Main conclusions regarding the management and factors affecting the property (see Items II.4 and II.5. above) | Main conclusions concerning the management of the property (see item II.4 above)<br>- PROPERTY MANAGED FOR THE STATE UNDER PARKS AND WILDLIFE ACT CHAPTER 20:14<br>- STATUTORY INSTRUMENTS 362 OF 1990<br>- DRAFT MANAGEMENT PLAN<br>- PARK ZONATION<br><br>Main conclusions concerning the factors affecting the property (see item II.5 above)<br>- KARIBA DAM LOWERS FLUCTUATIONS<br>- POACHING<br>- INCREASE IN VISITOR NUMBERS<br>- DEVELOPMENT PRESSURES<br>- INCREASE IN WILDLIFE POPULATION AGAINST THE VEGETATION RESOURCES.<br>- LAND USE PLANS ON THE PERIPHERY OF THE LANDSCAPE |
| c | Proposed future action/actions | Proposed future action(s):<br>- STRENGTHED ANTI-POACHING TEAMS<br>- MAKE A STAKEHOLDER ORIENTED, EFFECTIVE PARK PLAN APPROVED<br>- MAINTAINING THE RHINO HABITAT<br>- CONTINUE WITH ENVIRONMENTAL IMPACT ASSESSMENT FOR ANY DEVELOPMENTS |

| | | |
|---|---|---|
| | | -ENGAGE MORE RESEARCH WORK ON CONSERVATION INDICATORS FOR MONITORING CHANGES<br>-KEEP FIREBREAKS MAINTAINED<br>-PROGRESS WITH THE LION/PREDATORSHIP RESEARCH |
| d | Responsible implementing agency/agencies<br><br>Provide the necessary details for en eventual contact. | Responsible implementing agency(ies):<br>Agency: DEPARTMENT OF NATIONAL PARKS AND WILDLIFE MANAGEMENT<br>Person responsible: THE DIRECTOR<br>Address: P. O BOX CY140 CAUSEWAY<br>Telephone : 263 -04- 792787-9<br>Fax: 263 -04- 792782/724914<br>E-mail: nationalparks@gta.gov.zw |
| e | Timeframe for implementation | Timetable for implementation<br><br>FIVE YEARS |
| f | Needs for international assistance | Needs for international assistance:<br>YES / NO<br><br>Type of assistance desired:<br>-TECHNICAL EXPERTS TO ASSIST DO THE MANA POOLS/SADI/CHEWORE PARK PLANS<br>-FUNDING FOR THE EXERCISE AND RESEARCH WORK<br>-TRAINING OF STAFF ON SITE ON INFORMATION TECHNOLOGY<br>-TRAINING OF STAFF ON MANAGEMENT AND ADMINISTRATION |
| g | The State Party is also requested to indicate what experience the State Party has obtained which could be relevant to others dealing with similar problems or issues. Please provide names of organisations or specialists who could be contacted for this purpose. | Resource persons or organisations who could be involved in monitoring:<br>1. Name:<br>Address :<br>2. Name:<br>Address:<br>... |
| h | Address where the inventory, records and archives are kept. | Agency:<br>Person responsible:<br>Address: |

## II.8. Documentation enclosed

Maps and plans of the site layout
Site map (zoning)
Illustrations of the state of conservation of the site (photographs, slides and, if available, film/videos):
General view (overall view of the site)
Details of the important aspects (landscapes, animal and vegetable species, installations)
Photos illustrating the physical state of conservation of the site
Photos illustrating the main threats to the site and its surroundings
Copies of the management plans of the site and extracts of other plans relating to the site
Indicative bibliography

# 4 PUBLIC USE OF MANA POOLS NATIONAL PARK

## 4.1ZONING OF MANA POOLS NATIONAL PARK

### 4.1.1 Special Conservation Areas

No archaeological sites have been identified due to a lack of a proper survey.

| SPRING SPECIAL CONSERVATION AREAS | |
|---|---|
| **Area** | Chitake, Kaminga and Kasowe Springs. |
| **Purpose** | To protect sites that have unique, unusual or important biotic or abiotic features. |
| **Size** | 200m radius of the source of the spring. |
| **Management Strategy** | Protect and carry out restorative work if needed to perpetuate the inherent character of the spring. |
| **Tourist Activities** | Low density, non-consumptive. |
| **Entry Restrictions** | Limited to entry on foot during daylight hours only. |
| **Permitted Development** | Animal viewing hides and footpaths. |

### 4.1.2 Wilderness Areas

| RUKOMECHI RIVER WILDERNESS AREAS | |
|---|---|
| **Purpose** | To conserve the riverine vegetation along the Rukomechi River and to provide for wilderness experience and scientific study. |
| **Size** | 28km² |
| **Management Strategy** | Manage to preserve wilderness qualities. |
| **Tourist Activities** | Low density wilderness experience. |
| **Entry Restrictions** | No vehicle access except for staff on essential duties. Limited to entry on foot and all equipment to be carried in and out. All litter to be carried out. |
| **Permitted Development** | Footpaths, animal viewing hides, non-permanent camp sites, dry season management tracks. |

Boundary: Starting from the river road crossing going south until the security road crossing and for 365m on each side of the Rukomechi River.

The southern end of the wilderness area has the main road passing through it and there is a hand operated borehole pump on the banks of the Rukomechi River.

| ESCARPMENT WILDERNESS AREA | |
|---|---|
| **Purpose** | To provide large tracts of relatively undisturbed escarpment habitat for wilderness experience and scientific study. |
| **Size** | ±200km² |
| **Management Strategy** | Manage to preserve wilderness qualities. |
| **Tourist Activities** | Low density wilderness experience. |
| **Entry Restrictions** | No vehicle access except for staff on essential duties. Limited to entry on foot and all equipment and supplies to be carried in and out. All litter to be carried out. |
| **Permitted Development** | Footpaths, animal viewing hides, non-permanent camp sites, dry season management tracks. |

Boundary: Starting from the point where the 600m contour crosses the Rukomechi River and following the 600m contour eastwards until it crosses the Chitake River, then south along that river to the park boundary and west along the park boundary until the Rukomechi river, then north along that river to the starting point.

### 4.1.3 Wild Areas

Apart from the special conservation areas, wilderness areas and the development areas the rest of the park has been divided into four wild areas, which are distinguished on the basis of tourism and their differing ecology.

The Nyamatusi Wild Area represents the major habitat types of the park and has minimal development for tourists. It has a four wheel drive track cutting through it, which should be maintained as such and has limited access in order to give tourists the wilderness type experience. The old bridge on the Mbera River should be broken up and removed and all old roads etc. must be ripped so total reclamation is possible.

Entry is restricted to 4 wheel drive during daylight hours only unless accompanied by a professional or parks guide. No off road driving is permitted and no motorcycles or vehicles of gross mass greater than three tons. The road maybe closed during the wet season. Only one long haul canoe party, one short haul canoe party and one hiking party are permitted to camp overnight at their designated campsites. Two tourist vehicles (4WD) are permitted per day for game drives and/or walking and must get a permit from Nyamepi before entering the area.

| NYAMATUSI WILD AREA | |
|---|---|
| **Purpose** | To provide tracts of relatively undisturbed but accessible land for the enjoyment of visitors and scientific study. |
| **Size** | ±150km² |
| **Management Strategy** | Manage as wilderness area but with minor visitor use in order to preserve wilderness qualities |
| **Tourist Activities** | Game viewing by vehicle or on foot. |
| **Entry Restrictions** | Vehicles restricted to roads. One long haul canoe party, one short haul canoe party, one hiking party and two tourist vehicles (4WD only). |
| **Permitted Development** | Trails, roads, footpaths, animal viewing hides, interpretive displays, limited temporary tourist camps. |

Boundary: Eastwards from the mouth of the Chiruwe River along the Zambezi until the mouth of the Sapi River, then south until the Middle jesse road crossing on the Sapi River, then west along that road until the crossing on the Chiruwe River, then north along that river until the starting point.

| NORTHERN WILD AREA | |
|---|---|
| **Purpose** | To provide tracts of relatively undisturbed but accessible land for enjoyment of visitors and scientific study. |
| **Size** | ±325km² |
| **Management Strategy** | Manage as main locations of visitor use, keeping area as little disturbed as possible. |
| **Tourist Activities** | Game viewing by vehicle or on foot. |
| **Entry Restrictions** | Limited to park limit of 50 vehicles at a time. |
| **Permitted Development** | Trails, roads, footpaths, animal viewing hides, interpretive displays, limited tourist camps. |

Boundary: Starting at the mouth of the Chiruwe River on the Zambezi River heading south until the middle jesse road then west along the middle jesse road until it meets the main access road then south along this road until the crossing with the Fourways road then west along this road to the Dandawa road and west along this road to the boundary with the Rukomechi River Wilderness Area and then north along this boundary until river the road crossing at the Rukomechi River, then north along the park boundary to the Zambezi River, then east to the starting point along the Zambezi River.

This is the wild area with the majority of use for tourists and includes the exclusive camps along the Zambezi and all the tourist roads. It incorporates the majority of the floodplain, but also includes mopane and jesse. There are about 75km of old roads and tracks that need to be upgraded to at least 4WD status and re-aligned where they present an erosion hazard.

Game viewing hides may be constructed at water points or other loci where game concentrate. Underground hides disguised as anthills may be placed in

open areas on the floodplain provided that access is concealed by existing vegetation. The borehole at Muvundura Pan should be refurbished, if for nothing else but to supply patrols in the area with clean fresh water.

Entry is restricted to 50 vehicles for this area, no driving off the roads, no motorcycles and no vehicles of gross mass greater than three tons on any road other than the access road. Some specified roads may be closed during the wet season and subject to the normal criteria laid down by the Department.

| CHIRUWE WILD AREA | |
|---|---|
| **Purpose** | To provide tracts of relatively undisturbed but accessible land for enjoyment of visitors and scientific study. |
| **Size** | ±775km² |
| **Management Strategy** | Manage as main locations of visitor use, keeping area as little disturbed as possible. |
| **Tourist Activities** | Game viewing by vehicle or on foot. |
| **Entry Restrictions** | Limited to park limit of 50 vehicles at a time. |
| **Permitted Development** | Trails, roads, footpaths, animal viewing hides, interpretive displays, limited tourist camps. |

Boundary: To the north it is bounded by the Nyamatusi Wild area and in the east by the park boundary, in the south by the security road, then up the boundary with the Rukomechi River Wilderness Area until the Dandawa road to the Fourways road then down the access road to the jesse road and east along this road to the start of the Nyamatusi Wild Area.

This wild area has no roads, no development and consists mainly of mopane. It has very low densities of game in the dry season.

| SOUTHERN WILD AREA | |
|---|---|
| **Purpose** | To provide tracts of relatively undisturbed but accessible land for enjoyment of visitors and scientific study. |
| **Size** | ±450km² |
| **Management Strategy** | Manage as main locations of visitor use, keeping area as little disturbed as possible. |
| **Tourist Activities** | Game viewing by vehicle or on foot. |
| **Entry Restrictions** | Limited to park limit of 50 vehicles at a time. |
| **Permitted Development** | Trails, roads, footpaths, animal viewing hides, interpretive displays, limited tourist camps. |

Boundary: The northern boundary is the security road, the eastern boundary is the park boundary, the southern boundary is the park boundary until the Chitake river which it follows until the 600m contour then follows that west until the Rukomechi River which it follows south until the park boundary, then follows the park boundary around to the boundary with the Rukomechi River Wilderness area and then south to the security road.

This area includes most of the escarpment area and all the springs at the base of the escarpment. There is one bush camp for tourists at the Chitake spring and there are two potential sites at the Kaminga spring and Kasowe spring but should be sited more than 200m from the sources of these springs. Other possible bush or exclusive camps are up stream from Nyakasikana gate, up stream of Rukomechi Research Station and at Masikote camp. It is the other main area for tourists as there are game concentrations along the escarpment in the dry season.

### 4.1.4 Development Areas

No further development should occur at Nyamepi but a new management station should be built at Nyakasikana gate. When Tsetse Department vacate their accommodation at Rukomechi Research Station this can be converted in to a sub-station. Office space at Nyamepi is needed. Officer accommodation at Nyamepi needs improving. The abandoned house at Nyakasikana gate is to be dismantled. Other government departments should be encouraged to leave and their facilities taken over, eg Police, Roads and Tsetse

| DEVELOPMENT AREAS | |
|---|---|
| **Purpose** | To provide sites for staff accommodation and work and larger tourist complexes. |
| **Size** | Should be limited to the minimum required to satisfy the immediate requirements of the park. Boundaries of existing areas may not be extended with out Director's approval. New development should be restricted to no more than 1km². |
| **Management Strategy** | Manage to satisfy staff and tourist requirements without major impacts on surrounding areas. |
| **Tourist Activities** | Primarily an accommodation area. |
| **Entry Restrictions** | Subject to the criteria laid down by the Department. |
| **Permitted Development** | Subject only to design criteria laid down by the Planning Committee and the approval of the overall park plan. |

## 4.2IMPLEMENTATION OF TOURISM

### 4.2.1 Staff Requirements

In addition to other staff requirements as indicated above the following staff is also needed for tourism.

Tourist Officer - 1
Reception Scouts - 4
Wilderness Trail Scouts - 2
Walking Trail Scouts - 2

# CHECKLIST OF PLANTS COLLECTED IN

# MANA POOLS NATIONAL PARK

# SAPI SAFARI AREA

# AND

# CHEWORE SAFARI AREA

Prepared By P. R. Guy

## EQUISETACEAE

| | | |
|---|---|---|
| H | Equisetum ramosissimum | |

## MARSILEACEAE

| | | |
|---|---|---|
| H | Marsilea macrocarpa | |

## SALVINIACEAE

| | | |
|---|---|---|
| AH | Salvinia auriculata | Kariba weed |

## AZOLLACEAE

| | | |
|---|---|---|
| AH | Azolla nilotica | |
| AH | Adiantaceae | |
| AH | Thelypteridaceae | |

## GRAMINEAE

| | | |
|---|---|---|
| G | Alloteropsis cimicina | |
| G | Andropogon gayanus | Blue grass |
| G | Aristida adscensionis | Annual bristle grass |
| G | A.hordeacea | |
| G | A.meridinonalis | |
| G | A.mollisima | |
| G | A.pilgeri | |
| G | A.rhinochloa | Large-seeded bristle grass |
| G | A.scabrivalvis var contracta | |
| G | A.stipitata var greaciliflora | |
| G | A.vestita | |
| G | Brachiaria deflexa | Annual brachiaria |
| G | B.xantholeuca | |
| G | Chloris gayana | Rhodes grass |
| G | C.virgata | Old-lands grass |
| G | Cleistachne sorghoides | |
| G | Cymbopogon excavatus | Turpentine grass |
| G | Cymbosetaria sagittifolia | |

| | | |
|---|---|---|
| G | Cynodon dactylon | Couch grass |
| G | Dactylotenium giganteum | Giant crows foot |
| G | Danthoniopsis intermedia | |
| G | D.pruniosa | |
| G | Dichanthium annulatum | |
| G | Digitaria ciliaris | |
| G | D.debilis | |
| G | D.milianjiana | Mlanje finger grass |
| G | D.nemoralis | |
| G | D.perrottetii | |
| G | D.setivalva | |
| G | Diheteropogon ampectens | Broad-leaved blue grass |
| G | Dinebra retroflexa | |
| G | Echinochloa colonum | Jungle rice grass |
| G | E.stagnina | |
| G | Eleusine indica | Rapoko grass |
| G | Elytrophorus globularis | |
| G | Enneapogon scoparius | |
| G | Entropogon macrostachyus | |
| G | Eragrostis aethiopica | |
| G | E.aspera | Rough lovegrass |
| G | E.cilianensis | |
| G | E.ciliaris | |
| G | E.cylindriflora | |
| G | E.gangetica | |
| G | E.habrantha | |
| G | E.horizontalis | |
| G | E.namaquensis | |
| G | E.nindensis | |
| G | E.patens | |
| G | E.pilosa | |
| G | E.porosa | |
| G | E.rigidior | Curly-leaved lovegrass |
| G | E.rogersii | |
| G | E.rotifer | |
| G | E.sarmentosa | |
| G | E.tremula | |
| G | E.viscosa | Sticky lovegrass |
| G | Eriochloa maclounii | |
| G | E. meyerians | |
| G | Heteropogon contortus | Spear grass |
| G | Hyparrhenia filipendula | Thatching grass |
| G | H.finitima | |
| G | H.rufa | Jaragua grass |
| G | H.variablis | |
| G | Leptocarydion vulpiastrum | Spade grass |
| G | Leptochloa panicea | |
| G | L.uniflora | |
| G | Loudetia flavida | Pointed russet grass |
| G | Oplismenus burmanni | |

| | | |
|---|---|---|
| G | Oryza longistaminata | |
| G | Oxytenathera | |
| G | Panicum astrosangineum | |
| G | P.coloratum v.makarikariense | Buffalo grass |
| G | P.heterostachyum | |
| G | P.laevifolium | |
| G | P.manicatum | |
| G | P.maximum | Guinea grass |
| G | P.repens | |
| G | P.subalbidum | |
| G | Paspalum orbiculare | |
| G | P.polystachyum | Large native paspalum |
| G | Pennisetum polystachion | |
| G | P.purpureum | Elephant grass |
| G | Perotis patens | |
| G | Phragmites mauritianus | |
| G | Phyllorachios sagittata | |
| G | Pogonarthria fleckii | Annual cross grass |
| G | P.squarrosa | Cross grass |
| G | Rhynchelytrum mintiflorum var. melindoides | |
| G | R.repens | Natal red top |
| G | R.villosum | |
| G | Rottboellia exaltata | Shamva grass |
| G | Sacciolepis africana | |
| G | S.interapta | |
| G | Schizachyrium exile | |
| G | S.inclusum | |
| G | Schmidtia pappophoroides | Sand-quick |
| G | Setaria pallidifusca | Annual Timothy grass |
| G | S.palustris | |
| G | S.sphacelata | |
| G | Sorghum versicolor | Black Sudan grass |
| G | S.verticilliflorum | |
| G | Sporobolus consimilis | |
| G | S.cordofanus | |
| G | S.festivus | |
| G | S.fimbriatus | |
| G | S.ioclados | |
| G | S.panicoides | Famine grass |
| G | S.pyramidalis | Cats tail grass |
| G | Stereochlaena cameronii | Gilston grass |
| G | Themeda triandra | Red grass |
| G | Tragus berteronianus | Carrot-seed grass |
| G | Tricholaena monachne | Blue-seed grass |
| G | Tripogon minimus | Cheveron grass |
| G | Urochloa mossambicensis | Gonya grass |
| G | U.pullulans | |
| G | U.trichopus | |
| G | Vetiveria nigritana | Adrenalin grass |

## CYPERACEAE

| | |
|---|---|
| Se | Bulbostylios sp. |
| se | Cyperus amabalis |
| Se | C.alternifolius flabelliformis |
| Se | C.auriculatus |
| Se | C. difformis |
| Se | C.digitatus auricomis |
| Se | C.distans |
| Se | C.imbricatus |
| Se | C.kirkii |
| Se | C.longus |
| Se | C.nudicaulis |
| Se | C.pseudokyllingoides |
| Se | C.pygmaeus |
| Se | C.rotundus |
| Se | C.tenuispica |
| Se | C.zollingeri |
| Se | Fimbristylis bisumbellata |
| Se | F.exilis |
| Se | F.ferruginea |
| Se | F.hispidula |
| Se | F.squarrosa |
| Se | F.sp.1 |
| Se | F.sp.2 |
| Se | Fuirena ciliaris |
| Se | F.pachyrhiza |
| Se | F.stricta |
| Se | Kyllinga alba |
| Se | Lipocarpha chinensis |
| Se | Mariscus aristatus |
| Se | Pycreus chrysanthus |
| Se | P.flavescens |
| Se | P.mundii |
| Se | P.pelophilus |
| Se | P.polystachyos |
| Se | P.tremulus |
| Se | P.sp. |
| Se | Scirpus articultus |
| Se | S.cubensis |
| Se | S.praelongatus |
| Se | Scleria foliosa |
| Se | S.pergracilis |
| Se | Juncellus laevigatus |

## ACANTHACEAE

| | |
|---|---|
| H | Asystasia gangetica |
| H | Barleria ameliae |
| H | B.kirkii |

H B.lugardii
H B.senensis
H Blepharis caloneura
H B.involucrata
H B.leendertziae
H B.madaraspatensis
H B.pungens
H Brillantasia pubescens
H Crabbea velutina
H Crossandra spinescens
H Dicliptera melleri
H D.verticilliata
H Disperma crenatum
H D.quadrangulare
H Ecbolium hamatum
H Elytraria acaulis
H Hygrophila abyssinica
H H.aueiculata
H H.spiciformis
H Hypoestes verticilliaris
H Justicia betonica
H J.betonicoides
H J.glabra
H J.heterocarpa
H J.kirkiana
H J.matammensis
H J.strictata
H Lepidogathis sariosa
H Mellera nyassana
H Monechma monechmoides
H Nelsonia canescens
H Neuracanthus africanus
H Peristrophe bicalyculata
H Rhinacanthus gracilis
H Ruellia prostrata
H Ruspolia decurrens

**AIZOACEAE**

H Gisekia africana
H Glinus lotoides
H G.oppositifolia
H Mollugo cerviana
H M.nudicaulis
H Sesuvium sessuvioides
H S.nyasiaum

**ALISOMATACEAE**

H Linophyton obtusifolium

## AMARANTHACEAE

| | | |
|---|---|---|
| H | Achyranthes aquatica | |
| H | A.aspera | |
| H | Aerva leucura | |
| H | Alternanthera rodiflora | |
| H | A.pungens | |
| H | A.sessilis | |
| H | Amaranthus graecizans | |
| H | A.hybrdus | |
| H | A.hybridus incurvatus | |
| H | A.spinosus | |
| H | A.thunbergii | |
| H | Celosia trigyna | |
| H | Centemopsis gracilenta | |
| H | Cythula orthodonta | |
| H | Nothosaerva brachiata | |
| H | Psilotrchum scleranthum | |
| H | Pupulia lappacea | |

## ANACARDIACEAE

| | | |
|---|---|---|
| T | Lannea stuhlmannii var.tomentosa | False marula |
| T | Ozoroa reticulata | Tarberry |
| S/T | Rhus gueinzii var.spinescens | Spiny rhus |
| T | Sclerocarya caffra | Marula |

## ANNONACEAE

| | | |
|---|---|---|
| C | Artabotrys brachypetalus | Purple hook-berry |
| S/T | Cleistochlamys kirkii | Purple cluster-pear |
| S | Friesodielsia obovata (Popowia obovata) | Northern dwaba-berry |

## APOCYNACEAE

| | | |
|---|---|---|
| T | Diplorhynchos condylocarpon | Wild rubber tree |
| T | Holarrhena pubescens (H.febrifuga) | Jasmine tree |
| C | Stophanthus courmontii | |
| C | S.kombe | |
| C | S.petersiana | |

## ARACEAE

| | | |
|---|---|---|
| H | Amorphphallus sp. | |
| AH | Pistia stratiotes | Water cabbage, lettuce |
| H | Stylochiton puberulus | |

## ARISTOLOCHLACEAE

| | | |
|---|---|---|
| C | Aristolochia petersiana | Wild dutchman's pipe |

## ASCLEPIADACEAE

| | | |
|---|---|---|
| C | Ceropegia purpurescens | |
| C | Crytolepis obtusa | |
| C | Dregea macrantha | |
| C | Fockea multiflora | |
| C | Taccazea apiculata | |

## BALANITACEAE

| | | |
|---|---|---|
| S/T | Balanites aegyptiaca | Simple-thorned torchwood |
| T | B.maughamii | Y-thorned torchwood |

## BIGNONIACEAE

| | | |
|---|---|---|
| T | Kigelia africana | Sausage tree |
| T | Markhamia acuminata | Bean tree |
| T | Stereospernum kunthianum | Pink jacaranda |

## BOMBACACEAE

| | | |
|---|---|---|
| T | Adinsonia digitata | Baobab |

## BORAGINACEAE

| | | |
|---|---|---|
| H | Coldenia procumbens | |
| T | Cordia grandicalyx | Round-leaved cordia |
| T | C.goetzei | Blue-barked cordia |
| T | C.pilosissima | Wooly cordia |
| S | Ehretia amoena (E.caerulea) | Stamperwood |
| S | E.sp. | |
| H | Heliotropium indicum | |
| H | H.ovalifolium | |
| H | H.strigosum | |
| H | H.subulatum | |
| H | H.supinum | |
| H | Trichodema zeylanicum | |

## BURSERACEAE

| | | |
|---|---|---|
| S/T | Commiphora africana | Poison-grub commiphora |
| T | C.caerulea | Blue-bark commiphora |
| T | C.karibensis | Angular-stemmed commiphora |
| T | C.mollis | Soft-leaved commiphora |
| T | C.mossambicensis | Pepper-leaved commiphora |

| | | |
|---|---|---|
| T | C.pyracanthoides | Common commiphora |
| T | C.ugogensis | River commiphora |

**CAPPARIDACEAE**

| | | |
|---|---|---|
| T | Boscia albitrunca | Sheperd's tree |
| T | B.angustifolia var. corymbosa | Rough-leaved boscia |
| T | B.matabelenois | |
| T | B.mossambicensis | Broad-leaved boscia |
| T | B.salicifolia | Willow-leaved boscia |
| S | Cabada kirkii | Large-flowered cabada |
| S/C | Capparis rosea | |
| S/C | C.tomentosa | Wooly caper-bush |
| H | Cleome hirta | |
| H | C.macrophylla var. macrophylla | |
| H | C.monophylla | |
| H | C.gynandra var. gynandra | |
| S/T | Maerua angolensis | Bead-bean |
| S | M.edulis | Rat smell bush |
| S/C | M.juncea | |
| S/T | M.kirkii | Large-flowered maerua |
| S | M.parvifolia | |
| S/T | M.prittwitzii | Wooly-fruited maerua |

**CARYOPHYLLACEAE**

| | | |
|---|---|---|
| H | Polycarpaea corymbosa | |
| H | Polycarpon prostratum | |

**CELASTRACEAE**

| | | |
|---|---|---|
| T | Cassine matabelica | Condiment cassine |
| T | C.schlechterana | Large-leaved cassine |
| C | Hippocratea africana var.richardsiana | |
| S/C | H.crenata | |
| S/C | H.indica | |
| S/C | H.longipetiolata | |
| C | H.parviflora | Smooth-leaved paddle-pod |
| S | Hippocratea sp. | |
| S/T | Maytenus putterlickioides | Large-flowered maytenus |
| S/T | M.senegalensis | Confetti tree |

**CHENOPODIACEAE**

| | | |
|---|---|---|
| H | Chenopodium ambrosoides | |

**COMBRETACEAE**

| | | |
|---|---|---|
| T | Combretum albopunctatum | Silver-dot combretum |
| T | C.apiculatum | Red bushwillow |
| T | C.celastroides | Jesse-bush combretum |
| T | C.collinum | Variable combretum |
| S | C.eleagnoides | Peach-leaved combretum |
| T | C.fragrans | Four-leaved combretum |
| T | C.hereroense | Mouse-eared combretum |
| T | C.imberbe | Leadwood |
| T | C.kirkii | |
| C | C.microphyllum | |
| S/C | C.mossambicense | Shaving-brush combretum |
| C | C.obovatum | Spiny combretum |
| S | C.padoides | Thicket combretum |
| T | C.zeyheri | Large-fruited combretum |
| T | Meiostemon tatandrus australis | False combretum |
| T | Pteleopsis anisoptera | Four-winged pteleopsis |
| T | P.myrtifolia | Two-winged pteleopsis |
| T | P. sp. | |
| T | Terminalia brachystemma | Kalahari-sand terminalia |
| T | T.mollis | Large-leaved terminalia |
| T | T.prunioides | Purple-pod terminalia |
| T | T.sambesica | River terminalia |
| T | T.sericea | Silver terminalia |
| T | T.stenostachya | Rossette-leaved terminalia |
| T | T.stuhlmannii | Zig-zag terminalia |

**COMMELINACEAE**

| | | |
|---|---|---|
| H | Aneilema johnstonii | |
| H | A.pedunculosum | |
| H | Commelina bengalensis | |
| H | C.bracteosa | |
| H | C.diffusa | |
| H | C.forskalei | |
| H | C.sublobata | |
| H | C.zambesiaca | |
| H | Cyanotis foecunda | |

**COMPOSITAE**

| | | |
|---|---|---|
| H | Ageratum conyzoides | |
| H | Athroisma stuhlmannii | |
| H | Bidens biternata | Yellow-flowered blackjack |
| H | B.pilosa | Blackjack |
| H | B.schimperi | |
| H | Blainvillea gayna | |
| H | Blumea aurita | |
| H | B.mollia | |
| H | Calostephane divarcata | |
| H | Coryza floribunda | |

| | | |
|---|---|---|
| H | Crasscephalum rubens | |
| H | Eclipta prostrata | |
| H | Enydra fluctans | |
| H | Epaltes alata | |
| H | Erlangea sp. | |
| H | Geigera africana filifolia | |
| H | Gnaphalium indicum | |
| H | Grangea maderaspatana | |
| H | Hypercophyllum compositarum | |
| H | Melanthera scandens | |
| C | Mikania cordata | |
| H | Nicolasia felicioides | |
| H | Nidorella resedifolia | |
| H | Pleiotaxis eximia | |
| S/H | Pluchea dioscordis | |
| H | Sclerocerpus africanus | |
| H | Sphaeranthus angolensis | Vlei spice |
| H | Tridex procumbens | |
| H | Vernonia adoensis | |
| H | V.cinerea | |
| H | V.colorata | |
| H | V.glabra | |
| H | V.petersii | |
| H | V.stenolepis | |
| H | Vicoa leptoclada | |

**CONNARACEAE**

| | | |
|---|---|---|
| S | Brysocarpus orientalis | Short-pod |

**CONNVOLVULACEA**

| | |
|---|---|
| C | Hewittea sublobata |
| H | Ipomoea aquatica |
| C | I.archnosperma |
| C | I.copitca |
| C | I.eriocarpa |
| C | I.leucanthemum |
| C | I.mauritiana |
| C | I.nil |
| C | I.pestigridis |
| C | I.plebia africana |
| C | I.shirambensis |
| C | I.shupangensis |
| C | I.simonsiana |
| C | I.sinensis sinensis |
| C | I.tenuipes |
| C | I.welwitschii |
| C | Jacquemontia tamnifolia |
| C | Merremia hederaceae |

| | | |
|---|---|---|
| C | M.pinnata | |
| C | M.pterygocaulus | |
| C | M.tridentata augustifolia | |

**CRASSULACEAE**

| | | |
|---|---|---|
| H | Kalanchoe lanceolota | |

**CRUCIFERAE**

| | | |
|---|---|---|
| H | Rorippa crypantha | |
| H | R.madagascariensis | |

**CUCURBITACEAE**

| | | |
|---|---|---|
| C | Ctenolepis cerasiformis | |
| C | Cucumella sp. | |
| C | Cucumis anguira | |
| C | C.metuliferus | |
| C | Kedrostis foetidissima | |
| C | K.hertella | |
| C | Lageneria shaerica | |
| C | Luffa cylindrica | |
| C | Momordica cardiorpermoides | |
| C | M.charantica | |
| C | M.corymbifera | |
| C | M.kirkii | |
| C | Mukia maderaspatana | |
| C | Zehneria scabra | |
| C | Z.thwaitesii | |

**DIOSCOREACEAE**

| | | |
|---|---|---|
| C | Dioscorea bulbifera | |
| C | D.dumetorum | |
| C | D.hirtiflora | |

**DIPTEROCARPACEAE**

| | | |
|---|---|---|
| T | Monotes katangensis | Red-fruited montes |

**EBENACEAE**

| | | |
|---|---|---|
| T | Diospyros kirkii | Pink diospyros |
| T | D.mespiliformis | Ebony diospyros |
| T | D.quiloensis | Crocodile-bark diospyros |
| T | D.senensis | Peeling-bark or acorn diospyros |
| T | D.squarrosa | Rigid-star berry |
| T | Euclea divinorum | Diamond-leaved euclea |

KEY

1.

2. WILD AREA – SEE ZONATION 4.1.3

3. WILDERNESS AREA – SEE ZONATION 4.1.2

4 SPORT HUNTING AREA (PART OF THE WHS)

5 SPORT HUNTING AREA (NOT PART OF THE

SPECIAL CONSERV