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MANAGING NATURAL WORLD HERITAGE

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

World Heritage
Convention

ICCROM

ICOMOS
international council on monuments and sites

IUCN

ICCROM
Via di San Michele 13
I-00153 Rome
Italy
Tel: +39 06 585-531
Fax: +39 06 585-53349
E-mail: iccrom@iccrom.org
http://www.iccrom.org

ICOMOS
49-51, Rue de la Fédération
75015 Paris
France
Tel: +33 (0)1 45 67 67 70
Fax: +33 (0)1 45 66 06 22
E-mail: secretariat@icomos.org
http://www.icomos.org

IUCN
Rue Mauverney 28
1196 Gland
Switzerland
Tel: +41 (22) 999-0000
Fax: +41 (22) 999-0002
E-mail: worldheritage@iucn.org
http://www.iucn.org

UNESCO World Heritage Centre
7, Place de Fontenoy
75352 Paris 07 SP
France
Tel: +33 (0)1 45 68 18 76
Fax: +33 (0)1 45 68 55 70
E-mail: wh-info@unesco.org
http://whc.unesco.org

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Cover photo: Bukit Barisan Selatan National Park / Tropical Rainforest Heritage of Sumatra World Heritage site (Indonesia)
Staff of the Wildlife Conservation Society and the National Parks Agency monitor the site
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About the World Heritage Resource Manual Series

Since the World Heritage Convention was adopted in 1972, the World Heritage List has continually evolved and is growing steadily. With this growth, a critical need has emerged for guidance for States Parties on the implementation of the Convention. Various expert meetings and results of Periodic Reporting have identified the need for more focused training and capacity development in specific areas where States Parties and World Heritage site managers require greater support. The development of a series of World Heritage Resource Manuals is a response to this need.

The publication of the series is a joint undertaking by the three Advisory Bodies of the World Heritage Convention (ICCROM, ICOMOS and IUCN) and the UNESCO World Heritage Centre as the Secretariat of the Convention. The World Heritage Committee at its 30th session (Vilnius, Lithuania, July 2006) supported this initiative and requested that the Advisory Bodies and the World Heritage Centre proceed with the preparation and publication of a number of thematic Resource Manuals. The 31st (2007) and 32nd (2008) sessions of the Committee adopted the publication plan and determined a prioritized list of titles.

An Editorial Board consisting of members of all three Advisory Bodies and the World Heritage Centre meets regularly to decide on different aspects of their preparation and publication. For each manual, depending on the theme, one of the Advisory Bodies or the World Heritage Centre functions as the lead agency responsible for coordination, while the final production is ensured by the World Heritage Centre.

The Resource Manuals are intended to provide focused guidance on the implementation of the Convention to States Parties, heritage protection authorities, local governments, site managers and local communities linked to World Heritage sites, as well as other stakeholders in the identification and preservation process. They aim to provide knowledge and assistance in ensuring a representative and credible World Heritage List consisting of well-protected and effectively managed properties.

The manuals are being developed as user-friendly tools for capacity-building and awareness-raising on the World Heritage Convention. They can be used independently for self-guided learning as well as material at training workshops, and should complement the basic provisions for understanding the text of the Convention itself and the *Operational Guidelines* for implementation.

The titles in this series are produced as PDF online documents which can be freely downloaded.

List of titles:
Managing Disaster Risks for World Heritage (June 2010)
Preparing World Heritage Nominations (Second Edition, November 2011)
Managing Natural World Heritage
Managing Cultural World Heritage

Foreword

In its forty years of existence, the World Heritage Convention has become the most successful international instrument to recognize the most exceptional natural places in the world, characterized by their outstanding biodiversity, ecosystems, geology or superb natural phenomena. The Convention has provided international recognition to well over 10 per cent of the total area of protected areas in the world, and while certain gaps in the World Heritage List remain, it currently protects an extremely valuable sample of our natural heritage.

With almost 1,000 natural and cultural sites already inscribed on the List, the current challenge for the Convention is to ensure that the values for which these sites were listed are maintained in the context of a rapidly changing and global-ized world. The Convention is not only about recognizing and celebrating these exceptional places: by nominating them for listing, States Parties to the Conven-tion make a commitment to protect them for current and future generations. In order to maintain the values and integrity of these sites, States Parties have to ensure that they are managed to the highest possible standards.

A wealth of knowledge and best practice exists on protected area management and it is not the objective or the ambition of this Resource Manual to replace the literature on this subject. Instead, in the first place, it seeks to guide managers and practitioners on the specificity of managing a World Heritage site, building on the central concept of the Convention, that of Outstanding Universal Value. At the same time, it points to existing best practice examples and resources, guiding World Heritage site managers to available literature and documentation.

Best practice in protected area and World Heritage site management is evolving quickly. As managers are faced with new challenges on almost a daily basis, conservation strategies must also evolve. Therefore it was a strategic choice to publish this manual as an electronic document. We invite you to use and further enrich it by providing the World Heritage Centre with your comments and experiences, in order to make them available to your colleagues in sites all over the world.

Kishore Rao
Director, UNESCO World Heritage Centre

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UNESCO World Heritage Centre coordination

Vesna Vujicic-Lugassy

Laura Frank

C o n t e n t s

Preface

This Resource Manual has a specific purpose: helping to manage **natural**[1] values within World Heritage properties.[2] As such it is aimed at natural and mixed World Heritage properties as well as cultural landscapes (inscribed under cultural criteria). The intention is to help managers understand and incorporate World Heritage concepts and processes into natural site management. It is hoped that all natural World Heritage managers and staff will find useful guidance here and will be inspired to explore the many resources highlighted. Many of the management principles described will apply to any type of protected area, but here special emphasis is given to those management considerations most relevant to World Heritage status.

In recent years thousands of pages have been written on the subjects covered here; it is thus fair to say that this relatively slim volume can only be an introduction to the principles and best practice approaches to World Heritage management. The Resource Manual however draws on decades of experience of protected area and World Heritage management from many sources: UNESCO; IUCN and the two other World Heritage Advisory Bodies (ICCROM and ICOMOS); and government and non-government organizations concerned with protected areas. It is therefore also a source document, guiding site-based staff to a wealth of additional resources and material on best practice in conservation management.

The inclusion of a natural property on the World Heritage List is based on a statement that it is a special place of Outstanding Universal Value (OUV). Listing also brings an obligation for the country and those directly responsible to manage and conserve to the highest possible standards. World Heritage properties, which correspond to just 1 per cent of the terrestrial surface area of the planet, warrant the highest level of national and international recognition and scrutiny. The processes developed over the years to provide this special attention form an additional layer of national and site-level action which may seem complex, particularly for managers and staff new to World Heritage designated sites. But they exist for important reasons.

Natural World Heritage sites are inscribed because of their superlative values relating to scenery and other superb natural phenomena, geology, ecosystems and/or biodiversity. Management should be physically, financially, politically and practically capable of ensuring that these values are maintained in perpetuity. Because of their high status and prestige, World Heritage sites for many people are also exemplars, flagships or platforms for improving national protected area networks. As such, ensuring that management reaches the highest possible standards is crucial.

World Heritage status brings many potential benefits as well as related requirements and associated costs. The potential benefits include:
• The boost to national pride and prestige which comes from having one of the world's iconic sites.

1 – An accompanying manual on *Managing Cultural World Heritage* is being produced for publication in 2012.
2 – A note on terminology: the terms World Heritage site and World Heritage property are used synonymously throughout this manual. Although 'property' is preferred by UNESCO, 'site' has more meaning for natural World Heritage managers.

- Strengthened protection and long-term conservation as a result of the national commitment represented by World Heritage nomination and the international support for conservation that is the central purpose of the World Heritage Convention.
- Being part of a global network of natural World Heritage sites that provide opportunities for interchange of knowledge, experience and sometimes also for staff exchanges.
- Opportunities to benefit from training, courses and workshops aimed explicitly at World Heritage managers and staff.
- Access to dedicated support units at UNESCO Headquarters in Paris and at IUCN Headquarters in Gland, Switzerland (see Contact information, p. 98), regional offices and commissions / networks including UNESCO National Commissions and IUCN World Commission on Protected Areas.
- Opportunities for additional funding, both from governments and from other sources such as the private sector, NGO partners and specific World Heritage funds, due to the high profile created by World Heritage status and the additional confidence that donors are likely to experience due to the controls provided by the Convention.
- Greater levels of domestic and international scrutiny which can stimulate improved levels of protection, for example, through Reactive Monitoring, support missions to aid site management (see Section 2.3) and even inclusion on the List of World Heritage in Danger (see Section 2.4) if the site's OUV is seen as being severely threatened. Such a move can result in additional international attention and resources.
- Added value as a marketing or quality brand. The value of World Heritage as a brand can be maximized to attract tourism, resulting in increased national income.

None of these advantages is an inevitable result of World Heritage listing, but World Heritage status provides an instrument that can be used constructively in the ways outlined. Hand in hand with these benefits comes a range of requirements and potential costs:

- Tourism pressures, including additional social disruption, pressure for unsustainable tourism development and an influx of visitors, may result from the higher profile of the site.
- Additional reporting to the UNESCO World Heritage Committee may be required, particularly associated with Periodic Reporting.
- An increased obligation to engage and balance views across a broader spectrum of stakeholders, beyond local and national, to encompass the global community.
- A need for additional capacity and funding needs to realize the potential benefits of World Heritage.
- The potential for disappointed expectations if World Heritage listing does not immediately provide the benefits and support that the site has been expecting.

This manual has been prepared by the International Union for Conservation of Nature (IUCN), one of the Advisory Bodies named in the World Heritage Convention. IUCN advises the World Heritage Committee on the inscription of sites with natural values and reports on the state of conservation of existing World Heritage sites through its worldwide network of specialists. It is thus well placed to develop a manual on managing natural World Heritage.

The production of the manual has been coordinated by the IUCN World Heritage Programme, based at IUCN Headquarters in Switzerland, which supports its World Heritage activities along with the support of special advisors and network of regional and country offices. The programme focuses on:
- contributing to the development and implementation of the Global Strategy of the World Heritage Committee by preparing a series of global overviews, e.g. by working with States Parties to identify the gaps in the World Heritage and Tentative Lists (*Operational Guidelines*, Paragraph 71);
- evaluating properties nominated for inscription on the World Heritage List and presenting evaluation reports to the World Heritage Committee (*Operational Guidelines*, Paragraph 31e);
- monitoring the state of conservation of natural World Heritage properties (*Operational Guidelines*, Section IV);
- reviewing requests for International Assistance submitted by States Parties (see Section 4.2);
- providing training, capacity-building and related initiatives, particularly at regional and field levels (*Operational Guidelines*, Paragraph 37).

In addition to its specialized World Heritage functions, IUCN has an objective and mandate to promote conservation in protected areas, so that its interest in promoting World Heritage goes well beyond its formal advisory role. The team based at IUCN is supported by a World Heritage Panel, made up of members of IUCN World Commission on Protected Areas and other recognized experts whose role, on behalf of the IUCN Director-General, is to:
- review new nominations and advise / agree on the process for evaluation of OUV, integrity and management effectiveness;
- agree recommendations and advise on the finalization of reports to the World Heritage Committee on natural, mixed and cultural landscape nominations that have been evaluated and reviewed;
- advise on annual state of conservation reporting to the World Heritage Committee;
- consider and advise IUCN on World Heritage strategy, policy and any other related matter where advice or support is required by IUCN.

1 Introduction and glossary

This manual provides advice on the management of natural World Heritage properties. It reviews the obligations which are assumed once a site has been included on the World Heritage List and looks at more general concerns relating to the management of important conservation areas. It is not a guide to *applying* for World Heritage status (which is covered in a separate publication[3]) but may be a useful resource for properties considering nomination.

1.1 Intended audience

The Resource Manual is aimed at anyone with an interest in World Heritage, in particular:
1. Those responsible for managing natural World Heritage sites.
2. Managers and staff of protected areas (e.g. national parks, nature reserves, wilderness areas, indigenous and community conserved areas, etc.) that contain, or are contained, within World Heritage sites. These are often, but not always, the same people as above.
3. Local communities and indigenous peoples engaged in managing or co-managing World Heritage properties.
4. Institutions (e.g. governments, intergovernmental bodies and national or international non-governmental organizations) charged with sectoral responsibilities, involved in running conservation or development projects in and around natural World Heritage sites.
5. Communities and individuals living in or near a natural World Heritage site, or likely to be impacted by its designation and management, who want to understand or be involved in its management.
6. Businesses operating in or alongside a natural World Heritage site, including particularly those with operations based on the values of the site itself (e.g. tourism based on rare or iconic species, such as mountain gorillas, or important landscapes and geological features, etc.).

1.2 Background to World Heritage

The Convention concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) is one of the oldest and best supported of the international Multilateral Environmental Agreements (MEAs). The World Heritage Convention was signed into being by the UNESCO General Conference in 1972 and has been ratified (at early 2011) by 187 countries (States Parties), meaning it is almost universally embraced. The Convention recognizes that there are places on Earth (both cultural and natural) which hold special value to all of humanity. They have OUV for every citizen of the planet and deserve our collective efforts to safeguard their precious values for current and future generations.

There are many motivations for countries to ratify the World Heritage Convention. However, at its heart is perhaps the national pride and prestige that comes from nominating and caring for part of the planet's priceless heritage. As the UNESCO World Heritage Centre notes in relation to Article 6 of the World Heritage Convention: 'While fully respecting the national sovereignty, and without prejudice to property rights provided by national legislation, the States Parties recognize that the protection of the World Heritage is the duty of the international community as a whole'.[4]

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3 – *Preparing World Heritage Nominations*, 2011, Paris, UNESCO World Heritage Centre.
4 – UNESCO World Heritage Centre website: http://whc.unesco.org.

While OUV lies at the core of the Convention it also places equal weight on the importance of integrity, authenticity and the standard of care and protection. Inclusion on the World Heritage List implies that the quality and condition of a property's values will be maintained and perhaps enhanced in the future. It is not enough for the values alone to be recognized. In addition they need to be subject to the highest international standards of care control and management.

Within the two definitions of 'cultural heritage' and 'natural heritage' the Convention recognizes four different types of World Heritage property:

- **Cultural properties** that meet the definition in Article 1 of the Convention (i.e. they meet one or more of criteria i–vi) (see glossary for further details on criteria).
- **Natural properties** that meet the definition in Article 2 of the Convention (i.e. they meet one or more of criteria vii–x).
- **Mixed properties** that satisfy 'a part or the whole of the definitions of both cultural and natural heritage laid out in Articles 1 and 2 of the Convention' (*Operational Guidelines*, Paragraph 46). Properties should meet one or more of criteria (i)–(vi) and one or more of criteria (vii)–(x).
- **Cultural landscapes** 'represent the "*combined works of nature and of man*" designated in Article 1 of the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal' (*Operational Guidelines*, Paragraph 47).

It is important not to confuse mixed properties and cultural landscapes. Mixed properties are inscribed under both cultural criteria (i)–(vi) and natural criteria (vii)–(x), because they meet both criteria independently. The OUV of cultural landscapes arises not from their cultural or natural qualities assessed independently but from the interrelationship between culture and nature.[5]

The World Heritage Convention has resulted in many conservation successes. National decisions have been influenced in favour of heritage conservation at the time of nomination and, once inscribed, through the state of conservation monitoring processes which ensure the protection, conservation or safeguarding of OUV. The Convention has been a powerful catalyst in saving important global heritage, improving the conservation and management of properties, building better capacity and bringing countries together to promote the value of conservation.

1.3 **Scope and purpose of the Resource Manual**

No single publication can explain everything about managing natural World Heritage, as that would require a sizeable and constantly expanding library rather than one slim volume. Instead the focus is on clarifying questions that are likely to be particular or unique to World Heritage and either supplying relevant information directly or, where further detail is required, explaining where this information can be found. No prior knowledge of World Heritage processes is assumed, thus a glossary is included to help steer users through the complex web of acronyms and technical terms that accompany World Heritage status and management.

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5 – T. Badman, P. Dingwall and B. Bomhard, 2008, *Natural World Heritage Nominations. A Resource Manual for Practitioners*, Gland, Switzerland, IUCN.

The Resource Manual is structured around a management effectiveness framework (Figure 1) developed by IUCN for its work on management effectiveness of protected areas.[6] This framework identifies six stages within the management process: (1) understanding the **context** of the site by reviewing existing values, threats and stakeholders, thus providing the background for (2) **planning** site management and (3) the allocation of resources and other **inputs**, all of which result in (4) a series of **management processes** which go on to produce (5) **outputs**, i.e. goods and services that result in (6) conservation impacts or **outcomes**. The framework enshrines the concept of adaptive management, which is alert to changing conditions and seeks continual improvement. Five sections of the manual (as stages 5 and 6 of the framework have been combined) are based on the key themes of this management cycle and each includes a series of case studies.

After this introductory section the Resource Manual goes on to deal with **context** issues (Section 2) and reviews the concept of Outstanding Universal Value (2.1) and the development of a Statement of Outstanding Universal Value (2.2), which should describe the overall purpose and direction of **management**. Two other issues influencing the type and focus of management are also reviewed: threats to the site and its OUV (2.3 and 2.4) and the involvement of local people in management (2.5).

Figure 1. The WCPA Framework for Assessing Management Effectiveness.
Source: Hockings et al. (2006).
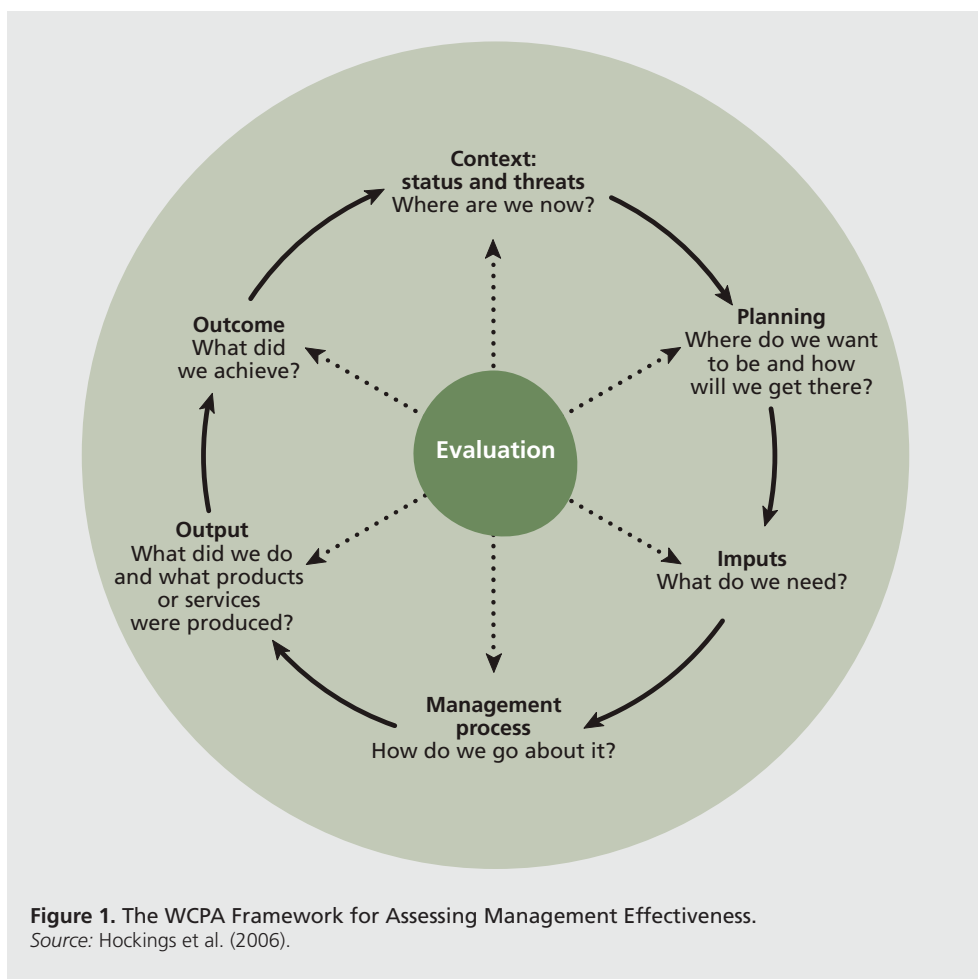
6 – M. Hockings, S. Stolton, F. Leverington, N. Dudley and J. Courrau, 2006, 2nd edn, *Evaluating Effectiveness: A framework for assessing management of protected areas,* Gland, Switzerland, IUCN WCPA.

Good **planning** (Section 3) is fundamental for effective management. The art of World Heritage management is based on taking the contextual information outlined in Section 2 with the legal frameworks that underscore the planning process (3.1), the development of management plans (3.2) and recommendations on site management made in World Heritage Committees (3.3). This section also includes a short discussion of boundaries (3.4) which have specific processes associated with World Heritage listing.

Closely linked to the planning process is the need to ensure a site has the **capacity** (Section 4), i.e. the inputs and resources such as finances and expertise, to implement the planned management activities. Development of a sustainable financial basis for management is covered in 4.1, while the options for dedicated financial support available to World Heritage sites are introduced in 4.2. Staff training and development is discussed in 4.3.

Even with good planning and sufficient resources, effective conservation at a World Heritage site will only be achieved if the **management processes** (Section 5) in place are based on best possible practices. As the range of management skills required by managers of World Heritage sites can sometimes seem overwhelming, this Resource Manual focuses on three management areas of greatest relevance to the implementation of the World Heritage Convention: sustainable use and benefit sharing (5.1), education and interpretation (5.2) and tourism (5.3).

Section 6, on **delivering results**, combines the **outputs** and **outcomes** elements of the management framework in Figure 1, looking at the two fundamental components that need to be in place for managers to know if they are achieving their management objectives and conserving the World Heritage site's OUV: monitoring (6.1) and research (6.2). It then reviews the various processes in place for site managers to report the results of their management to the World Heritage Committee (6.3). Section 6.4 returns to the IUCN management effectiveness framework by introducing the concept of management effectiveness and the *Enhancing our Heritage Toolkit*; a methodology developed specifically for use in natural World Heritage sites.

Resources (p. 84), which lists the main World Heritage and associated documents by section, with links to where they can be found, is followed by four appendices. **Appendix 1** summarizes a set of indicators that have been included throughout the Resource Manual. The Periodic Reporting questionnaire for World Heritage properties (outlined in Section 6.3) asks if *key indicators for measuring the state of conservation are used in monitoring, and how the Outstanding Universal Value of the property is being maintained*. As few natural World Heritage sites currently have such indicators, a series of possible indicators is suggested in relevant places throughout the text along with questions in the Periodic Reporting format. **Appendix 2** complements the resources for each section with a more detailed list of tools that may be useful for World Heritage site managers. **Appendix 3** relates to Section 5.3 and reproduces the *Principles for Sustainable Tourism at World Heritage Properties*. Many World Heritage sites have other international designations, for example they may be a Ramsar (Convention on Wetlands) recognized wetland, a Biosphere Reserve or have had a management category assigned to them using the IUCN category system. **Appendix 4** briefly reviews the relationships between these designations and systems and World Heritage designation. A final section, **Contact information**, provides details of helpful organizations for further advice and guidance.

1.4 Essential resources for World Heritage managers

All World Heritage site managers should have a number of key documents to hand, the resources that are referred to throughout this manual.

World Heritage resources
- UNESCO World Heritage website: http://whc.unesco.org/. The site contains a wealth of resources on the convention and World Heritage processes. Biome specific resources (e.g. forests and marine) can be found at http://whc.unesco.org/en/activities/.
- World Heritage Convention: All practitioners should be familiar with this text (see http://whc.unesco.org/en/conventiontext/).
- *The 1972 World Heritage Convention: A Commentary*, edited by Francesco Francioni and Federico Lenzerini, Oxford University Press, 2008 (see http://ukcatalogue.oup.com/product/9780199291694.do).
- *Operational Guidelines:* These provide a guide to the implementation of the Convention (see http://whc.unesco.org/en/guidelines/). Individual paragraphs of the guidelines are referenced in this manual. The *Operational Guidelines* are regularly reviewed and updated (the latest version is dated 2011). Managers and those involved in site management should check the World Heritage website for updates.
- Criteria: For information on World Heritage criteria see http://whc.unesco.org/en/criteria/.
- World Heritage List Strategy: In 1994 the World Heritage Committee launched its Global Strategy for a Representative, Balanced and Credible World Heritage List. Details of the global study and the analyses carried out by the Advisory Bodies ICOMOS and IUCN can be found at http://whc.unesco.org/en/globalstrategy.
- All World Heritage Committee decisions can be found on the **Decisions Database** at http://whc.unesco.org/en/decisions/. Entering a site name in the search box will bring up all the decisions relating to a specific World Heritage property.

Site-specific documents
Each natural World Heritage site has an entry on the World Heritage Centre website. See http://whc.unesco.org/en/list to find a site. Each site has a number of sections on the web, which may include:
- a basic **description**, with information on when and for which criteria the property was inscribed and in many cases links to latest news, events, activities, etc. For newly inscribed or extended properties the OUV is included (see for example the entry for **Tubbataha Reefs Natural Park** in the Philippines, http://whc.unesco.org/en/list/653), while in other cases important facts about the site can be found in Resources, p. 84;

Tubbataha Reefs Natural Park

Description | Maps | Documents | Gallery | Indicators | Assistance

Brief Description

The Tubbataha Reef Marine Park covers 130,028 ha, including the North and South Reefs. It is a unique example of an atoll reef with a very high density of marine species; the North Islet serving as a nesting site for birds and marine turtles. The site is an excellent example of a pristine coral reef with a spectacular 100-m perpendicular wall, extensive lagoons and two coral islands.

Other Languages:
English French Arabic Chinese Russian Spanish

Philippines
Municipality of Cagayancillo, Province of Palawan
N8 57 12 E119 52 3
Date of Inscription: 1993
Extension: 2009
Criteria: (vii)(ix)(x)
Property : 130,028 ha
Ref: 653bis

Activities
News
Links

If you have been to Tubbataha Reefs Natural Park recently, please give us feedback through our partner TripAdvisor

– an interactive **map**;

– **documents** that include links to Advisory Body evaluations, State of Conservation reports, Periodic Reporting results and World Heritage Committee decisions. As the Statement of Outstanding Universal Value (SOUV) is a relatively new concept (see Section 2.2) and SOUVs have not been developed for all sites, Section II Periodic Reporting reports where available will include considerable background information;

– a **gallery** of pictures;

– a graphic representation of **indicators** based on frequency of discussions on the property by the World Heritage Committee over the past fifteen years;

– details of **International Assistance** received by the site.

• **Nomination dossier:** Copies can be requested from the relevant government authority or the World Heritage Centre. Many can be found in the documents section of a property's entry on the World Heritage website. For example, the nomination file for **The Wadden Sea** can be found at http://whc.unesco.org/en/list/1314/documents/.

© Hubert Farke

Oystercatchers –
The Wadden Sea
(Germany / Netherlands)

1.5 Glossary

Advisory Bodies

Article 8.3 of the World Heritage Convention states that the Advisory Bodies to the World Heritage Committee are: ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) and ICOMOS (International Council on Monuments and Sites) for cultural properties and IUCN (International Union for Conservation of Nature) for natural sites. Mixed properties and cultural landscapes are dealt with jointly by ICOMOS and IUCN. Cultural landscapes are cultural properties that represent the combined works of nature and of man. The Advisory Bodies' primary role is to provide advice and support to the World Heritage Committee. The role of each organization is discussed below.

Authenticity

This is a criterion of OUV applicable to cultural sites, including mixed sites, focusing on whether cultural values are 'truthfully and credibly' expressed through attributes such as form, design, materials, function, traditions, setting, language and spirit. The Nara Document on Authenticity (www.international.icomos.org/naradoc_eng.htm) provides a practical basis for examining authenticity.

Criteria for assessment of World Heritage properties

To be included on the World Heritage List, properties must be of OUV and meet at least one out of ten assessment criteria (http://whc.unesco.org/en/criteria/). The criteria are regularly revised by the Committee to reflect the evolution of the World Heritage concept itself and are explained in the *Operational Guidelines* (see below). The 2011 criteria are that nominated properties should:

(i)   represent a masterpiece of human creative genius;

(ii)   exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

(iii)   bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

(iv)   be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

(v)   be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environ- ment especially when it has become vulnerable under the impact of irreversible change;

(vi)   be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);

(vii) contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(viii) be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;

(ix)   be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;

(x)   contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of OUV from the point of view of science or conservation.

To be deemed to have OUV, a property must also meet the conditions of integrity and/or authenticity (see definitions) and must have an adequate protection and management system (see definition) to ensure its safeguarding.

General Assembly

The General Assembly includes all States Parties to the Convention and meets once every two years during the ordinary session of the General Conference of UNESCO to elect the members of the World Heritage Committee. During its session, the Assembly determines contributions to the World Heritage Fund (see Section 4.2) applicable to all States Parties and elects new members to the World Heritage Committee (see below) to replace the outgoing members. Election information is available on the Election FAQs page. Both the General Assembly and General Conference of UNESCO receive a report from the World Heritage Committee on its activities.

ICCROM

ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) is an international intergovernmental organization based in Rome, Italy. Established by UNESCO in 1956, ICCROM's statutory functions are to carry out research, documentation, technical assistance, training and public awareness programmes to strengthen conservation of immovable and movable cultural heritage. The specific role of ICCROM in relation to the Convention includes being the priority partner in training for cultural heritage, monitoring

Contents

the state of conservation of cultural World Heritage properties, reviewing requests for International Assistance submitted by States Parties, and providing input and support for capacity-building activities (www.iccrom.org).

ICOMOS

The International Council on Monuments and Sites, a non-governmental organization, was founded in 1965 after the adoption of the Charter of Venice, in order to promote the doctrine and the techniques of conservation. ICOMOS provides the World Heritage Committee with evaluations of properties with cultural values proposed for inscription on the World Heritage List, as well as with comparative studies, technical assistance and reports on the state of conservation of inscribed cultural properties (www.icomos.org).

Indigenous and Tribal Peoples

Defined in the International Labour Organization (ILO) Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries as: '(a) tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; (b) peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.'

Intangible heritage

Intangible cultural heritage is the practices, expressions, knowledge and skills that communities, groups and sometimes individuals recognize as part of their cultural heritage. Also called 'living cultural heritage', it is usually expressed in one of the following forms: oral traditions; performing arts; social practices, rituals and festive events; knowledge and practices concerning nature and the universe; and traditional artisanal skills.

A separate Convention for the Safeguarding of the Intangible Cultural Heritage was adopted by UNESCO in 2003. The convention aims to safeguard the intangible cultural heritage; ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned; raise awareness at local, national and international levels of the importance of intangible cultural heritage, and ensuring mutual appreciation thereof; and provide for international cooperation and assistance. Full details of the convention can be found at http://www.unesco.org/culture/ich/index.php?lg=en&pg=00006.

Integrity

Integrity is described in the *Operational Guidelines* as: 'a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity, therefore requires assessing the extent to which the property: (a) includes all elements necessary to express its OUV; (b) is of adequate size to ensure the complete representation of the features and processes which convey the property's significance; (c) suffers from adverse effects of development and/or neglect' (Paragraph 88).

IUCN

IUCN (International Union for Conservation of Nature) is a global environmental network. It is a membership union with more than 1,000 government and NGO member organizations. As well as over 1,000 staff working in offices worldwide, the union can call on some 11,000 volunteer natural and social scientists, lawyers and educators in more than 160 countries who work primarily for its six expert commissions. It was founded in 1948 (www.iucn.org).

IUCN protected area definition and management categories

IUCN defines a protected area as 'a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values', and has defined six categories of protected areas (one with a sub-division) according to the management model, which are summarized in Table 1 and further discussed in Appendix 4.

Table 1. *IUCN protected area categories (2008)*

No.	Name	Description
Ia	Strict nature reserve	Strictly protected areas set aside to protect biodiversity and also possibly geological / geomorphologic features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.
Ib	Wilderness area	Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.
II	National park	Large natural or near natural areas set aside to protect large-scale ecological processes, along with the species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.
III	Natural monument or feature	Areas set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove.
IV	Habitat / species management area	Areas that aim to protect particular species or habitats and where management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.
V	Protected landscape or seascape	An area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.
VI	Protected areas with sustainable use of natural resources	Areas which conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Operational Guidelines for the Implementation of the World Heritage Convention

Usually referred to as simply the *Operational Guidelines*, these help to explain the implementation of the Convention. They include procedures for:
• inscription of properties on the World Heritage List and the List of World Heritage in Danger;
• protection and conservation of World Heritage properties;

• granting of International Assistance under the World Heritage Fund;

• mobilization of national and international support in favour of the Convention.

The *Operational Guidelines* (available in English, French and Portuguese) are periodically revised to reflect the decisions of the World Heritage Committee. The current (2011) version of the guidelines can be found at http://whc.unesco.org/en/guidelines/. When the *Operational Guidelines* are referred to in this Resource Manual the relevant paragraph is given in parentheses.

Outstanding Universal Value

OUV is described in the *Operational Guidelines* as: 'cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole' (Paragraph 49).

Protection and management

Protection and management of World Heritage properties, as outlined in the *Operational Guidelines* should ensure that the OUV, the conditions of integrity and/or authenticity at the time of inscription are maintained or enhanced in the future (Paragraph 96).

Serial properties

Any World Heritage property that consists of two or more areas which are physically unconnected but related, for example because they belong to the same geological or geomorphologic formation, biogeographic province or ecosystem type, and which together are of OUV; such value would not necessarily exist if its component parts were considered individually (see *Operational Guidelines* Paragraphs 137–39 for further details).

States Parties

Describes countries which adhere to the World Heritage Convention and have thus agreed to identify and nominate properties within their national territory to be considered for inscription on the World Heritage List. Details of States Parties' ratification status can be found at http://whc.unesco.org/en/statesparties/. States Parties identify national focal points that ensure implementation of the World Heritage Convention and are the recipients of all communications from the World Heritage Centre.

Tentative List

The first step that a country must take towards the inscription of properties under the Convention is to make an 'inventory' of important natural and cultural heritage properties located within its boundaries. One output of this 'inventory' is a draft list of potential World Heritage properties, known as a Tentative List, which provides a forecast of the properties that a State Party may decide to submit for inscription in the next five to ten years and which may be updated at any time. This is an important step because the World Heritage Committee cannot consider a nomination for inscription on the World Heritage List unless the property has already been included on the State Party's Tentative List.

UNEP-WCMC

The United Nations Environment Programme World Conservation Monitoring Centre manages the database of World Heritage properties with natural values (www.wdpa.org/) and (www.protectedplanet.net/). UNEP-WCMC also plays a role in evaluating new natural World Heritage nominations through undertaking a comprehensive global analysis of sites with comparative values.

UNESCO
The United Nations Educational, Scientific and Cultural Organization's mission is to contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.

World Commission on Protected Areas (WCPA)
IUCN WCPA is one of IUCN's six expert commissions. The Commission has over 1,400 members worldwide. Its mission is to promote the establishment and effective management of a representative network of terrestrial and marine protected areas as an integral contribution to IUCN's mission. Organized around a series of regions, specialist groups and task forces, the Commission provides a vital link between its wide network of experts and the World Heritage work of IUCN through its World Heritage Advisory Group. This group's mains tasks are to:
• provide feedback on proposals for, and reports on, World Heritage projects involving IUCN;
• assist with the governance of ongoing projects;
• provide advice on other World Heritage matters as requested.

More specifically, IUCN calls on the membership of WCPA to assist in the technical evaluations of all new natural World Heritage nominations and monitoring missions.

World Heritage Centre
UNESCO World Heritage Centre is responsible for the day-to-day management of the World Heritage Convention. The Centre, which is based in Paris, is staffed by conservation experts from around the world who coordinate within UNESCO activities relating to World Heritage including management of the Convention, organization of the annual World Heritage Committee meeting, distribution of International Assistance and the coordination of reports, education, information and communication. The World Heritage Centre is the route through which to contact the World Heritage Committee. The Centre is organized into regional teams (the UNESCO regions are: Africa; Arab States; Asia and Pacific; Europe and North America; Latin America and the Caribbean); and a series of specialized cross-cutting themes. The Centre's website (http://whc.unesco.org) includes a large amount of information of use to World Heritage managers.

World Heritage Committee
The World Heritage Committee meets annually and consists of representatives from twenty-one of the States Parties to the Convention, who are elected by the General Assembly for terms up to six years. The Committee is responsible for the implementation of the World Heritage Convention, defines the use of the World Heritage Fund and allocates financial assistance. It decides whether a property is to be inscribed on the World Heritage List; examines reports on the state of conservation of inscribed properties and requests States Parties to take action when properties are not being adequately managed. It also decides on the inscription or deletion of properties on the List of World Heritage in Danger and the possible deletion of properties from the World Heritage List if deemed necessary. Individual natural World Heritage properties are most likely to be aware of the Committee's work through the decisions made at the Committee meeting, which will be conveyed to States Parties and World Heritage sites by the World Heritage Centre. The World Heritage Committee can be contacted through its secretariat, the World Heritage Centre (see Contact information, p. 98).

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Understanding the context of a natural World Heritage site is an essential first step in developing effective site management. Natural World Heritage sites are established to conserve special values, so understanding these values and their significance is vital for both developing management systems and assessing what threats these values face and how best they can be protected and enhanced. For World Heritage sites this values-based management is based on the concept of OUV and on each property's SOUV; these are thus the first two issues discussed in this section. The understanding of threats to OUV is reviewed within the context of World Heritage Danger listing, which highlights both threats faced by sites and a process for managing these threats. Involving local people in management is a major focus for World Heritage and an important cross-cutting issue throughout World Heritage management, it is thus considered in Section 2.5.

2.1 Outstanding Universal Value … key concept of the World Heritage Convention

INDICATOR

Conservation status of the property
• *Is the OUV of the property in good condition?*
• *Is the OUV being adequately conserved (e.g. management and protection)?*

Natural World Heritage sites are examples of the world's most important places in terms of scenery, geology, ecology and/or biodiversity. Most natural World Heritage sites will also be protected areas, which already suggest that they are special places containing features of high value. But World Heritage status implies much more, specifically that the site has been nominated by a national government for listing as a World Heritage property and subsequently recognized by the World Heritage Committee as having OUV. These values are paramount and should be conserved and managed by the State Party responsible, with support from UNESCO, IUCN and the international community. OUV thus provides the main direction for how each World Heritage site is managed.

What values does a site need to be inscribed on the World Heritage List?

World Heritage sites are places that have been recognized by the World Heritage Convention as being of Outstanding Universal Value. OUV is the central construct of the World Heritage Convention and is defined by the *Operational Guidelines* as 'cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity' (Paragraph 49).

OUTSTANDING UNIVERSAL VALUE

Property meets one or more World Heritage criteria

Property meets the conditions of integrity and authenticity if relevant

Property meets the requirements for protection and management

Illustration of the three pillars of Outstanding Universal Value within the World Heritage Convention. All three must be in place for a property to be judged to have Outstanding Universal Value.

Figure 2. The three pillars of Outstanding Universal Value. *Source:* IUCN (2007).

To be included on the World Heritage List a natural site needs to meet the three pillars of Outstanding Universal Value (see Figure 2):

- **Criteria for assessment:** A natural World Heritage site must meet at least one of four criteria, which in summary relate to natural phenomena or aesthetic importance (vii), geology (viii), ecosystems (ix) or biodiversity (x) (numbering follows the *Operational Guidelines*). Around 80 per cent of natural World Heritage sites are inscribed for two or more criteria. There are in addition six more criteria for cultural sites, which may relate to some mixed natural/cultural sites, concerning human creative genius (i); interchange of human values (ii); civilizations (iii); typical buildings or landscapes (iv); representative and threatened human cultures (v); and key living traditions (vi). These criteria are set out in full in the glossary.
- **Integrity:** The *Operational Guidelines* also make clear that to be deemed to have OUV, a natural site must also meet conditions of integrity. This refers to wholeness and intactness of the site; broadly speaking whether a natural World Heritage site: (i) contains all the relevant ecological, geological and/or scenic elements needed to maintain the values for which it has been listed; (ii) is large enough to include the key features of OUV and to remain viable over time, and (iii) is in a good state of conservation.
- **Authenticity:** This is an additional requirement for cultural sites, and is applicable to mixed sites, focusing on whether cultural values are 'truthfully and credibly' expressed through attributes such as form, design, materials, function, traditions, setting, language and spirit.
- **Protection and management:** The third requirement specified in the *Operational Guidelines* is that each World Heritage site must have an adequate protection and management system to ensure it is safeguarded. Thus the expectation of effective protection and management is an explicit requirement to guarantee OUV. There has never been a requirement that a natural World Heritage site also invariably be a recognized protected area, and some older sites are not protected areas; however most new applications for natural World Heritage status would normally be expected to meet the IUCN definition of a protected area (see glossary for further details) with its implied high levels of protection through legal or other effective means. Protected area status alone is not sufficient, however, and natural World Heritage sites are expected to be adequately managed. A wide range of management considerations including management capacity and planning systems as well as sustainable finance will have been considered in making recommendations to the World Heritage Committee about listing a site and management effectiveness will continue to be considered in the various monitoring and reporting requirements of the World Heritage Committee (see Section 6.3).

Each word of the phrase Outstanding Universal Value is important to understanding the concept behind it:

- **Outstanding:** IUCN has noted that: 'the World Heritage Convention sets out to define the geography of the superlative – the most outstanding natural and cultural places on Earth'.
- **Universal:** the scope of the Convention is global in relation to the significance of properties. By definition, properties cannot be considered for OUV from a national or regional perspective.
- **Value:** what makes a property outstanding and universal is its 'value', which implies clearly defining the worth of a property, and ranking its importance based on clear and consistent standards, including the recognition and assessment of its integrity.

A property's OUV is the justification for its inscription on the World Heritage List and should also be the basis for ongoing site management and monitoring. For many natural World Heritage properties that are already protected areas, this will entail an additional layer of planning and management activity focused solely on the OUV. This is complicated however because the concept of OUV has been modified and refined over time. The terminology has changed and the sophistication with which OUV is applied has varied, as has the threshold of what OUV is considered to be and the weight given to it in decisions about nominations. Since 2007, when the World Heritage Committee agrees to inscribe a property on the World

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Heritage List, it also agrees a SOUV that encapsulates why the property is considered to be worthy of World Heritage listing. The SOUV now plays a central role in the World Heritage Periodic Reporting process which has required properties nominated before 2007 to develop retrospective statements of OUV; as outlined in the next section.

2.2 Statement of Outstanding Universal Value

A SOUV aims to provide a clear, shared understanding of the reasons for natural World Heritage inscription and of what needs managing in order to sustain OUV in the long term.

Why SOUVs are important

Recently, nomination documents have included a Statement of OUV (SOUV) to be adopted by the World Heritage Committee, which explicitly articulates the unique values of the site and identifies which of the 10 assessment criteria are included in its OUV. For example, **Jeju Volcanic Island and Lava Tubes** (Republic of Korea) are listed because the Geomunoreum lava tube system is regarded as the finest such cave system in the world (criterion vii) and because the lava shield volcano built on a continental plate, with distinctive tuff cone and lava tubes, is globally rare in its tectonic and environmental setting (criterion viii). **Rainforests of the Atsinanana** (Madagascar) are listed because they have extremely rare forest types on steep terrain, with enormously rich biodiversity reflecting peculiarities of geology and location (criterion ix) and globally outstanding endemism at 80–90 per cent of species present (criterion x). The conditions of integrity and/or authenticity and protection and management systems are also outlined in these statements.

Dangcheomul cave with speleothems, Jeju Volcanic Island and Lava Tubes (Republic of Korea)

Community meeting, Rainforests of the Atsinanana (Madagascar)

For many properties, however, there is currently no SOUV agreed by the World Heritage Committee. This does not mean that properties have not had their OUV recognized; rather it means that the OUV that was agreed by the Committee at the time of inscription has not been articulated in an agreed format. In cases where there is no SOUV a retrospective Statement needs to be created, this may be *inferred* from other statements in the nomination document or Advisory Body evaluation, such as: *reasons for nomination, justification for nomination, statements of significance, outstanding universal significance, statements of universal significance,* and similar. In addition, the criteria for inscription often in effect make up a description of OUV. In these cases, a retrospective SOUV may be a repackaging (and

reassessment) of existing statements and should be a relatively simple matter for IUCN and the World Heritage Committee to approve. It is still however a process which will be most useful if it involves a range of participants (e.g. site managers, local communities, stakeholders, researchers, etc.), in which case it can be a valuable negotiation and communication exercise, rather than the SOUV being consigned to some external consultancy process. It is important to note that the SOUV should reflect the OUV of the property *at the date on which it was inscribed* on the World Heritage List; however the section on Protection and Management should be contemporary and outline the most up-to-date management arrangements.

For the World Heritage Committee and the Advisory Bodies, the SOUV has become an essential reference point for monitoring, including Periodic Reporting, potential state of conservation reporting (Reactive Monitoring), boundary modifications, changes to the name of a property, and possible inclusion on the List of World Heritage in Danger. The SOUV is also the ultimate benchmark against which any decision regarding the possible deletion of a property from the World Heritage List should be weighed. Because OUV is so important, any changes must be assessed by the Advisory Bodies (in the case of natural World Heritage sites by IUCN) and approved by the World Heritage Committee. States Parties must forward statements suggesting changes to the OUV to the World Heritage Centre; these statements must reassess the arguments and evidence in support of changing the OUV. Once submitted the evaluation process is likely to still take at least eighteen months).

Developing the SOUV

ICOMOS, ICCROM, IUCN and the UNESCO World Heritage Centre have developed a detailed guidance note on the preparation of *Retrospective Statements of Outstanding Universal Value for World Heritage Properties,* which should be consulted before starting to develop a SOUV, and many examples of SOUVs approved by the World Heritage Committee are now available on the World Heritage website (see Resources, p. 84). The guidance sets out the suggested procedures for compiling a retrospective SOUV and for submitting this for approval by the World Heritage Committee and suggests a process for developing the SOUV. The main sections of a SOUV should be (1) a brief synthesis; (2) justification for criteria; (3) statement of integrity (for all properties); (4) statement of authenticity (for properties nominated under criteria i to vi) and (5) requirements for protection and management. Each of these sections is covered in the guidance on retrospective SOUVs. They should be relatively brief with the overall length of a SOUV between two and four pages.

2.3 Threats to World Heritage

There is an assumption that once a World Heritage property has been nominated and inscribed, its values will be preserved. Sadly, this is not necessarily the case. Although unfortunately there can be few natural World Heritage site that do not face some kind of threat; the effect these threats have on a site will depend on how threats are assessed and the management actions in place to contain threats. If threats to a site are becoming serious, there are two World Heritage processes which have been developed to help sites to manage threats effectively. The first is state of conservation reporting (i.e. Reactive Monitoring) (see below) and the second, Danger listing (see Section 2.4), is the ultimate tool if Reactive Monitoring is unable to bring about the necessary management response and the OUV is under grave threat.

Assessing threats

Threats to protected and other conservation areas can range from global threats relating to climate change, regional-scale threats such as habitat fragmentation and localized problems including poaching, excessive visitor impacts and waste disposal. Developing and implementing response strategies to these threats is an essential part of protected area management.

INDICATOR

Threats to Outstanding Universal Value
• *Is the OUV of the property seriously threatened?*

The same is true for natural World Heritage sites. However, as the conservation of these sites is an obligation of the global community, the World Heritage Centre and Advisory Bodies have specific mechanisms to monitor and respond to these threats. Only when the emerging threats are considered to be serious enough to degrade the OUV or integrity of the site will they enter into the formal processes established to mitigate threats in the framework of the Convention.

Many natural World Heritage sites will already have threat assessment methodologies in place. For those wishing to develop assessments, the *Enhancing our Heritage Toolkit* (see Section 6.4) includes a threat assessment tool (Tool 2), which helps managers to consider the relationships between the **causes** and **impacts** of threats and also helps to plan what urgent responses should be put in place by concentrating on those threats most likely to affect the site's OUV. The revised Periodic Reporting electronic questionnaire (see Section 6.3) includes a tool to help managers assess the factors affecting their properties, which can also be used as a basic threat assessment tool. Much of the work on developing threat assessments has been influenced by USAID's Biodiversity Support Program publication: *Is Our Project Succeeding: A Guide to Threat Reduction Assessment for Conservation* (see Resources, p. 84, for details).

State of Conservation reports

The World Heritage Centre and IUCN monitor the state of conservation of the natural sites inscribed on the World Heritage List. If they receive reports on emerging threats to the values or integrity of a site, or issues relating to site protection or management, they will take steps to verify the reports and then request information from the State Party on the nature and seriousness of the threats.

If it appears that the threats are serious, a field mission (Reactive Monitoring mission) will be sent to the site to verify the situation and discuss potential management responses. The World Heritage Committee may request a mission to review the state of conservation at the site if:
• there are indications of one or more threats to the site;
• follow-up to previous World Heritage Committee decisions is required;
• information has been received relating to any threat or damage to or loss of OUV, integrity and/or authenticity.

Such missions are an opportunity to find some outside expertise to help address particular problems that may arise. State of Conservation reports are coordinated annually by the World Heritage Centre and must be submitted by States Parties by 1 February the year after the report has been requested by the World Heritage Committee.

Based on the information provided by the State Party and the results of the monitoring mission, they can decide to submit a State of Conservation report and suggest management responses to address particular problems to the World Heritage Committee through the decision-making process (see Section 3.3).

Having the attention and support of the World Heritage community, which is often prompted by the World Heritage Committee decision process, can often help to resolve possible threats. Being aware of these recommendations is crucial for the site manager and will influence the action taken in response. For example, planning permission to expand salt extraction was refused by the Mexican Government after the World Heritage Committee warned of the negative impacts on the **Whale Sanctuary of El Vizcaino**. It is the responsibility of States Parties to implement management responses to emerging threats, based on the decisions and recommendations of the Committee and the advice of the Advisory Bodies.

*Whale Sanctuary of
El Vizcaino (Mexico)*

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If the World Heritage Committee still has concerns about the state of conservation of a property following Reactive Monitoring, the site many be placed on the List of World Heritage in Danger (see below).

2.4 World Heritage in Danger

This section reviews what happens to natural sites under threat – it looks specifically at how and why sites are listed as being 'in Danger' and what the processes are for delisting properties.

The World Heritage Committee can inscribe a site on the List of World Heritage in Danger if the OUV of a World Heritage site is threatened, but there is potential for this threat to be managed (*Operational Guidelines*, Paragraph 181). Once on the List the Committee can allocate immediate assistance from the World Heritage Fund (see Section 4.2). Listing is also a rallying call to the international community that the site is in danger of losing its OUV. Inscription leads to the development and implementation of a programme of corrective measures and monitoring, in consultation with the State Party concerned.

Where serious problems are identified that endanger the OUV of the property, the site is initially identified through a listing process controlled by the World Heritage Committee. The *Operational Guidelines* define the criteria under which a site can be listed as being in danger (Paragraphs 178–80). For natural properties these are:

Ascertained danger: 'The property is faced with specific and proven imminent danger, such as:
(i)   A serious decline in the population of the endangered species or the other species having OUV which the property was legally established to protect, either by natural factors such as disease or by man-made factors such as poaching.
(ii) Severe deterioration of the natural beauty or scientific value of the property, as by human settlement, construction of reservoirs which flood important parts of the property, industrial and agricultural development including use of pesticides and fertilizers, major public works, mining, pollution, logging, firewood collection, etc.
(iii) Human encroachment on boundaries or in upstream areas which threaten the integrity of the property.'

Potential danger: 'The property is faced with major threats which could have deleterious effects on its inherent characteristics. Such threats are, for example:
(i)   A modification of the legal protective status of the area.
(ii) Planned resettlement or development projects within the property or so situated that the impacts threaten the property.

(iii) Outbreak or threat of armed conflict.
(iv) The management plan or management system is lacking or inadequate, or not fully implemented.
(v) Threatening impacts of climatic, geological or other environmental factors.'

Properties can be inscribed on the List of World Heritage in Danger at the request of a State Party. Some countries apply for inscription to focus national attention on the problems of the site and to obtain support in solving them (as in the **Everglades National Park** example below). In most cases, inscription on the Danger List is recommended by the World Heritage Centre and IUCN, based on the findings of a monitoring mission sent at the request of the Committee and by invitation of the State Party, which concludes that the above-mentioned conditions for Danger listing are met. In certain cases of potential danger, the World Heritage Centre recommends Danger listing without a mission, in particular when sites are affected by the outbreak of armed conflict and a mission is not possible, or when a sudden potential threat emerges.

Danger listing is not perceived in the same way by all parties concerned. Some countries support Danger listing as a way to achieve improved conservation. Others however, wish to avoid being added to the List, which they perceive as a reflection on their inability to protect these properties. Danger listing should not be considered as a sanction, but rather as a tool to alert the global community, identify needs and set priorities for investment in conservation. For example, the listing of the five natural World Heritage sites in the Democratic Republic of the Congo (DRC) resulted in considerable international cooperation to aid the conservation of these properties during civil strife (see Section 3.4). Everglades National Park has twice been added to the list at the request of the United States, because of serious and continuing degradation of its aquatic ecosystem. The most recent listing, in 2010, was accompanied by a request from the US for World Heritage Centre and IUCN experts to visit the site to evaluate its state of conservation and assist in the development of a desired state of conservation. The World Heritage Committee in 2010 commended the inscription request and encouraged the US to continue corrective measures to restore and preserve the site.

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Guard camp in Garamba National Park (RDC)

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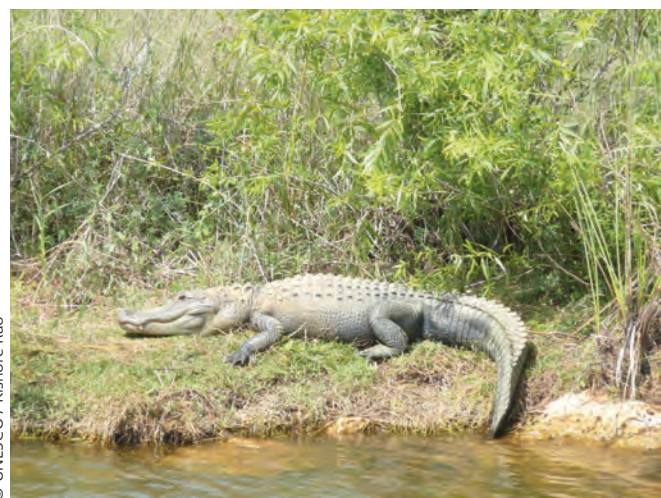
Everglades National Park (USA)

The key objective of Danger listing is to avoid a loss of OUV (which would imply delisting) and in cases where the OUV has been eroded by ascertained danger, to identify the necessary actions to restore the OUV. These necessary actions, so-called 'corrective measures', are usually developed by the State Party in conjunction with the World Heritage Centre and the Advisory Bodies during a monitoring mission and subsequently formally approved by the

Committee together with a tentative timescale. In recent years, the Committee has also requested States Parties, with the help of the World Heritage Centre and its Advisory Bodies, to identify indicators to monitor the recovery of the OUV and assist a decision on future removal from the Danger List – the so-called Desired State of Conservation for Removal (DSOCR) from the List of World Heritage in Danger. Showing that management actions are being successful will also require systems of monitoring and evaluation to be in place. Monitoring systems such as the *Enhancing our Heritage Toolkit* (see Section 6.4) have proved particularly effective in this respect, as have effective monitoring and reporting systems.

The corrective measures set by the World Heritage Committee and the DSOCR of a property from the Danger List are closely linked. The DSOCR is made up of four key elements:
1. **Indicators to monitor recovery**, which relate to the property's OUV (values, integrity, and protection and management), as outlined in the SOUV.
2. **A rationale for the indicators selected**, for example it could be argued that forest cover is a good indicator for a forest site inscribed under criteria (ix) or (x) because it is fundamental to maintaining biodiversity;
3. **A method of verification for each indicator**, for example through surveys of the values of the site (e.g. surveys of wildlife populations, surveys of habitat extent and condition), or measures of particular protection or management measures (e.g. regular patrol visits, adoption of laws or policies); and
4. **A timescale for the implementation of both the corrective measures and the DSOCR**, which should be realistic and allow sufficient time to implement the corrective measures and carry out adequate monitoring of the DSCOR indicators.

The purpose of the DSOCR indicators noted above is to provide a focused and transparent way of assessing when a property is, or is not, sufficiently recovered to be removed from the List of World Heritage in Danger. Given this purpose, the indicators selected should mirror the corrective measures set by the Committee.

As an example, the DSOCR for **Simien National Park** (northern Ethiopia), which was developed following a Reactive Monitoring mission to the site in 2009, has six indicators in total: two ecological indicators, and one indicator each for boundary gazettement, grazing, agriculture, and population and alternative livelihoods. These indicators in turn mirror the four corrective measures set by the Committee in 2006: park extension (which had already been fulfilled at the time of the 2009 mission), boundary gazettement, livestock reduction, and alternative livelihoods. In addition two ecological indicators (upward trends in the populations of Walia ibex and Ethiopian wolf) are not based on the corrective measures, but are necessary basic indicators of the state of the values for which the site was inscribed, as documented in the SOUV.

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Managers meeting – Simien National Park (Ethiopia)

The relationship between the SOUV, Danger listing, corrective measures, and the DSOCR may be summarized as follows:
• The SOUV defines the OUV of a property and identifies what needs managing in the long term.

• Danger listing recognizes that a property risks losing, or is in the process of losing, the OUV for which it was inscribed on the World Heritage List.
• The corrective measures identify the actions necessary to maintain and restore OUV.
• The DSCOR sets the level of maintenance / recovery of OUV necessary to remove a property from the Danger List.

Deletion from the World Heritage List

If a property loses the characteristics which determined its inscription on the World Heritage List, the Committee may decide to delist the property. A property can be delisted in cases where:
• it has deteriorated to the extent that it has lost those characteristics which determined its inclusion on the World Heritage List; and
• its intrinsic qualities were threatened by human activities at the time of its nomination and where the necessary corrective measures have not been taken within the time proposed (*Operational Guidelines*, Paragraph 192).

The only natural site that has been delisted to date is the **Arabian Oryx Sanctuary** (Oman). The World Heritage Committee delisted the site in 2007 because of Oman's decision to reduce the size of the protected area by 90 per cent. This change in the area's status, and thus its legal protection, put in question the integrity and protection of the site which impacted on the conservation of its values.

2.5 Involving local people

One of the central aims of the World Heritage Convention is to encourage participation of the local population in the preservation of their cultural and natural heritage, as outlined in the current Strategic Objectives of the World Heritage Committee, also referred to as the '5 Cs': Credibility, Conservation, Capacity-building, Communication and Communities.

Role of local people in World Heritage management

The very existence of natural areas available for protection, in a world which humans have modified to an enormous extent, usually means that these areas have already been valued by the local population – often for many centuries. It is an essential part of World Heritage site management that all stakeholders possibly affected by the listing of a site should be made aware of, consulted and involved in the interpretation and assessment of its values, the preparation and presentation of the nomination and subsequent management systems. This is not always the case, which can lead to significant problems in site management.

The dominant protected areas philosophy, which developed just over a hundred years ago, was based on conserving areas by the government (in some parts of the world by the colonial powers), in a way that often led to communities being forcibly relocated from land that had in some cases been their traditional homelands for centuries. There was little recognition of people's values and traditions, their knowledge and practices, and little understanding of the important links and interaction between land and culture. It is not surprising that such management models created tension, conflict and increasingly a backlash against the whole concept of protected areas, including World Heritage.

Although some of these conventional, top-down models are still being applied, today this approach is becoming less common. Something of a paradigm shift has occurred, resulting in greater attention being paid to ethical, social, cultural and economic as well as biological and scenic values; insistence of prior informed consent before changing management status; and an openness to different governance models in protected areas including co-management and management by indigenous peoples and local communities. The result is a far wider variety of protected areas, both in terms of management and governance, than was

INDICATOR

Relationships with local people
• Do relationships with stakeholders in the property help to facilitate effective conservation of the property's OUV?
• Are the needs of local stakeholders addressed effectively within the management system for the property, and are benefits provided by the World Heritage site shared equitably with local people?

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Reindeer gather on the plains of Boarek, Laponian Area (Sweden)

recognized a decade ago. Such approaches have proved successful in understanding different perspectives and broadening the range of land use and tenures compatible with conservation. The results have avoided costly misconceptions and improved management through access to local knowledge and engagement. In World Heritage properties these changing perspectives on the role of nature and culture are most clearly represented in mixed sites inscribed for both natural and cultural values. The **Laponian Area** of Sweden was inscribed as a World Heritage mixed site in 1996, partly because of its exceptional natural environment and partly because of the cultural traditions of the Saami people who have lived in the landscape for thousands of years. Developing management systems which preserve both these values have been complex and the process leading to a coordinated management plan has been lengthy, with the various the stakeholders now recognizing that it has taken time to learn about each other's needs and objectives.

Establishing any new management system introduced as a result of nomination as a natural World Heritage site should fully recognize the pre-existing governance system and usage that has made the site special. Where applicable the management system developed for the World Heritage site should draw on these systems to help facilitate long-term management, equity[7] and bio-cultural sustainability.

Working with local people

Article 5(a) of the World Heritage Convention asks each State Party which has signed the Convention 'to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes'.

Ideally, issues relating to community participation and indigenous practices should have been considered and dealt with from the outset of the World Heritage process, including at the time of consideration of Tentative Lists and nominations. If this has not been the case the management team may have to work hard to build interest, trust, understanding and eventually a working relationship with local people. Based on a study (World Heritage Paper Series, No. 13) on *linking universal and local values for the sustainable management* of World Heritage properties, it is suggested that work with local communities should have the following characteristics:

• Interaction with local people and all other stakeholders should ensure that everyone understands the values, goals, purposes, rules, costs and benefits of World Heritage site management, and that World Heritage managers understand other perspectives about site values and the perceived needs and desired outputs expected from management.

• When working with local communities, local power structures, decision-making and resource utilization ought to be recognized, and where possible gender-disaggregated information and data should be collected.

7 – In applying the principle of equity, it is assumed that the removal of barriers hindering economic and political opportunities, as well as the provision of access to education and basic services, will allow people (men and women of all ages, conditions and positions) to enjoy equal opportunities and benefits.

- Understanding of incentives among all stakeholders who benefit from World Heritage site management.
- Understanding potential negative impacts of World Heritage status, including e.g. lost access to resources, and the potential need for compensation.
- Relationship-building through a continuous process of dialogue to create trust between and among the various groups of stakeholders.
- Participation by all stakeholders, including empowerment of communities to take responsibility and acquire a sense of ownership, and the provision of incentives to encourage investment of people's time and resources.
- A flexible and adaptable process in the face of the prevailing dynamic relationships between the natural World Heritage site and local people. The benefits and costs of living with often dangerous wildlife, cultural perspectives, land-use patterns, and peoples' expectations, are all likely to change over time. Community conservation must therefore constantly adapt to take account of these expectations.
- Monitoring activities to provide the baseline data required to assess and evaluate the state of conservation of heritage properties and the socio-economic development of the surrounding area.

Many World Heritage sites are still working to apply these principles. Actions undertaken on behalf of the World Heritage Committee and in the name of the Convention should be guided by the 1948 **Universal Declaration of Human Rights,** the **ILO C169 Indigenous and Tribal Peoples' Convention** (1989) and the **Convention on Biological Diversity** (1992), particularly its **Programme of Work on Protected Areas** (2004). States Parties should also take note of the **Declaration on the Rights of Indigenous Peoples** (UNDRIP), adopted by the UN General Assembly in 2007. Although not a legally binding instrument under international law, the UN describes this as setting an important standard for the treatment of indigenous peoples and a significant tool towards eliminating human rights violations. UNDRIP encourages states to recognize indigenous institutions of governance and creates a platform of dialogue between the civil service and local indigenous institutions and representatives. The **World Bank Indigenous Peoples Operational Directive OD 4.20** is a useful source document which outlines policies and procedures for projects that affect indigenous peoples. It sets out basic definitions, policy objectives, guidelines for the design and implementation of projects (see Resources, p. 84, for download details).

The listing of a World Heritage property raises expectations and increases public scrutiny, making it even more important that such properties serve as models of best practice in terms of rights-based approaches. The fact that a World Heritage property is an international designation can help to trigger reference to these other legal and quasi-legal obligations. Superlative properties deserve superlative management, applying global best practice approaches to governance, participatory management and equitable access to resources and benefits.

Practical steps to build equitable relationships between stakeholders can take many forms. The Indigenous Peoples of Africa Co-ordinating Committee (IPACC), for example, has reviewed the key role of indigenous peoples in identifying and delineating protected areas, and noted how they then tend to be excluded from employment opportunities due to regulations on standards of education. One way to ensure the involvement of local people is to create certification or qualification standards for local knowledge-holders so that they can be employed permanently or occasionally on site as trackers, rangers, guides, heritage interpreters and in scientific research and monitoring. IPACC also highly recommends participatory landscape mapping as a platform for communities and government to discuss local usage, knowledge and cultural systems – and use this mutual understanding as the basis for site interpretation planning, decision-making and conflict resolution. A simple tool which helps managers to understand and assess the differing relationships with all the sites stakeholders is included in the *Enhancing our Heritage Toolkit* (see Section 6.4).

Box 1: *Working with indigenous peoples: some guidance*

*One State Party that has been striving hard to improve what were frequently difficult relation-
ships with local people is **Canada**. In the past, several Canadian World Heritage properties were
declared on Aboriginal land without the involvement of Aboriginal people,[8] leading to conflict
and lack of support for the property. Years of work by the managing agency Parks Canada has
however led to better working relationships and much greater support for World Heritage
principles. Key lessons from this work, which could easily apply to natural World Heritage sites
around the world, include:*

- *The importance of gathering and recording oral history about land use and any evidence
  supporting the designation of the site.*
- *Ideally local and indigenous peoples should be involved during the nomination process: if this
  has not occurred, processes must be developed to allow participation in decision-making or
  research activities in order to prevent the deterioration of relationships.*
- *States Parties should be aware of the need for training local and indigenous peoples in the
  management and operation of sites.*
- *Local and indigenous peoples need to see themselves reflected in the staff make-up of sites
  and management bodies need to include local and indigenous peoples, so that their views are
  formally included in ongoing discussions of operations and management direction.*
- *Local knowledge (also variously referred to as traditional, indigenous, community,
  customary or practical knowledge) should be incorporated into the design of ecological
  plans and monitoring.*
- *Simple, ongoing information-sharing about activities is needed to develop effective working
  relationships with local and indigenous peoples.*

CASE STUDY

Involving people in World Heritage management: Huascarán National Park (Peru)
*Brent A. Mitchell, QLF Atlantic Center for the Environment; Jorge Recharte, The Mountain Institute (Peru); and
Marco Arenas Aspilcueta, Chief of Huascarán National Park, SERNANP – MINAM (Peru)*

*At the top of the highest tropical mountain range in the world, Huascarán is the crown jewel of the
Peruvian protected area system. Encompassing twenty-seven peaks of over 6,000 m, the area supports
high biodiversity, exceptional landscape values and water supplies crucial to the region. Threats include
vegetation loss and degradation due to livestock grazing, tourism and firewood collection; mining
activities; hydropower projects; and loss of glaciers due to global warming. Huascarán was established in
1975 as a national park of 340,000 ha and was inscribed on the World Heritage List in 1985. The World
Heritage site forms the core of a biosphere reserve of over a million hectares.*

*While the park boundary is a long ellipsis encircling the high peaks, local perceptions of the land transect
the area. Villages are organized along the ravines and coulees, with agriculture in the lower elevations
and pastures in the higher, steeper areas. 'We are nothing without the* Quebrada Honda *(Deep Ravine)'
declares a community leader from Vicos, one of forty-two villages bisected by the park boundary.*

*The establishment of the park in 1975 transferred rights over most of the land within the boundary to
the state, managed today by the National Service of Natural Protected Areas (SERNANP). However, land
tenure continues to be debated, and the legitimacy of the park authority is still questioned in some
surrounding communities. The decree continued to allow certain use rights to communal businesses and*

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8 – Aboriginal people include Inuit and First Nation people living in Canada. The terminology in the guidance notes from
Wood Bluff has been changed from Aboriginal people to indigenous peoples in recognition of how these local guidelines
could have a global application.

CASE STUDY

© Brent Mitchell

Site staff – Huascarán National Park (Peru)

local villages. These included traditional grazing activities and pre-existing mining concessions. This created a management paradox: how to accommodate such uses while reducing their impacts, the very reason for establishing the park. The concept of a protected area was foreign to inhabitants, and the newly established management authority lacked experience and resources to communicate effectively over such a large and difficult terrain. Conflicts were inevitable, and were not solved by the formal delineation of a 170,000 ha buffer zone around the park in 2001.

Huascarán is the most visited national park in Peru (Machu Picchu is designated a historical sanctuary). However, most tourism is managed by entrepreneurs based in the regional capital, with few benefits accruing to local people. At the request of park authorities, in the mid-1990s The Mountain Institute (TMI) helped local people to share in tourism benefits sustainably by developing village-based, small-scale accommodation, guiding and food services adjacent to the park. TMI and the park also worked to organize pastoralists to improve grassland management in and adjacent to the boundaries. Local experts were nurtured into positions of leadership to promulgate best practices in husbandry, improve productivity of native grasslands in the buffer zone, and begin the transition from the use of cattle to less-destructive camelids (alpaca and llama).

These efforts are seen as pilot projects, but have begun to change local perceptions of the park from a restriction to an opportunity, and on the part of park staff to recognize that buffer communities can be conservation allies. Although mining and glacial retreat remain intractable problems, and more comprehensive, long-term actions are needed, growing cooperation between local communities and park authorities are leading to improvements in conservation outcomes and local livelihoods.

CASE STUDY

Coming off the Danger List, Sangay National Park (Ecuador)
Allen Putney, Vice-Chair for World Heritage IUCN WCPA; and Jorge Rivas, Senior Conservation Officer, Fundación Natura

Sangay National Park extends over an important part of the Ecuadorian Andes, from deep valleys to peaks over 5,000 m, and encompasses a range of ecosystems from tropical rainforest through cloud forest and páramo ecosystems to mountains above the snowline. This combination of ecosystems and the fact that the area lacked any major human impact contributed to Sangay being listed as a natural World Heritage site in 1983. Although originally viewed as secure, the park was threatened by a controversial highway project that cut across an 8 km corner. The construction of roads from the highlands to the Amazon Basin in other parts of Ecuador, such as the Banos highway to the north of Sangay, had been shown to result in widespread colonization, deforestation and the construction of side roads. Thus, although the Ecuadorian

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● ● ○ *Government increased the park's size to the south, almost doubling the area from 271,925 ha to 517,725 ha, justifiable concerns over the impact of the road led Sangay to be added to the World Heritage in Danger List in 1992.*

Despite protests, the highway went ahead. However, in part thanks to the pressure as a result of Danger listing, the feared negative impacts could be avoided. The road building contract was given to the Army Corps of Engineers, which followed the relevant ISO standards. They set up military checkpoints at each end of the road during construction, and worked closely with the small campesino communities that were already installed along the route, to make sure that no new colonists arrived. The army's construction methods were incredibly cautious, so they avoided much of the expected land slippage. The area of the park adjacent to the highway was also revised, separated from the park and defined as a buffer zone. Therefore the protected area was in good condition, and the government was anxious that the Danger listing be removed. An IUCN Reactive Monitoring mission was therefore organized to review the impact of the road and state of conservation of the park. The mission confirmed that the road had not resulted in the feared impacts.

Cugusha Falls along Guamote-Macas-Sangay National Park (Ecuador)

© Allen Putney

During the period leading up to the mission, staff at Sangay agreed to test the Enhancing our Heritage *(EoH) management effectiveness assessment toolkit (see Section 6.4). Protected area staff completed three detailed assessments over seven years and held a series of stakeholders' meetings to discuss local opinions about the park and its management. An important outcome of this process was the emergence of sharper and more focused management objectives. Although not originally conceived as a response to Danger listing, the EoH assessment contributed to Sangay's removal from the List.*

The monitoring mission sent to Sangay found the first full EoH assessment report to be an important source document, providing detailed background information and details of stakeholder views that the mission would not have had time to collect. In particular the assessment report provided:
• *clear identification of the conservation targets and World Heritage values that management was attempting to protect;*
• *clarity on the threats affecting the conservation targets and World Heritage values, and their distribution in and around the protected area;*
• *specific and quantified indications of the current conservation status of each of the targets;*
• *precise management priorities based on the above.*

This gave precise, quantifiable and irrefutable indicators of the state of conservation of the site, the requirements for effective management, and the degree to which these requirements were currently being met. The effective management of the impact of the road on Sangay, along with the development of conservation targets clearly linked to the sites OUV, resulted in Sangay being taken off the Danger List in 2005.

Decisions for removal from the Danger List are made by the World Heritage Committee, based on recommendations by the World Heritage Centre and IUCN. As well as the expert missions to the site, a detailed, independent assessment, such as those developed using the EoH methodology, with clear and verifiable indicators, monitoring and reporting, can make a major contribution to providing the necessary assurance, and precise supporting data, to the World Heritage Centre and IUCN that the dangers leading to inscription on the Danger list have been adequately addressed (see also the Case Study of Ichkeul National Park, Tunisia, p. 81).

CASE STUDY

Benefits of World Heritage listing at Nanda Devi and Valley of Flowers National Parks (India)
Vinod B. Mathur and S. Sathyakumar, Wildlife Institute of India, Dehradun

Until 1933, the present-day Nanda Devi National Park was unexplored and naturally protected. Following the opening of a trekking route to Nanda Devi and scaling of the Nanda Devi peak in 1934, it gained worldwide popularity and efforts to conserve this area began by declaring it a Sanctuary in 1939. The uncontrolled human activities in Nanda Devi area, particularly moun-

Nanda Devi and Valley of Flowers National Parks (India)

© UNESCO / Nomination File

taineering expeditions (1934 to 1983) and the consequent environmental degradation, led to pressures on government to establish this area as a National Park (625 km²) in 1982. In 1988, the Nanda Devi National Park was inscribed as a World Heritage site.

Nanda Devi National Park encompasses the transition zone between Greater and Trans-Himalaya, and hence supports a high biological diversity. Since 1983, the park has been closed to all human activities and an assessment of the status of flora and fauna was made during May–June 1993 by a team of scientists supported by the Corps of Engineers of the Indian Army by undertaking a 'Scientific and Ecological Expedition to Nanda Devi'. This expedition reported improvement in the status of flora and fauna and recommended that the Nanda Devi park should remain 'inviolate' and the status of the biodiversity monitored every five to ten years. After twenty years of the initial ban on human activities, the 'Biodiversity Monitoring Expedition to Nanda Devi' was undertaken in 2003 to evaluate the status of flora, fauna and their habitats and assess changes in their status over a period of two decades; and also conduct baseline surveys on new aspects in ecology and geology. This expedition also reported improvement in status of some species / taxa and habitats or no change in status.

The ban on trekking and mountaineering activities inside Nanda Devi since 1983 had brought remarkable improvements in the biodiversity resources of the World Heritage site, but it also had an adverse impact on the local communities, who were deprived of livelihood opportunities that they used to derive through various jobs relating to mountaineering activities. The forest department has however been working hard to bridge the gap between park management and the local people. The park management worked to reconcile the conflict between the long-term conservation of park resources and local benefits through the development of regulated tourism inside the park area. The response of the local people to this people-centric conservation and livelihood enhancement programme has been very positive. The ongoing Wildlife Institute of India-UNESCO Project 'Building partnerships to support UNESCO's World Heritage Programme: India' in Nanda Devi is further strengthening the efforts of conservation and management of the site.

3 Planning

Having an adequate system in place to manage a natural World Heritage property is fundamental to the success of conserving the site's OUV. These management systems need to be based on adequate legal and governance frameworks that take into account the requirements of the World Heritage Convention (as outlined in 3.1) to ensure cultural and natural heritage protection consistent with the values for which the property has been inscribed. Managers also need to be aware of the requirements associated with implementing the Convention, in particular decisions and recommendations arising from the World Heritage Committee which are relevant to the property (explained in 3.3).

With a solid understanding of World Heritage processes in place, managers should be well able to develop management plans to ensure effective OUV conservation; and some guidance on the development of management plans with a focus on OUV is provided in 3.2. There is also a short discussion (3.4) of issues relating to the boundaries of a World Heritage site.

3.1 Legal framework in the planning process

The World Heritage Convention provides an international legal framework for parties to the Convention, which contains specific obligations relevant to management and, in particular, to guide national legislative protection.

Adequacy and effectiveness of legal protection in World Heritage properties

Article 5(d) of the World Heritage Convention requires States Parties: 'to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage ...'. The World Heritage *Operational Guidelines* elaborate on this Article, stating that 'All properties inscribed on the World Heritage List must have adequate long-term legislative, regulatory, institutional and/or traditional protection and management to ensure their safeguarding' (Paragraph 97). The guidelines also stress that legislation must be implemented. The fact that a property has been accepted onto the List implies that the World Heritage Committee considers it to have strong enough legal protection and that 'Legislative and regulatory measures at national and local levels should assure the survival of the property and its protection against development and change that might negatively impact the Outstanding Universal Value, or the integrity and/or authenticity of the property' (Paragraph 98). That said, the effectiveness of any law is only as good as its implementation and enforcement.

In order for World Heritage properties to be adequately protected, legislative frameworks specifically aimed at implementing the Convention and the *Operational Guidelines* may be required, which incorporate management principles and standards as well as processes for their enforcement. Although managers of natural World Heritage sites may not have the chance to engage in the development of such legislative frameworks, it is important that they and their staff are familiar with both the World Heritage Convention and national legislation and can thus ensure their management is in accordance with these frameworks.

To date, however, there are no specific guidelines concerning what constitutes adequate legislative and regulatory measures, with only a few countries having enacted specific legislation on natural World Heritage: *for example* the **Australian Environment Protection and Biodiversity Conservation Act 1999** specifies management principles for World Heritage sites. Most jurisdictions rely on protected area conservation law, typically legislation relating

INDICATOR

Legal framework
• *Is the legal framework for the World Heritage site effective in maintaining its OUV?*

to national parks and reserves often at subnational level, which is appropriate as long as this legislation permits or enables the achievement of the requirements of the Convention in terms of protection.

From a practical point of view, the more complex the legal protective status of the World Heritage site, the more complicated management can become, and conflicts can arise at regional or local levels from a lack of harmonization of legal tools. Commonly protected areas at national level are subject to a wide range of laws. For example, in the Republic of Korea, ten different laws govern the different types of protected area in the country. A further example of this is serial sites, which comprise a series of (often disconnected) protected areas within one or more countries, and may have very different protective status between sites: for example the **Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany**, a transboundary site of forests in Germany, Slovakia and Ukraine, include various forms of protected area such as primeval forest reserves and national parks, as well as biosphere reserves. The details of rules and regulations differ between the three countries. In these cases special measures, such as an international agreement, may be needed to ensure that the legislative basis of protected area operations are consistent with each other and thus the management requirements of the World Heritage listing are adequately met. The **Trilateral Cooperation on the Protection of the Wadden Sea** between Denmark, Germany and the Netherlands is another example of cooperation in cross-border protection of a shared ecosystem on the basis of a common management plan and a harmonized monitoring programme, both of which were a precondition for designation of the Dutch-German Wadden Sea as a World Heritage site. For serial properties the Convention calls for adequate coordination and overarching mechanisms to ensure consistency of protection and the protection of values which are a sum of the parts.

Primeval Beech Forests of the Carpathians (Germany / Slovakia / Ukraine)

Area de Conservación Guanacaste (Costa Rica)

Natural World Heritage sites can also include both public and private land. In these situations legal protection can be afforded if land in private ownership can be bound by the legislation for the state-run protected area. Legislation in many countries can provide for this, either compulsorily, or on a voluntary basis: for example the **Area de Conservación Guanacaste** (Costa Rica) includes areas owned by the state, a parastatal NGO and areas of private land. The areas that make up Guanacaste are recognized by government decree as well as being formally part of the protected area system of Costa Rica.

In summary, the legal framework must be comprehensive, consistent and coordinated to guarantee effective protection of OUV.

3.2 Management planning

Implementation and continuous review of a good management plan (or documented management system), supported by World Heritage staff and local communities, is a key factor in the management effectiveness of natural World Heritage sites.

Values-based management

The fact that World Heritage sites are special – few in number, with high values and expectations – means that management should also be similarly special; in particular, management needs to reflect the stated values of the site in terms of OUV and assessment criteria. Plans should be driven by management objectives and prescriptions that conserve and enhance the values for which the property has been inscribed. However it should be noted that many, probably most, World Heritage sites will have values *in addition* to those specifically mentioned in the World Heritage nomination and the management plan needs to address the conservation of all these values. World Heritage status can thus become an opportunity to structure overall management through a clearer understanding of site values (e.g. what has been termed 'values-based management'). In some cases it will be appropriate to slant management towards these values-based objectives or at least balance the protection of OUV against other values of the protected area. Plans should also include strengthened monitoring and evaluation programmes to measure the condition and integrity of OUV over time.

A global survey of over 8,000 protected areas found that effectiveness was strongly linked to having a good management plan and those sites without management plans tended to be less effective.[9] Managers need to clearly understand what is required and have well-thought-out steps to achieve this. The best plans are succinct, based around achievable, measurable targets and linked to implementation systems, budgeting processes and monitoring and business plans, but they also need to leave enough space for adaptation to unforeseeable challenges and changing situations; and, of course, they should adequately and equitably involve a full range of stakeholders.

Equally important is for managers to engage and seek to influence surrounding land use and development plans, as they may affect the World Heritage property. Where possible the World Heritage property management plan should be nested within a hierarchy of sympathetic planning that begins with the buffer zone (see Section 5.1), where it exists, and integrates with wider regional and national planning. For example it would be of limited value to have a sound management plan that stopped at the boundary of the World Heritage property if surrounding regional development strategies pursued contrary objectives.

All World Heritage sites need to show that they have an adequate management system. The *Operational Guidelines* define this need as: 'an appropriate management plan or other documented management system which must specify how the Outstanding Universal Value of a property should be preserved, preferably through participatory means' (Paragraph 108).

Management plans take various forms and for natural World Heritage sites the planning process and format is often guided by national protected area policy. The most basic requirement is that the management plan describes the overall goal of the protected area / World Heritage site, details the specific objectives for the natural and cultural resources within the protected area / World Heritage site, and identifies the management activities needed to achieve those objectives. The SOUV should give a clear picture of management priorities for World Heritage sites. For example, the **Greater Blue Mountains Area** (Australia) contains a wide range of natural eucalypt forest habitats along with other relic species from the ancient

INDICATOR

Management system and plan
• Are the management system and plan adequate to maintain the property's OUV?

Contents

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9 – F. Leverington, K. Lemos Costa, H. Pavese, A. Lisle and M. Hockings, 2010, A global analysis of protected area management effectiveness, *Environmental Management,* Vol. 46, pp. 685–98.

Greater Blue Mountains Area (Australia)

Sea cucumber fisheries monitoring – Galápagos Islands (Ecuador)

continent of Gondwana, many of which are plant species endemic to the region. Consequently, management priorities concentrate on maintaining these species and ecosystems. However, for sites where whole ecosystems are conserved, for example **Galápagos Islands** (Ecuador), management priorities can appear more complex. In these cases planning can be aided by translating the OUV into a set of simple targets, each of which has associated indicators, thresholds and responses (see Serengeti Case Study, Section 3.4) around which the plan can be built. A large and complex World Heritage site may utilize a multi-layered management system rather than a single management plan. For example, in the **Great Barrier Reef** (Australia), the management system comprises a combination of a spatial zoning plan, area-based management plans and permits, site plans (both statutory and non-statutory), as well as temporal (seasonal) management arrangements, all of which collectively provide a comprehensive management approach.

Developing a management plan

The *Operational Guidelines* (Paragraph 111) state that an effective management system could include:
(a) a thorough shared understanding of the property by all stakeholders;
(b) a cycle of planning, implementation, monitoring, evaluation and feedback;
(c) the monitoring and assessment of the impacts of trends, changes, and of proposed interventions;
(d) the involvement of partners and stakeholders;
(e) the allocation of necessary resources;
(f) capacity-building; and
(g) an accountable, transparent description of how the management system functions.

Because management plans take on many different formats there is no template for an 'ideal management plan'. Here, therefore, some key elements of a plan are suggested, taking into consideration the elements of an effective management system outlined by Paragraph 111 of the *Operational Guidelines*. Many of these are applicable to any protected area management plan but others have a distinct World Heritage focus. More detailed guidance on the management planning process and contents for natural World Heritage sites are given in the IUCN publication: *Management Planning for World Heritage Properties* (see Resources, p. 85).
• **Introduction:** Describes the vision for planning, how the plan was completed, the values, objectives and targets, and key proposals for strategies and actions. Processes to understand

stakeholder relationships (e.g. a stakeholder analysis) and ensure active participation should be explained (Paragraph 111a and d).

- **Context review:** The biological, social and economic resources, and the legal, political, administrative and historical issues relevant to the site; why the site was added to the World Heritage List (and to any other designations held by the site) and its SOUV.
- **Values and objectives:** Clear statements of the desired outcomes of management, which should be linked to the site's SOUV, and any other relevant values not associated with World Heritage listing.
- **Pressures:** Most plans will include details of threats to the site either from an assessment specifically undertaken as part of planning or from ongoing management effectiveness assessments (see Section 2.3).
- **Description of the targets** (biodiversity, cultural, economic and social): Clear measurable management targets which are the focus of actions to achieve the area's overall objectives and protect its values, including those specifically associated with the OUV.
- **Indicators for targets:** A list of measurable indicators for the agreed targets which can be used to monitor success of management and ensure the effectiveness of the management plan.
- **Strategies and actions for management:** These emerge from consideration of the status of the targets / indicators (e.g. responding to the threats and opportunities affecting them) (Paragraph 111g).

Box 2: *Developing targets and indicators*

A possible process for translating the OUV into a set of simple targets, each of which has associated indicators, thresholds and responses (see Section 3.4 for case studies) around which the plan can be built is outlined below.

Step 1: The OUV is summarized as a small group of carefully chosen features which represent the OUV and are the main focus of management. These might be important species, or habitats, or ecological processes that, if all are conserved, will generally mean that the natural World Heritage site is maintaining its overall values. This does not mean that staff should ignore everything else, but these features representing the OUV provide a manageable framework around which to base a management plan without having to individually address every element in an ecosystem.

Step 2: Key components or attributes, which represent the quality, integrity and/or functioning of the features, are identified to provide the basis of planning and monitoring. Attributes consist of one or more essential components of the feature. For example, if the feature is a viable population of important species, attributes might include population size, health and rate of recruitment – things that determine overall status of the population.

Step 3: Threats and opportunities acting on the key features are identified. Each of the features needs to be put into context by identifying the key threats (if any) and opportunities, through some kind of situation analysis, SWOT (strengths, weaknesses, opportunities and threats) analysis or similar.

Step 4: Identify ways of measuring the key features and what to do if things go wrong: the monitoring system ideally includes the indicators to be monitored and the management actions to be undertaken. So, for example, if the indicator is the population of a particular species, then if the population falls, the managers should institute urgent action to address the decline (more guidance on choosing suitable indicators is provided in Section 6.1 on monitoring). Ideally, a good management plan will also include an indication of what this management response might be.

- **Zoning:** Strategies and actions for management are likely to differ according to the characteristics and needs of discrete areas within the property (e.g. areas dedicated to tourism, or those needing specific restoration activities, or 'wilderness areas'). Zoning can be both spatial and temporal (i.e. applied only at certain periods of the year). This section may refer to specific management needs if the World Heritage boundary is different from other designations (e.g. national protected area status, biosphere reserve, etc.).
- **Buffer zones:** Areas surrounding the site with complementary legal and/or customary restrictions placed on use and development to give an added layer of protection are often recommended as a strategy to ensure conservation (*Operational Guidelines*, Paragraph 104). If the need for a buffer zone is identified, the location, legal authority, and management processes should be included in the plan (see Section 5.1 for further discussion on buffer zone management).
- **Monitoring:** All targets/indicators should be included (see Section 6.1), with a description of monitoring actions, responsible staff, indicators, and monitoring methods and frequency (Paragraph 111b).
- **Management effectiveness:** Plans should include and respond to regular assessments; this section needs to explain how the assessment should be carried out (Paragraph 111b) and how results will be used. (See Section 6.4 for an introduction to management effectiveness tools developed for World Heritage sites.)
- **Capacity development and training needs:** Capacity development refers to activities which strengthen the knowledge, abilities, skills and behaviour of individuals and improve institutional structures and processes such that the management agency can efficiently meet management objectives. The plan should lay out the capacities requiring development, training needs, and the ways in which these requirements will be addressed (Paragraph 111f).
- **Management plan revision:** How often the plan should be reviewed and revised (e.g. every five years).
- **Inputs (budget, staffing, facilitates, infrastructure, etc.):** An outline of costs and sources (including funding needs if applicable) (Paragraph 111e) and how the plan will be modified if the required inputs do not become available;
- **Key references:** Major sources of information about the natural World Heritage sites.
- **Other elements:** Any other information that will help to guide management actions, including organizational charts, glossaries of key terms, case studies, maps, inventories.

The best plans are often quite short (twenty to thirty pages) so that as many people as possible are encouraged to read and use them (this is particularly important where plans need to be translated into several local languages to ensure maximum understanding and participation of stakeholders): other information (e.g. details of biological and social values of the site, details of the indicators, etc.) can be included in appendices or separate documents.

Sites can also have a range of other plans or sub-plans, which should be linked to the overall management plan, such as visitor management plans (see Section 5.3), business plans (see Section 4.1) and threatened species management plans. In this case a sub-plan may be an excellent way to detail management objectives and prescriptions targeted at the OUV of the property. For example a migratory species sub-plan might be warranted for a World Heritage site inscribed for these values under criteria (ix) and/or (x).

Other management planning documents
Whereas the management plan is usually developed for between five and ten years and provides overall direction for site management, the **operational/work** plan is usually developed for a budgetary year and thus balances available funding with activities that will lead to the overall implementation of the plan. These plans usually contain agreed work plans, with timescale, budget and staffing details, to implement the objectives in the management plan. The operational plan can thus include more detailed actions and provide a more flexible response to changing site conditions and priorities (Paragraph 111b).

Developing a plan: the management planning process

As with the contents of the plan, many protected areas which are also World Heritage sites will have the management planning process already laid out in national policies. This section highlights a generic process that provides guidance on the sort of process likely to be useful in developing the plan. Individual sites will also necessarily have to reflect national policies. The following steps will all be needed:

• **Develop a work plan:** Detail the planning process, including a description of the general methods used, identification of specific products or results, and an assignment of leadership roles for each phase.

• **Agree on the timeline:** Depending on the level of engagement required, care should be taken to avoid overlapping with inconvenient periods for staff (e.g. during peak tourist seasons or periods of high fire risk) and for stakeholders (e.g. during harvest, when weather conditions are particularly bad, or in the middle of their fisheries season).

• **Define and identify resources needed to carry out the plan:** It can be useful to divide resources up into broad groups such as: *people* (what skills and how much time), *equipment* (computers, GIS software, access to vehicles, etc.), and *meeting or workshop resources* (meeting space, participant transport, lodging facilities, food, paper, markers, tape, printed materials, etc.).

• **Engage stakeholders:** Involving a wide range of stakeholders in the planning process will result in many opinions and suggested actions. World Heritage properties always have a wide range of stakeholders, including those at global level. Providing opportunities for people to comment and provide input is essential for success and the process should be agreed and made public at the start. The means of communication and information sharing should be established at the start of any consultative process and should have agreed goals and objectives. It is important to try to reach as many community members as possible in the process, and in particular to be aware of the gender and age composition of each specific group. Clear, agreed processes for finalizing the plan and dealing with conflicts that arise are vital. The steps needed to provide adequate opportunity for stakeholders to review and comment on the proposed plans should be outlined. Opportunities can be formal and informal. Formal ones are required by law or policies (reviews of the management plan, approval of the operational plan, budget review, impact assessments, etc.). Informal opportunities can be agreed with stakeholders (e.g. committees, task forces, meetings, special education or communication campaigns and fund-raising events).

• **Develop the approval process:** Many countries have established official procedures for management plan approval, sometimes including submission of documentation to government sectors such as the secretariat of economy, social development agencies, and others. It is important to know the requirements and establish and publicize the steps by which the plan will be finalized and agreed. But it is also necessary to agree if and how any informal approval process will take place with local and other stakeholders.

• **Consider actions to deal with conflict prevention and resolution:** Establishing rules for decision-making; at a minimum identifying who makes the final decisions, who resolves disputes and how they will be resolved. It is important to find mechanisms to balance a myriad of stakeholder views but final decisions need to be in the best long-term interests of protecting the values and integrity of the property.

Management planning for serial properties

Serial properties should ensure that adequate protection and management for each component part of the property is in place and working effectively. The geographical relationship of the component parts and the legal framework for management will dictate whether it is feasible to have one overarching plan for all the individual areas or alternatively a high-level (political or institutional) strategic framework for the whole area and a series of individual action-orientated plans for each individual component part of the property. For a transnational serial property an intergovernmental agreement is of particular value as the basis of coordination within the management system.

Contents

A series of minimum expectations was developed through an expert meeting (see BfN-Skripten document 248, referred to in Resources, p. 85) for the management system which should describe, in an accountable and transparent way, how management as a whole functions in terms of objectives and coordination. At the level of the whole serial property the management system should ensure communication and coordination between all component parts in relation at a minimum to the:

- harmonization of management of all component parts to meet a set of shared objectives of preserving OUV;
- identification of and response to threats to the property; and
- coordination of monitoring and reporting, in particular in relation to the requirements of the World Heritage Convention.

It was also recommended that the management system for a serial property should regularly review and reinforce where feasible the coordinating mechanisms to increase the cohesion and effectiveness of its management as a World Heritage property, and respond to changes that affect its component parts. An evaluation of whether or not the above minimum requirements can be achieved should be regarded as a benchmark for whether the property is regarded as manageable and therefore meets the requirements of the *Operational Guidelines.*

3.3 World Heritage Committee decisions

INDICATOR

World Heritage Committee decisions and recommendations
• *Has the State Party implemented the decisions and recommendations of the World Heritage Committee relating to the property?*

When planning the management of a World Heritage property it is important to be aware of how the World Heritage Convention is implemented globally, and how World Heritage Committee decisions relating to site-based implementation can be incorporated into management.

The World Heritage Committee is responsible for the implementation of the World Heritage Convention. It is made up of twenty-one representatives of the States Parties to the Convention elected by the General Assembly, elected for terms up to six years.

The *Operational Guidelines* are the main instrument for implementing the Convention and should be the main reference document for managers (see Resources, p. 85). However, for some properties World Heritage Committee decisions spell out site-specific recommendations made as part of the inscription decision and/or State of Conservation reporting (see Sections 2.3 and 6.3). The content of the decisions is intended to support site management to fulfil the requirements of the Convention and ensure that the property's OUV is conserved. Decisions can, for example, support funding requests (e.g. awarding International Assistance funds – see Section 4.2); encourage the involvement of others, such as NGOs, to support site management; or help to ensure that national processes, such as planning decisions, are supportive of site management.

Decisions are prepared by the World Heritage Centre in liaison with the Advisory Bodies and discussed and adopted at World Heritage Committee sessions. The subjects covered by the decisions range from policy issues, global implementation decisions and site-specific decisions relating to State of Conservation reports (see Section 2.3). The process of decision drafting and adoption is summarized below:

- **Drafting decisions:** Decisions that detail recommendations for action are jointly drafted by the Advisory Bodies and World Heritage Centre in advance of the World Heritage Committee meeting. The draft decision documents need to meet standards set out in the *Operational Guidelines (*Paragraph 23).

- **Adopting decisions:** The decisions are then reviewed and, if necessary, discussed and revised at the World Heritage Committee meeting. The process for approval of decisions at the Committee meeting is laid out in the Committee Rules of Procedure.

- **Information on Committee decisions:** After the Committee meeting the World Heritage Centre forwards a report of all the Committee decisions to States Parties within a month of the meeting (Paragraph 168) and notes decisions taken in relation to the specific properties. However information on Committee decisions may not necessarily filter down to those working at the individual World Heritage properties. It is therefore useful to look at either the World Heritage page on the UNESCO website or the World Heritage Decisions Database (see Resources, p. 85, for details) to check the status of decisions in relation to a specific property. All decisions are numbered in relation to the meeting agenda at which they were discussed. Thus for example Decision 33COM 3A relates to the 33rd session of the World Heritage Committee and specifically to agenda item 3A.

- **Implementing the decision:** How sites have implemented the decisions is monitored by the World Heritage Centre through, for example, the Periodic Reporting process. State of Conservation reports specifically require properties to report on actions taken to follow up previous decisions of the World Heritage Committee on the state of conservation of the property (*Operational Guidelines*, Paragraph 173) and there are follow-up missions to review the implementation of actions highlighted in decisions.

3.4 World Heritage boundaries

Understanding the special requirements of boundaries is a fundamental part of effective site management and values protection.

Effective boundaries

The *Operational Guidelines* define boundaries as areas which 'should reflect the spatial requirements of habitats, species, processes or phenomena that provide the basis for their inscription on the World Heritage List. The boundaries should include sufficient areas immediately adjacent to the area of Outstanding Universal Value in order to protect the property's heritage values from direct effect of human encroachments and impacts of resource use outside of the nominated area' (Paragraph 101).

In many cases the boundaries of the natural World Heritage site conform to those of a designated protected area. In others the area inscribed for conservation of OUV may only represent part of the site. For example, the 10,747 ha **Yakushima** World Heritage site (Japan) protects a rich flora, including ancient specimens of the 'sugi' (Japanese cedar) within a larger national park and the nominated area overlaps several designations, including a special natural monument and wilderness area.

Boundaries of the property will be set during nomination (and are thus discussed in detail in the Resource Manual *Preparing World Heritage Nominations*), although

© Sue Stolton

Yakushima (Japan)

there are processes in place to make boundary amendments after nomination in exceptional circumstances. Changes may be needed, for example, to ensure better conservation of OUV due to better understanding of ecological processes associated with the site, or to manage threats facing the property, ranging from local sources of pollution to the impacts of climate change. Boundaries are also mentioned here as they are an important factor in monitoring and assessing the conservation of the property in World Heritage processes such as Periodic Reporting (see Section 6.3), and changes may be suggested as a result of findings.

The process for making changes to a site's boundaries is laid out in Paragraphs 163–65 of the *Operational Guidelines*. Changes can either be minor, or represent significant modifications. All modifications need to be submitted to the World Heritage Committee, through the Secretariat, by 1 February each year. All modifications will be evaluated by the relevant Advisory Body and submitted to the Committee. Significant modifications are treated as new nominations; minor modifications may be approved by the Committee or may also be considered as significant enough to also require a full nomination procedure.

Effective management of the boundaries will depend greatly on the type of site; and boundary management will clearly be radically different in a protected forest as opposed to a marine area. The basic requirement however is to be able to distinguish between legal agreements on boundaries (including the boundaries set out in the World Heritage nomination dossier) and physical demarcation on the ground through posts, signs, buoys, use of geographical features and suchlike, with the agreement and engagement of local stakeholders. This understanding and demarcation of boundaries is particularly important in areas where sustainable use agreements are being implemented or where threats such as illegal logging, fishing, or other resource use are threatening to encroach into the site.

CASE STUDY

Developing a management plan:
Serengeti National Park
(United Republic of Tanzania)
Ephraim Mwangomo, Park Ecologist, Mount Kilimanjaro National Park and Ecologist at Serengeti during development of the General Management Plan; and Nigel Dudley, Equilibrium Research

Serengeti National Park (listed as a natural World Heritage site in 1981) is part of the huge Mara ecosystem, an area of savannah, dry woodland and small hills (kopjes) that straddles the border between Tanzania and Kenya. Its OUV refers to the ecosystem and the unique migration of around a million zebra, wildebeest and antelope, which annually follow the rains to feed on fresh grass.

© UNESCO / Marc Patry

Black Rhino monitoring team – Serengeti National Park (Tanzania)

When a new general management plan (GMP) was needed, the Tanzanian Parks Authority (TANAPA) hired consultants to analyse previous Serengeti plans and suggest a methodology for producing a new ten-year plan. One important conclusion was that older plans suffered from a lack of clear targets and thus did not lend themselves to measuring conservation progress. TANAPA employed a modified form of the Conservation Action Planning approach developed by The Nature Conservancy, a US-based NGO, which organizes management around a few carefully chosen targets that together reflect the wider ecological values of the area. The methodology used in Serengeti is included as part of the Enhancing our Heritage Toolkit *(see Section 6.4). If targets remain in good condition it is assumed that the OUV will also be intact.*

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The following targets (i.e. features) were selected with reference to the OUV of the site: (1) the migration; (2) Mara River; (3) riverine forest; (4) Acacia woodland; (5) Terminalia woodland; (6) kopje habitat; (7) black rhino and (8) wild dogs. This does not mean that staff ignore everything else – for example if elephant numbers collapsed this would need a management response – but targets provide a framework around which to base management without having to address every species and habitat.

Attributes (i.e. indicators) describe in more detail the components of each target to be considered in management; these were also identified and examples from two targets are summarized below:

Target	Attribute
Mara River	*Water flow*
	Water quality
	Forage extent / size
Black rhino	*Population size*
	Productivity (recruitment)
	Genetic diversity

Each of the targets needs to be fleshed out by identifying threats (if any) and management opportunities. So, for example, threats to the black rhino include poaching, disease, poor birth rate or infant survival and habitat changes. Opportunities include the existence of a small rhino population, high tourist interest and perhaps further recruitment by transferring individuals from other countries.

The targets also function as indicators against which to measure progress. The monitoring system ideally includes: indicators to be monitored; thresholds, beyond which some management response is needed; and management action if the threshold is exceeded. So for example if the indicator is the Mara River, one threshold might be a certain maximum acceptable level of pollution and the management response control of agricultural chemicals or human waste as appropriate.

The identification of targets, attributes and indicators and eventually a plan for monitoring the targets, which forms the ecological monitoring plan in the revised GMP, was developed primarily through three workshops attended by staff and researchers. In addition to identifying indicators, monitoring protocols (e.g. method, procedure, frequency of data collection, data analysis, data management) were developed for each indicator to ensure consistency and credibility and suitability for repeat analysis over time.

Implementing the World Heritage Convention: Okapi Wildlife Reserve (DRC)
Guy Debonnet, Programme Specialist Natural Heritage, UNESCO World Heritage Centre

The Okapi Wildlife Reserve in the Democratic Republic of the Congo (DRC) was inscribed on the World Heritage List in 1996. The reserve protects important biodiversity of the eastern Congo Basin forest. As well as the okapi (the forest giraffe with zebra like markings, which is endemic to DRC), thirteen species of primates and six duiker species are found in the reserve. It also has the most important population of forest elephants in eastern DRC and several rare and elusive species such as the giant genet. The reserve is home to the indigenous Mbuti people. While approximately 20 per cent of the reserve is designated as a strictly protected zone, certain traditional resource-use activities such as subsistence hunting are permitted in the remaining areas.

Less than a year after being listed, Okapi became a World Heritage site in Danger, as DRC became engulfed in the Great Lakes conflict, involving several countries in the region. On several occasions the reserve was the stage for violent clashes between different armies and rebel factions and the capacity of the reserve authorities to control illegal resource-use activities, e.g. mining and bushmeat hunting, was severely affected. The effects on wildlife were devastating and the site's OUV degraded.

CASE STUDY

© Éric Loddé

*Managers meeting –
Okapi Wildlife Reserve
(DRC)*

*Despite the many ramifications of the conflict, management at the site continued and the values of Okapi were not completely lost. The World Heritage Centre was able to develop an international partnership, involving UNESCO, the protected area authority and international conservation NGOs through the **Biodiversity Conservation in Regions of Armed Conflict** project to support the site. Thanks to support from the United Nations Foundation and the governments of Belgium and Italy, the project provided financial support to site staff, who were no longer receiving their salaries, and provision of essential field equipment. Effective delivery of support on the ground depended on all parties involved in the conflict understanding the overriding importance of these sites and the necessity of allowing staff and their partners to carry out conservation activities. UNESCO was able to create these conditions by using the Convention as a strategic argument in conservation diplomacy actions, for example, through missions of UNESCO staff to the various parties engaged in the conflict. The project also rallied the support of the local communities by targeting community conservation activities. At the same time, the project pursued long-term objectives (strengthening international partnerships, retraining field staff, sustainable funding) to prepare the reserve management for the post-war challenges.*

Although these actions could not fully stop the degradation of the OUV, it is widely recognized that without the support of the project there would be little left of the natural heritage that justified the inscription of Okapi on the World Heritage List. Okapi Reserve remains in some danger, but since 2007 management has gained control of 95 per cent of the reserve and closed down most of the illegal mining camps. Elephant poaching has also been brought under better control through more effective surveillance and cooperation with the armed forces and administrative authorities. These successes were clearly aided by World Heritage listing and the resources and capacity that came with it.

CASE STUDY

Sustainable use of the Wadden Sea
Common Wadden Sea Secretariat

The Wadden Sea runs for about 500 km along the North Sea coasts of Denmark, Germany and the Netherlands. It is Europe's largest and most important marine wetland and the scale of its tidal flats, gullies, salt marshes, dunes, islands and estuaries is globally unique. The great productivity and size of the Wadden Sea provides a foundation for the reproduction of North Sea fish stocks and is of international importance as a staging, moulting and wintering area for at least fifty-two populations of forty-one migratory waterbird species on the East Atlantic flyway; 10–12 million birds pass through each year.

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CASE STUDY

*Barnacle geese –
The Wadden Sea
(Germany / Netherlands)*

*In 2009, the Dutch-German Wadden Sea was inscribed on the World Heritage List under criteria (viii),
(ix) and (x) as the largest unbroken system of intertidal sand and mud flats in the world, with natural
processes undisturbed throughout most of the area. The World Heritage site covers almost 10,000 km².*

*As the Wadden Sea is surrounded by a significant population and contains human uses, the continued
priority for its protection and conservation is the planning and regulation of use, including land and
water-use plans, the provision and regulation of coastal defences, maritime traffic and drainage. Key
threats requiring ongoing attention include fisheries activities, harbours, industrial facilities, maritime
traffic and safety, residential and tourism development and climate change.*

*Denmark, Germany and the Netherlands, working together in the Trilateral Cooperation on the
Protection of the Wadden Sea, have managed and protected this valuable ecosystem since 1978. Today,
almost the entire coast is protected as national parks and nature reserves. The management system is a
combination of the national management systems and the trilateral Wadden Sea Plan (WSP) implemented
by the authorities responsible. The WSP provides the foundation upon which the OUV of the property is
preserved, in addition to its legal protection on national and state levels. Activities incompatible with
conservation have either been banned or are heavily regulated and monitored to ensure they do not
impact adversely on the Wadden Sea. The Trilateral Monitoring and Assessment Program (TMAP) regularly
assesses the status of the ecosystem and provides recommendations for management and policy.*

*Every year millions of tourists are drawn to the Wadden Sea coast, providing an important income for the
region. A balance between tourism and ecosystem protection is the only way to guarantee that the region
will continue to attract holidaymakers. The recreational values of the Wadden Sea are maintained by
introducing and applying information systems (visitor guidance) and/or temporal and spatial zoning, to
protect the most ecologically sensitive areas. Blue mussel fisheries, for example, are regulated by permits,
size of culture lots, fishing periods and other regulations. In certain areas fishing is not permitted.*

*A precondition of the WSP is that unreasonable impairment of the interests of the local population and
the traditional uses in the Wadden Sea are avoided. Small-scale, traditional use is still possible. Any user
interest is considered on a fair and equitable basis in the light of the purpose of protection in general,
and the particular case concerned.*

Further information: *www.waddensea-worldheritage.org*

4 Capacity

However good management plans and systems may be, without the capacity and resources to manage them there is little likelihood of effective conservation at World Heritage sites. While resources required for effective management of a site are influenced by both internal and external demands, a realistic understanding is needed of what resources are necessary for developing effective management systems. This section begins by looking at how World Heritage properties can move towards more sustainable financing and reviews financial support specifically available to them. It also reviews human capacity, with an overview of staff education and training needs and the type of expertise that might be required in natural properties on the World Heritage List.

4.1 Sustainable finance

A secure source of financial support is crucial to the success of World Heritage sites. This may come directly from the state, donors, trust funds or directly from visitors; often a mixture of all sources is used. Natural World Heritage sites that rely on sporadic, project-based funding are likely to remain at risk of funding shortfalls. Drawing up and implementing a plan for sustainable financing is thus a major element in management.

Understanding and meeting the costs of World Heritage management
Today, many protected areas find it difficult to achieve financial stability (e.g. the ability to meet all the costs associated with the management of a World Heritage site). The reasons are often complex but have been summarized by the United Nations Development Programme as follows:
• Government budget allocations that are below estimates of need.
• Legislative, political or institutional constraints to innovation and cost-effective operations, due to the poor integration of protected areas into national development policies.
• Managers who are ill-equipped and poorly motivated to diversify funding sources and are often working without strategic financial plans or even management plans.
• Limited technical knowledge on screening, assessment, formulation and implementation of new mechanisms to improve protected area financing.

Financial planning is basically the process of defining costs and identifying ways to meet those costs. Good financial planning helps managers to make strategic financial decisions such as reallocating spending to match management priorities and identifying appropriate cost reductions and potential cash flow problems.

A consensus has emerged that current spending on protected areas is grossly inadequate. World Heritage sites may have added leverage to attract funds because of the high status afforded to inclusion on the World Heritage List, but experience suggests that many natural World Heritage sites still struggle from lack of funds. Traditional funding mechanisms such as government budgets or project funding from bilateral and multilateral aid, tourism, contributions from NGOs and charitable foundations account for the bulk of natural World Heritage funding and will probably remain so for many years to come.
• **Government funding:** Domestic government budgets are the single largest source of protected area financing in most countries. In the developing world as a whole it is estimated that public national park budgets amount to between US$1.3 billion and US$2.6 billion per year.
• **Bilateral and multilateral aid:** In recent years international financing for biodiversity conservation is estimated to be around US$4 billion to US$5 billion annually with some 30–50 per cent going to protected areas. Out of this some US$2 billion comes from

high-income countries' Overseas Development Assistance (ODA) in the form of country-to-country bilateral aid and multilateral aid managed by the Global Environment Facility (GEF), other UN agencies, International Development Agencies and multilateral development banks. By 2010 the GEF had made an investment of US$1.5 billion in the creation or management of 1,600 protected areas worldwide.

- **Site-based revenues:** Park entry fees are a steady and sustainable source of funding for many World Heritage sites and protected areas worldwide. In South Africa, for example, the parastatal body responsible for national parks, South African National Parks, finances up to 80 per cent of its annual budget from tourism receipts.

- **Site-based funds:** Some natural World Heritage sites, such as Galápagos Islands (Ecuador), Aldabra Atoll (Seychelles), Bwindi Impenetrable National Park (Uganda), Monarch Butterfly Biosphere Reserve (Mexico), and Banc d'Arguin National Park (Mauritania, see case study in Section 4.3), have their own foundations.

- **NGOs:** Funds from international conservation NGOs, private foundations and business-related foundations may contribute over US$1 billion annually but precise figures are difficult to estimate. The United Nations Foundation has given over US$10 million to World Heritage sites.

Factors important for ensuring financial sustainability have been identified by IUCN:

- **Build a diverse funding portfolio** to minimize funding risks and fluctuations. Most sources of funding can be either insecure or subject to fluctuations. Visits to national parks in Kenya, Uganda and Zimbabwe, for example, declined markedly as a result of civil unrest during the 1990s. Combining different sources of funding is thus a key element to long-term financial sustainability.

- **Improve financial administration effectiveness** to ensure that funding is allocated and spent in a way that supports World Heritage needs and conservation goals. In many cases, funding is skewed towards recurrent costs, especially staffing, while critical investment needs remain underfunded. Management effectiveness assessments can help in developing an understanding of the adequacy of management resources, as can the development of business plans (see below). For example, Tool 7 of the *Enhancing our Heritage Toolkit* (see Section 6.4) provides a simple methodology for considering the resources that are required for effective management of the site, and measures these against the resources available.

- **Take a comprehensive view of costs** which considers the full range of costs, ensuring that those who bear the costs associated with the World Heritage site are recognized and adequately compensated, and that those who benefit from the site make a fair contribution to their maintenance. Financial planning has traditionally focused on meeting direct operational and management costs – in other words funding the salaries, infrastructure, equipment and maintenance required to establish and run a World Heritage site. Indirect and opportunity costs are however often substantial and are incurred by a wide range of groups, including local landholders and resource users as well as public and private enterprises in a variety of other sectors. Making a protected area truly sustainable in economic terms implies covering all of these indirect and opportunity costs, and compensating those who bear them.

- An additional aspect of understanding the comprehensive costs of managing a World Heritage property is the **cost implications of the site's management plan**. Previous sections have elaborated on the process of preparing a comprehensive management plan to guide protection of OUV. It is instructive to undertake a financial impact analysis of the actions proposed within the management plan over the timescale that it operates. This can be a helpful 'reality check' on plans which may result in a more rational approach to managers' aspirations or a

lengthening of timescales for implementation. Equally it can make the case for investment. In a similar vein, undertaking an evaluation of management effectiveness using the framework within this document can highlight management needs and resourcing shortfalls, again helping to build evidence for improved resourcing.

• **Understanding benefits:** Increasing efforts to quantify the many benefits which come from land and sea areas protected for conservation have resulted in some countries increasing support for protected areas. In the last few years the budget assigned to federal protected areas by the Government of Mexico, for example, has increased significantly. This stems largely from the efforts of many protected area practitioners in Mexico to highlight the multiple benefits derived from protected areas, and World Heritage sites such as the **Monarch Butterfly Biosphere Reserve, Sian Ka'an Biosphere Reserve** and **Islands and Protected Areas of the Gulf of California**, and associating these benefits with the economic and social values they provide.

Monarch Butterfly Biosphere Reserve (Mexico)

Rangers station – Sian Ka'an (Mexico)

Islands and Protected Areas of the Gulf of California (Mexico)

• **Create an enabling financial and economic framework:** External factors that influence conservation funding opportunities and financial status include so-called 'perverse' incentives, where public subsidies can make biodiversity-depleting or environmentally damaging activities more profitable than those which are compatible with conservation practice. In addition, the conservation of OUV is often seriously underpriced, or not priced at all, by the market. Such challenges are of course not easy for individual World Heritage managers to overcome, but the increased profile offered by World Heritage listing can help to develop enabling frameworks for sustainable financing strategies.

• **Build capacity to use financial tools and mechanisms** such as business planning, which can help managers to: (1) assess their staff and resources and ensure that these are used in the best possible ways; (2) identify and 'sell' a site's values, to tourists, funders or government departments; (3) more generally, learn the language of the business sector; and (4) help in a range of business-centred activities. The Shell Foundation – UNESCO/World Heritage Business Planning Skills Project has developed the *Business Planning for Natural World Heritage Sites – A Toolkit*. This is complemented by a five-year capacity-building initiative between UNESCO, Earthwatch and Shell where up to fifteen natural World

Heritage sites will receive training from Shell executives on business planning, followed by a one-year monitoring and support effort. The toolkit is aimed at users with no business knowledge or experience. All business concepts are introduced at a basic level and no previous knowledge of business planning is required. The many templates and frameworks used in the toolkit are designed to be simple to use and easily applicable. The toolkit is structured to enable World Heritage site managers to build a business plan gradually, implementing the elements they need most urgently (according to time and cost limitations). It is thus presented in eight distinct parts following the structure of a standard business plan: Institutional Analysis, Market Analysis, Marketing Plan, Operational Plan, Human Resources, Risk Analysis, Financial Plan, Action Plan.

4.2 Financial support specific to World Heritage sites

Listing as a World Heritage site can help to attract NGO, trust and donor funding, particularly if the site is being used as a flagship for other protected areas in a country, biome or region.

World Heritage funding options

There are several small funding mechanisms linked directly to UNESCO which can provide funds to properties listed as World Heritage; these are outlined below.

World Heritage Fund: A trust fund, established by Article 15 of the World Heritage Convention, which supports activities relating to the implementation of the Convention. The fund is resourced primarily by compulsory and voluntary contributions made by States Parties to the Convention (*Operational Guidelines*, Paragraph 223), as well as from private donations. The World Heritage Committee allocates funds according to the urgency of requests, with priority being given to the most threatened sites and in particular those on the Danger List (see Section 2.4). Funding is also linked to priorities set out by the World Heritage Centre's Regional Programmes following the results and recommendations from the Periodic Reporting exercise (see Section 6.3). Apart from emergency assistance (see below) States Parties in arrears with their compulsory or voluntary contributions to the World Heritage Fund are not eligible for International Assistance. Funds can be sought for properties inscribed on the World Heritage or Tentative List, and requests must be submitted to UNESCO via a State Party National Commission for UNESCO, Permanent Delegation to UNESCO or an appropriate governmental department or ministry.

Money allocated from the fund is called International Assistance. It is best to consult the World Heritage Secretariat and the Advisory Bodies when thinking about submitting a request, for advice and help on whether the application is suitable for this type of funding. International Assistance is provided for three specific types of activity (Table 2; for further details see *Operational Guidelines*, Paragraph 241): the first is in relation to providing assistance to sites preparing nominations and is thus discussed in the *Nominations Manual*; the other two are:

1. **Conservation and management**, which includes:
   – training and research assistance to support group training activities, mainly for personnel working on World Heritage sites (individual scholarships are not funded);
   – technical cooperation to provide expertise and material support for management plans and various conservation activities for inscribed sites;
   – promotional and educational assistance to raise awareness and develop educational materials relating to World Heritage (maximum amount US$10,000).
2. **Emergency assistance**, to enable urgent action to halt or repair damage caused by adverse human activity or natural disasters.

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Table 2. *International Assistance request process*

	Submission deadline	Evaluation by	Examination by the panel*	Final decision made by
Process for an International Assistance request for Preparatory Assistance or Conservation & Management Assistance				
Request for US$5,000 or less	Any time	World Heritage Centre	No	Director of the World Heritage Centre
Request between US$5,001 and US$30,000	Any time	Advisory Bodies and World Heritage Centre	Yes	Chair of the World Heritage Committee
Process for an International Assistance request for Emergency Assistance				
Request for US$5,000 or less	Any time	World Heritage Centre	No	Director of the World Heritage Centre
Request between US$5,001 and US$75,000	Any time	Advisory Bodies and World Heritage Centre	No	Chair of the World Heritage Committee
Request above US$75,000	1 February	Advisory Bodies and World Heritage Centre	No	World Heritage Committee (June/July)

Convened at least twice a year in January and September.

Rapid Response Facility: A small grants programme that provides emergency funding of up to US$30,000 to address severe and time-sensitive threats to endangered biodiversity. The Rapid Response Facility (RRF) is aimed at sites inscribed on the World Heritage List under criteria (vii) and (x) (see glossary, Section 1.5, for full details of the criteria); nominated sites whose inscription to the World Heritage List was deferred[10] due to immediate threats to their ecological integrity; or natural sites inscribed on Tentative Lists. RRF grants are also restricted to countries that are eligible for Official Development Assistance according to the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD). The RRF has a precise definition of an emergency based on six criteria, which should be considered when considering an application. Operated jointly by the World Heritage Centre, the United Nations Foundation (UNF) and Fauna & Flora International (FFI), the RRF aims to protect natural World Heritage sites in times of crisis by:
1. mobilizing funds quickly to respond to emergency situations in natural World Heritage sites;
2. providing bridging funds in places where longer-term funding is being sought;
3. catalysing innovative financing mechanisms as part of a long-term support programme.

The RRF accepts applications year-round and aims to review all applications and provide funding decisions to applicants within about eight working days. The Project Coordination Group, made up of a representative from FFI, UNF and the World Heritage Centre, makes the decision on grant allocation.

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10 – Nominated sites can be recommended for inscription; not recommended for inscription; or recommended for referral or deferral. Referrals are when the Committee decides to refer the nomination back to the State Party for additional information; deferrals are when the nomination requires a more in-depth assessment or study, or a substantial revision by the State Party (*Operational Guidelines*, Paragraphs 158–60).

The **Nordic World Heritage Foundation (NWHF)** was the first regional initiative for the World Heritage Convention established on a permanent basis in 2002 by the Government of Norway in cooperation with the other Nordic governments and UNESCO. NWHF is a non-profit foundation supporting international activities within UNESCO's programme framework. Part of its role is to act as a focal point by bringing the Nordic countries together to promote work with the World Heritage Convention. Other regions and countries are included in Nordic cooperation if appropriate. As fundraiser, NWHF explores innovative ways to raise funds including programme support from Nordic bilateral and multilateral donors, development banks, commercial companies, etc., and thus NWHF has relevance, and runs projects, globally. See www.nwhf.no for further details.

The **African World Heritage Fund (AWHF)** is the second regional funding initiative for the World Heritage Convention; and is applicable to all African Union member states that have signed the Convention. The AWHF, launched in May 2006, provides finance and technical support for the effective conservation and protection of Africa's natural and cultural heritage having OUV. AWHF is recognized as a Category II centre. Key areas of assistance include identifying and preparing African sites for inscription on the World Heritage List; the conservation and management of inscribed sites; the rehabilitation of sites on the Danger List and the training of heritage experts and site managers. More information, including an application form for funding, can be found at www.awhf.net.

Funds-in-Trust (FIT) are donations given by countries to support specific projects with defined goals and objectives. Of the five funds currently in existence, only two specifically focus on natural sites: the Japanese Trust Fund for the Preservation of the World Cultural Heritage (http://whc.unesco.org/en/partners/277) and the Netherlands Funds-in-Trust (http://whc.unesco.org/en/nfit).

4.3 Staff training and development

For World Heritage sites to function as exemplary models demonstrating best practice in protected area management and biodiversity conservation around the world, staff need to exhibit professionalism in a wide range of subjects and disciplines. For many under-resourced sites this clearly presents a major challenge which will need significant resources to overcome.

Improving site management capacities

World Heritage site management is becoming increasingly complex, which means that managers and staff are required to be experts in skills as widely varied as biodiversity conservation, monitoring and assessment, budgeting, personnel management and staff welfare – as well as being inspirational education providers who can communicate the OUV of a site and the value of the World Heritage Convention in general. And this necessary skill set continues to grow as our knowledge of the natural world increases and the number of factors interrelated with conservation management expands (from dealing with the impacts of climate change to negotiating resource use agreements with indigenous peoples).

Many of the topics covered in this Resource Manual aim to help improve and reinforce the skill sets of protected area staff and managers. Below is an overview of some of the key skills that are indicative of the most recent developments in best practice site management, which includes knowledge and understanding of the following:[11]

INDICATOR

Staff training and development
• *Are human resources adequate to manage the World Heritage property?*

11 – This list draws on the 2006 Strategy for Natural Heritage (see decision World Heritage C-06/30.COM/INF.6A). A Global Capacity Building Strategy for World Heritage is currently being developed under the leadership of ICCROM with the participation of the other two Advisory Bodies and relevant academic institutions.

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1. Coping with climate change. The World Heritage Committee has identified climate change as one of the most significant threats to World Heritage properties, commissioning several global assessments of potential impacts and developing a World Heritage Climate Change Policy. A number of countries have commissioned specific vulnerability assessments of their World Heritage properties. For example, the Great Barrier Reef (Australia) has a detailed Vulnerability Assessment addressing both natural and social implications of climate change. Managers need to develop skills to understand the likely impacts of climate change as well as the potential of World Heritage properties to combat it.

2. Understanding the World Heritage Convention and central World Heritage concepts such as OUV (see Section 2.1).

3. Interpreting and presenting World Heritage sites including communication and outreach (see Section 5.2).

4. Using systems for assessing management effectiveness (see Section 6.4).

5. Understanding the logistical and organizational aspects of management and World Heritage reporting systems (see Section 6.3).

6. Using monitoring systems that can track World Heritage values and site integrity (see Section 6.1).

7. Drawing up sustainable financing strategies for management and engaging in business planning (see Section 4.1).

8. Integrating management with broader landscape/seascape management and sustainable development priorities (see Section 5.1).

9. Managing tourism (see Section 5.3).

Although this seems a daunting list, various support networks exist, ranging from regional and global networks of World Heritage sites and managers to help develop and share lessons and best practices, to specific training programmes designed for World Heritage staff (see below).

A professional development programme is an essential component of site management and can provide opportunities for continuing education. Where training is required, it is worth noting a few basic principles. Good training should be led by the identification of needs (including an understanding of the profile of who is being trained and their levels of literacy, knowledge, etc.), opportunities and gaps, as well as consideration of the ability to apply learning at site level (this can involve consideration of staff availability, equipment needs, budgetary resources, etc.). It is also worth distinguishing between *training*, i.e. teaching people how to do things, and *development*, i.e. encouraging them to develop their perceptions as well as pure skills. Both training and development should go hand in hand, encompassing knowledge, skills and perception/attitudes. In the context of natural World Heritage site management this means training participants to manage *people*, manage *resources* and manage *systems*. Good training also needs to be *adaptive* in that it is responsive to participants' needs and concerns. It should relate to the experiences of participants; have opportunities for responses, discussions and feedback; be participative and active; be based on learning theory that people recall most when they actually *do something* rather than just sit listening; and it should be well paced and balanced, so that people have a chance to reflect and assimilate what they have learned.

The *Enhancing our Heritage Toolkit* (see Section 6.4) includes a tool (Tool 7) which helps managers to **assess staff training requirements** against current staffing capacity. Such assessments will only be of use if managers have a clear idea of the skill levels required for each component of site management. A wealth of training material is available interna - tionally, including case studies and best practice principles (see Resources, p. 86) for the rapidly developing discipline of protected area management. Some of this has been brought together by the Convention on Biological Diversity Secretariat in **concise learning modules** organized around its Programme of Work on Protected Areas. These modules are developed

around short courses which take approximately an hour each to complete, providing an overview of key terms, concepts, resources and approaches. Areas covered in these courses include protected area network design, management planning, threats, governance, participation, policy, sustainable finance, management effectiveness, monitoring, etc.

Improving institutional capacity

Staff effectiveness will be supported or limited by the institutional environment within which they operate. Put simply, the most capable staff will not be effective if not supported through appropriate laws, policies and support programmes at institutional level. Some considerations include:

• Adequate laws to protect the OUV of the property, including an appropriate legal frame-work governing buffer zones which surround inscribed properties and control adjoining land use. Some countries have established special laws enhancing the protection afforded to World Heritage properties (see Section 3.1).

• Tailored policy and programmes which support World Heritage. For example institutional programmes on World Heritage promotion, management aimed at protecting OUV, sustainable financing, enhanced environmental assessment of development impacts, monitoring and evaluation programmes tailored to assess OUV condition, etc.

• The appointment of dedicated World Heritage staff employed to ensure specialized skills are available. Many institutions have established dedicated World Heritage Units which bring together expertise, for example resource management specialists, researchers, educators and community liaison staff.

• An articulated institutional level vision for managing World Heritage. Does the managing agency appreciate the significance and obligations of managing World Heritage? Are they articulating this to stakeholders? Are they able to participate at international level in recognition of the property's global importance?

• Agency outreach programme on World Heritage – are staff engaging or partnering with other sectors? For example, the relationship between managing agency and the tourism sector is often crucial. An effective partnership can bring mutual benefits whereas a poor relationship can result in misunderstanding and negative impact. Similarly, establishing strong partnerships with academic and research institutions can bring many positive benefits.

• Effective coordination mechanisms for serial properties. This is especially important for serial properties that are transnational.

Training providers and funders

Several training providers around the world offer specific training on World Heritage issues, some of which are officially recognized by UNESCO.[12] A list of University World Heritage Studies Programmes can be found on the UNESCO website (see Resources, p. 84).

Other sources of funding for training are usually linked to specific projects run by the World Heritage Centre and IUCN or other organizations working in and/or dedicated to World Heritage site management.

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12 – There are two levels of training institutions fitting this category: UNESCO-run institutes and centres (Category I) and institutes and centres operating under the auspices of UNESCO (Category II). Category II institutes and centres are not legally part of UNESCO, but are associated with it through formal arrangements.

Sustainable finance: Banc d'Arguin National Park (Mauritania)
Sylvie Goyet, Director General, Fondation Internationale du Banc d'Arguin (FIBA)

© Parc National du Banc d'Arguin (PNBA)

Banc d'Arguin National Park (Mauritania)

Known in schoolbooks for the sandy shallows where the French frigate Medusa *sank in 1816 inspiring the famous painting by Gericault, the Parc National du Banc d'Arguin (PNBA) is first and foremost internationally renowned as a shark and marine wildlife sanctuary and as the resting and nesting place for over 2 million migratory waterbirds; all reasons for World Heritage listing in 1989. Extending over 12,000 km^2, half marine and half terrestrial, it is a spectacular assemblage of imposing sand dunes cutting across flat deserts of gravel and salty* sebkha, *underwater channels, seagrass beds and mudflats dotted with numerous islands. As a result of severe droughts over decades, the formerly densely populated site is now home to only about 1,200 Imraguen people, 'those who collect from the sea', traditionally fishing for mullet by foot with shoulder nets. Covering a third of Mauritania's coastline, the park protects important nursery grounds which help to fuel the fishing economy of the whole subregion, industrial and small-scale fisheries alike.*

Financially sustaining the daily management and the administration of the park has been a key issue over the years. It has relied upon the Swiss NGO, Fondation Internationale du Banc d'Arguin (FIBA), created in 1986, to mobilize technical and financial support. Other dedicated projects supported by bilateral agencies and international NGOs sustained activities over the years. The Government of Mauritania also provided substantial financial support: 20 per cent of the total budget in 2005 to 40 per cent in 2007, showing a remarkable and continuous commitment.

But the need for more sustainable and less project-based funding has been long recognized. Setting up a conservation Trust Fund was first discussed in the 1990s. A feasibility study was undertaken in 2001 and, following its recommendations, the park undertook a full organizational audit, developed a management and business plan and consolidated its accounting and administration services. The EU-Mauritanian bilateral fisheries negotiations gave an important impetus to the Trust Fund's development. The two-year twice renewable agreement effective from 2006 provided a yearly allocation of €11 million to improve sustainable national fisheries policies. For the first time in such negotiations, €1 million per year was allocated to reinforce the budget of PNBA, recognizing the park's role as a fisheries management tool, and 50 per cent of the total amount was invested in the Trust Fund.

A Trust Fund Steering Committee composed of government, NGO and aid agency representatives was set up by ministerial decree in 2007. Officially created in 2009 in the United Kingdom, the fund was granted charity status in 2010. Building on expressed interest from various foundations, bilateral cooperation and private companies, intense fund-raising activities are now being undertaken to supplement the initial contribution of the EU fisheries agreement.

Developing a trust fund is not a simple process – over the last ten years the firm engagement of the Government of Mauritania and the park authorities made the successful outcome possible. Technical assistance from FIBA and the German bilateral cooperation agency, GTZ, also helped to broker the process over the years and mobilize support and project legitimacy.

5 Management processes

The best possible management practices are essential for effective World Heritage site management; but this is becoming increasingly difficult to achieve as the range of management skills and processes required by managers (as noted in Section 4.3) expands. This section reviews three areas of World Heritage management particularly relevant to the implementation of the Convention: sustainable use and benefit sharing; education and interpretation; tourism.

5.1 Sustainable use and benefit sharing

The World Heritage Committee's vision for the future implementation of the Convention sees World Heritage as '… a positive contributor to sustainable development'. However this concept is relatively new and the 1972 Convention does not make any specific mention of the term 'sustainable development'. Guidance on how conservation and sustainable development can be achieved and showcased in World Heritage sites is thus still being developed. Most natural World Heritage sites benefit from a high protection status, typically national park or strictly protected area, and resource use inside the property is normally limited to non-consumptive uses (such as tourism). Sustainable development therefore tends to be closely linked with the management of adjacent buffer zones. There are some rare cases where parts of the World Heritage site have a lower protection status and allow for sustainable consumptive uses. This is for example the case of most marine sites, where fishing is allowed outside the strictly protected zones. Central to the question of sustainble use in World Heritage sites is the protection and conservation of the site's OUV, while optimizing the benefits derived from World Heritage and ensuring equitable sharing arrangements with local communities and others.

Recognizing the importance of sustainability

Sustainable development is really a prerequisite for conservation; with unsustainable development and in particular unsustainable resource use being among the most significant threats to conservation. The Budapest Declaration (adopted at the 26th session of the World Heritage Committee) stressed the need to 'ensure an appropriate and equitable balance between conservation, sustainability and development, so that World Heritage properties can be protected through appropriate activities contributing to the social and economic development and the quality of life of our communities'. These concepts have been further elaborated in the *Operational Guidelines* which give guidance on the role of sustainable use in properties: 'World Heritage properties may support a variety of ongoing and proposed uses that are ecologically and culturally sustainable, and which may contribute to the quality of life of communities concerned. The State Party and its partners must ensure that such sustainable use or any other change does not impact adversely on the Outstanding Universal Value of the property. For some properties, human use would not be appropriate' (Paragraph 119). To date, however, these references to sustainable development and resource use have not translated into much actual policy and procedure in relation to implementing the Convention, although work is currently under way to address this.

Principles of sustainable use

Sustainable use is defined by the Convention on Biological Diversity (CBD) as: 'The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.'

For natural World Heritage sites the overall principles of the CBD can help to provide a management framework and policy context for linking sustainable development with

Sustainable use
• *Are effective mechanisms in place to ensure that resource use permitted in and around the World Heritage site is sustainable and does not impact negatively on its OUV?*

conservation. The CBD's three objectives relate to the conservation and sustainable use of biological diversity and fair and equitable sharing of its benefits. The CBD therefore explicitly recognizes the validity of sustainable use, so long as it is in the context of fair and equitable distribution of any benefits, and decisions on sustainable use take into account the maintenance of traditional knowledge, sustainable practices and innovations, and protect and encourage customary and sustainable use of biological resources.

The CBD has developed a set of principles for sustainable use of biodiversity, the **Addis Ababa Principles**, which can serve as a guiding model for management, although in some natural World Heritage sites it will be necessary to substitute geological values for biodiversity. The CBD's 2004 document *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* provides an overview of the principles and practical guidance on how they can be implemented at policy level. It is recommended that all fourteen principles should be reviewed and the management practices of the World Heritage site considered in the light of the *Operational Guidelines* for each of the principles. A summary of the relevant points is given below:

- Eliminating subsidies that contribute to illegal, unreported and unregulated resource use is a prerequisite of sustainable resource use.
- Resources over which individuals or communities have rights (these can be use, non-use or transfer rights) are usually more sustainable, as resource users have an incentive to manage sustainably and no longer feel the need to maximize benefits before someone else removes the resource.
- Resource users should participate in making decisions about use of the resource and have the authority to carry out any actions arising from those decisions.
- Management objectives for the resource being used should be defined; and management practices reviewed and adapted in the light of monitoring and research results.
- Management practices should consider impacts that are wider than the particular species being used to ensure that resource use does not impair the capacity of ecosystems to deliver goods and services that may be needed some distance from the site. For example, selective cutting of timber in a watershed should not adversely affect the ecosystem's capacity to prevent soil erosion and provide clean water.
- Benefits from resource use should flow to the managers of the local natural resource so that essential management to sustain the resources is maintained.
- For serial sites, where a resource is transnational, it is advisable to have a bilateral or multilateral agreement between those states to determine how the resource will be used and in what amounts.

Site-level sustainability

Consideration of sustainable development issues will usually need to consider World Heritage sites within their broader socio-economic landscape, rather than only activities within the site itself (see discussion on buffer zones below). This implies working with other stakeholders and institutions both within the site and in the surrounding area, and might require innovative approaches to governance or the development of partnerships and use agreements. In practice, consideration of sustainable development, resource use and conservation management objectives require the development of effective participatory management systems as highlighted throughout this Resource Manual. The use of indicators, maps and other tools can help to facilitate discussion to reconcile any perceived conflicts between resource use, development and conservation goals. It is important to know who is traditionally managing the natural resources and, for example, if men and women have different roles in resource utilization and/or management.

In the case of most natural World Heritage sites, which are located within protected areas, rules on resource use will to a large extent already be set by national protected area policies and legislation, although sometimes World Heritage status may result in stricter protection.

Management planning should also understand traditional or local governance and customary use systems, which may not be formally recognized by the national government. Where the natural World Heritage site consists of multiple land ownership units and is part of a living landscape or seascape, the issue may be more confused: the *Operational Guidelines* stress that *any use must not impact adversely on the Outstanding Universal Value of the property* (including its integrity and, if relevant, authenticity) and must be both ecologically and culturally sustainable (Paragraph 119). While most natural World Heritage sites only allow for non-consumptive uses, there are some examples of natural World Heritage which in certain areas support various forms of sustainable consumptive use. Usually, this concerns larger sites, where zoning sets aside areas for strict protection and areas for sustainable use. For example: the **Volcanoes of Kamchatka** natural World Heritage site in the Russian Far East consists of several protected areas of different designations; within some of these limited hunting (including fur hunting, fishing and mushroom collection) is permitted and some land has been set aside specifically to maintain the traditional lifestyles of the indigenous peoples. **Lake Malawi National Park**, part of a larger lake ecosystem, is similarly divided between strictly protected wilderness areas and an offshore zone open to traditional fishing, although large-scale trawling is banned throughout the protected area.

Volcanoes of Kamchatka (Russian Federation)

Lake Malawi National Park (Malawi)

Economic valuation

An increasingly important aspect of sustainable use and benefit sharing is the ability to understand the contribution World Heritage properties can make to regional and national economies. It is important for managers to be thinking about this and assembling evidence of the economic benefits generated by these sites. For example in the Wulong Karst component of the **South China Karst** World Heritage site visitation to the area doubled following World Heritage listing in 2007; 4.2 million visitors now come to this part of China, bringing significant management challenges but also great economic benefit. In this case the World Heritage site is helping to drive regional economic development and prosperity. Local managers are working with communities in the buffer zone to create sustainable livelihoods through growing and selling vegetables branded as Wulong World Heritage quality. A 2009 study of Australia's World Heritage properties, seventeen at the time, found that they generated Aus$12 billion annually and supported over 120,000 jobs. The gross economic value of tourism in the **Wet Tropics World Heritage Area** alone was estimated at Aus$426 million in 2007.

Wet Tropics of Queensland (Australia)

Managers and decision-makers should consider how World Heritage can positively benefit livelihoods and contribute to poverty reduction through addressing the dimensions of poverty:
• **Opportunities:** income, housing, food, alternative livelihoods, education, acquisition of new skills.
• **Empowerment:** governance mechanisms, community participation, benefits to women, children and youth, access and rights.
• **Security:** health, social cohesion, cultural traditions, maintenance of natural resources.

World Heritage properties can deliver a wide range of goods and services, including:
• resources for subsistence, livelihoods and nutritional improvement;
• maintenance of social and cultural values, and new or improved governance mechanisms;
• maintenance of resources crucial to human and ecosystem health, and traditional health care;
• maintenance of the quantity and quality of water resources for drinking and irrigation, and erosion control;
• disaster mitigation;
• climate change adaptation.

An effective way of understanding and promoting economic values is through regional economic valuation studies which can quantify these contributions. Such studies can help to make the case for support and good management to protect OUV and a sustainable flow of these ecological goods and services.

Role of buffer zones in sustainable development
Although the features of OUV are included within the World Heritage property boundaries, the areas adjoining the site (i.e. the buffer zones) can have a profound influence over the site and its management. The boundary of a World Heritage property and any surrounding buffer zone will usually have been agreed during the nomination process. Well-managed buffer zones can provide for sustainable resource use which benefits local communities in direct and indirect ways from the core World Heritage property. They are thus zones which require policies, regulations and management measures to ensure that the OUV is maintained and that benefits flow from the site. Some buffer zones are in fact protected areas (often IUCN categories V or VI) to ensure well-regulated activities that will not be harmful to the property's OUV. In other cases buffer zones are outside protected areas but subject to higher levels of regulation and monitoring than the general landscape or seascape.

The *Operational Guidelines* define a **buffer zone** as 'an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property' (Paragraph 104). This focus on ensuring appropriate buffer zones are in place recognizes the important part they can play in site management; in particular buffer zones can help to:
• **protect** the values of the property from current or potential threats originating outside the site's boundaries, and thus enhancing a site's integrity; e.g. protecting upstream water supplies from pollution; locating tourism facilities outside the site; regulating agricultural practices to help prevent alien species or nutrient leaching into the site;
• **manage** the impacts of climate change such as biome shifts of fauna, flora and habitats – in these circumstances World Heritage sites may need to be expanded to ensure that values remain protected;
• **create** linkages or connectivity to adjacent protected areas or other natural areas not primarily managed for biodiversity and landscape/seascape conservation, which helps to integrate World Heritage properties with, for example, local cultural and spiritual practices or community sustainable use practices;
• **foster** sustainable resource use that is compatible with the World Heritage property.

In the case of serial World Heritage properties, this provision of connectivity between different elements of the series will usually be particularly important for the conservation and management. **Cape Floral Region Protected Areas**, for example, a serial World Heritage site (Western Cape and Eastern Cape Provinces, South Africa) is made up of eight protected areas, covering 553,000 ha, and a buffer zone of 1,314,000 ha.

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Cape Floral Region Protected Areas (South Africa)

5.2 World Heritage education and interpretation programmes

Articles 4 and 5 of the World Heritage Convention note the importance of presenting cultural and natural heritage, and encourage States Parties to provide information on the policies and programmes for the interpretation, presentation and promotion of properties under their jurisdiction. World Heritage properties should aim to be centres of excellence where knowledge is passed on regarding the importance of World Heritage values specifically, and conservation management expertise to other protected areas generally.

Educational role of World Heritage sites

Education forms an intrinsic part of managing World Heritage sites and is specifically referred to in Article 27 of the World Heritage Convention, where the role of educational and information programmes is defined as being 'to strengthen appreciation and respect by their peoples of the cultural and natural heritage defined in Articles 1 and 2 of the Convention'. This role should ideally be seen as a two-way communication between local people not closely involved in day-to-day site management and staff managing the site. The relationship and understanding between local people and site management should be a two-way learning process; and educational programmes in particular should ensure recognition of the importance of the World Heritage site from the perspectives of *all* stakeholders (including men and women, and different age groups within the community, etc.).

Developing educational programmes within World Heritage sites generally requires setting up projects linked to local communities. World Heritage sites can inspire pride of place and a sense of belonging in the communities living in and around them, particularly if their global importance is understood. Conveying this message is especially important for World Heritage site managers who are developing World Heritage educational programmes with schools or other formal or non-formal education institutions in their regions.

When working with educational establishments, one of the most important initial tasks is for site managers and staff to engage and inspire teachers/trainers/lecturers about the values

INDICATOR

Education and interpretation programmes
• *Do education, interpretation and awareness programmes significantly enhance the understanding of the site's OUV among stakeholders?*

Contents

of their World Heritage site and how they can be used creatively in the education curriculum. This can be done, for example, by setting up working groups where education professionals can come together and discuss existing and new teaching materials and share good practice. Teacher/trainer/lecturer training should also be a core part of any World Heritage educational programme and can be used to deliver materials that are developed to interpret the World Heritage property. This method of outreach is cost effective and is also the best way to reach a wide range of stakeholders year after year.

One tool that managers can introduce to educational establishments is **UNESCO's World Heritage Education Kit:** *World Heritage in Young Hands*, which is designed to stimulate teachers' and students' interest in the central messages of the World Heritage Convention. The kit, which can be downloaded in a range of languages from the World Heritage website (see Resources, p. 87), contains:
• information on all aspects of World Heritage that can be incorporated into school curricula;
• forty-two suggested activities (e.g. discussions, visual sessions, site excursions, role play, classroom activities) to provide a better understanding of the characteristics, values and conservation of World Heritage sites around the world; and
• information sheets and glossaries of terms to expand educators' knowledge of World Heritage.

Schools can also be encouraged to join the **UNESCO Associated Schools Programme**, which requires them to make a pledge to teach UNESCO values as part of their curricula.

Less formal education can be focused on local residents or specific groups within local communities, such as women, elderly or less able people. Volunteer programmes can be a particularly effective way to provide local people with access to the site and to 'learn by doing' about the site's values. The **World Heritage Volunteers Initiative** consists of two complementary activities: Heritage Work Camps and a World Heritage Non-Formal Education kit for educational activities outside the formal school setting. The work camps gather young volunteers from different countries during a given period of time to live and work together with the local population towards a common conservation goal.

Site interpretation
Presentation is the explanation of a property and its values to the public (visitors and local people) from established, authoritative information sources; as such it is a largely one-way process of communication. *Interpretation*, on the other hand, embraces a much wider concept (in fact presentation is just one element of interpretation) which refers to the full range of potential activities intended to heighten public awareness and enhance understanding of a site. These activities can include print and electronic publications, public lectures, on-site and directly related off-site installations and/or activities, educational programmes, community activities, ongoing research, and training and evaluation of the interpretation process itself.

Interpreting World Heritage values
The presentation and interpretation of natural World Heritage sites should, as noted in the Convention text, increase people's awareness, understanding and appreciation of the need to preserve cultural and natural heritage, ensure that future generations understand the values associated with this heritage and help to increase the participation of stakeholders in the protection and presentation of heritage. This is often a particular challenge for managers of natural World Heritage sites, because it is a field in which conservationists are not necessarily well trained.

Interpretation activities need to convey messages about the three pillars of OUV (see Section 2.1). Statements of OUV (see Section 2.2) tend to be relatively academic texts, so

that interpreting and presenting the OUV may not be as simple as repeating the reasons why the World Heritage Committee approved the listing of a site. The OUV is nonetheless the starting place for interpretation.

The site's nomination file should include full details of the OUV and supporting material. Due to World Heritage sites' special qualities, most will have been subject to a wide variety of research projects and papers and there should be information available to help develop interpretation material. Interpreting the OUV may involve explaining unique values that are not necessarily those initially most obvious to local people and visitors. In Finland and Sweden, for example, the **High Coast / Kvarken Archipelago** (in a northern extension of the Baltic Sea) is outstanding because of the ongoing rapid process of land uplift as land weighed down under glaciers in the last ice age rises. However, most visitors to the area are drawn by its beautiful landscape values and may be unaware of its unique values in terms of geomorphology.

Along with scientific resources, managers often need to consider local knowledge (also known as traditional, indigenous, community, customary or practical knowledge), traditions and practices in relation to site values. In many cases, traditional knowledge has been passed down orally for generations and roles, knowledge and traditions often differ between men and women, and between different age groups. Local knowledge can be expressed through stories, legends, folklore, rituals, songs, the performing and visual arts and even laws and/or marketing campaigns. Understanding and interpreting how a site's unique values have been expressed by local people can help to increase understanding of the site both on the part of local people and visitors. For example, the World Heritage website provides a scientific description of **Uluṟu-Kata Tjuṯa National Park**, formerly called Uluṟu (Ayers Rock – Mount Olga) National Park (Australia). It begins: 'Uluṟu is composed of hard sandstone which has been exposed as a result of folding, faulting and the erosion of surrounding rock'. Yet, the less scientific website of the Australian Department of Sustainability, Environment, Water, Population and Communities, which is dedicated to Uluṟu-Kata Tjuṯa, has been developed with the traditional owners of the site.

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Uluṟu-Kata Tjuṯa National Park (Australia)

They introduce the park as a land 'created by our creation ancestors. In their travels they left marks in the land and made laws for us to keep and live by. Generations of Anangu have actively managed this ancient land using traditional practices and knowledge ...' and tell visitors the story of the park and its people. Communicating values like this is a specialist job which should be subject to professional standards. Based in the **Canadian Rocky Mountain Parks** World Heritage site, the Interpretive Guides Association aims to encourage excellence in the interpretation of nature, history and culture in Canada's Rocky Mountain national parks and surrounding areas. The Association's **Outstanding Heritage Interpreter Award** accredits interpretive guides who have demonstrated excellence in heritage interpretation and provides ongoing opportunities for training in heritage interpretation.

Developing an interpretation plan

Section 5.i of the World Heritage nomination format requires sites to have policies and programmes relating to presentation and promotion. Most sites therefore develop an interpretation and presentation plan before they are nominated to the World Heritage List. Inscription as a World Heritage site will however require revision of the interpretation plan to include the significance of a site's OUV and how this contributes to the global implementation of the World Heritage Convention. Although much of the literature and guidance on interpretation is focused on visitors, in many cases World Heritage values also need to be interpreted for and by local people. An overview of issues to consider in developing programmes is given below, looking first at visitors to the site and then at interpretation for local people.

Interpreting and presenting OUV to site visitors

Interpreting Our Heritage by Freeman Tilden (the classic text on interpretation), defines principles of interpretation aimed primarily at visitors to a site. Within the World Heritage context the *Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* developed by ICOMOS also contains principles for site interpretation. Both these documents are worth reviewing; some of their key points are set out below:

- Development and implementation of interpretation and presentation programmes should be an integral part of planning, budgeting and management of a World Heritage site.
- Local people should be involved in the development of interpretation and presentation programmes to ensure they are locally relevant. Because the question of intellectual property and traditional cultural rights is especially relevant to the interpretation process, legal ownership and right to use images, texts and other interpretive materials should be discussed and clarified when developing interpretation and presentation programmes.
- Qualified interpretation professionals should be included within site staff.
- The purposes of interpretation are to provoke, to excite the intellect and to reinforce the experience. Interpretation should generate interest, develop deeper understanding of the site and elicit concern and support for the conservation of the site's OUV.
- Interpretation and presentation programmes should identify and assess their audiences demographically, geographically and culturally.
- Interpretation should be based on a careful, multidisciplinary study of the site and its surroundings and should include where appropriate alternative historical hypotheses, local myths and stories.
- Interpretation should serve a range of educational and cultural objectives. The success of an interpretive programme should not be judged solely on the basis of visitor attendance figures or revenue.
- Interpretation addressed to children should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. School programmes are required, which will be substantially different from the adult visitor programmes.
- Interpretive activities should aim to provide equitable and sustainable economic, social and cultural benefits to the host community at all levels, through education, training and the creation of economic opportunities.
- The interpretive programme and infrastructure should be designed and constructed in a way that ensures periodic content revision and/or expansion.
- Interpretation programmes and their physical impact on a site should be monitored and evaluated, and changes made on the basis of both scholarly analysis and public feedback. Visitors, members of associated communities and heritage professionals should be involved in evaluation. Various monitoring methodologies exist (see Resources, p. 88).

A number of key questions can help to guide the development of an interpretation plan:
- Do visitor arrivals turn over rapidly (say, every one or two hours) or do visitors tend to stay longer (three hours, a whole day, overnight or several nights)? Answers will provide guidance on how detailed the interpretation programme should be and how long visitors are likely to have to absorb the information.

- Are visitors locally based? Do they visit frequently or does the area receive visitors for a 'once in a life-time' experience? This will help to determine if the interpretation programme should be constantly evolving for locally based visitors or aimed at those seeking a one-off experience (e.g. Africa safari or Galápagos cruise)
- What are the cultural, linguistic, re-gional and national characteristics of the visitors? What is their socio-economic profile? This will help to determine if the programme should include translation facilities, the level of intellectually challenging material, specific cultural slants, etc.

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Tourists – Galápagos Islands (Ecuador)

Local people: interpreting and presenting OUV

Site interpretation and presentation is often focused at visitors to the site. However most sites also have local stakeholders, including people living in or regularly using the site, many of whom have cultural relationships with the area stretching back centuries, if not millennia. This group should also be a target of interpretation programmes. For this audience, interpre-tation may be initially less focused on providing information and more at gaining insights from local people about the history, use, management, governance and cultural traditions of the site. A process for developing an understanding of local knowledge will be crucial. Once this is ongoing it may be necessary to develop educational programmes and activities which help to introduce the concepts behind World Heritage listing and explain how this links with the management practices undertaken at the site. An important aspect of inter-pretation for local people will be ensuring that understanding of the site's values is passed on to younger generations. The programme can also develop long-term activities such as development of 'friends of' groups, including volunteer programmes to carry out manage-ment tasks. Sites that have outreach programmes undertaking development activities may also require interpretation relating to these particular activities.

World Heritage presentation

There are many different formats for interpretative material. Some basic considerations to take into account when assessing interpretive media needs are given below.
- **Flexibility:** How adaptable is the medium to changes of emphasis, design or layout?
- **Participation:** Does it enable and encourage visitors/local people to become actively involved?
- **Provocation:** Does it arouse curiosity and encourage people to discover more about an issue?
- **Accessibility:** Does it allow for different levels of comprehension, language, capacity or physical ability?
- **Appearance:** Does it intrude on the surroundings or does it reflect and harmonize with them?
- **Durability:** Is it vulnerable to damage (by people, weather, etc.) or prone to failure or breakdown?
- **Resources:** Is it expensive to install, maintain, repair or replace?

World Heritage emblem

United Nations
Educational, Scientific and
Cultural Organization

World Heritage
Convention

The World Heritage logo, adopted as the official emblem of the Convention in 1978, is used to identify properties inscribed on the World Heritage List. The central square symbolizes the results of human skill and inspiration, the circle celebrates the gifts of nature. The emblem is round, like the world, as a symbol of global protection for the heritage of all humanity. This creates a strong and consistent visual identity that heightens awareness of the World Heritage brand and its values by visitors, communities, other government entities and management personnel. The use of the emblem is strictly regulated and determined by the World Heritage Committee, with guidelines for its use defined in Section VIII of the *Operational Guidelines*. (A link to download a good quality image file for the emblem is given in Resources, p. 88.)

© UNESCO

Example of World Heritage emblem, Australia

All World Heritage sites should aim to display the emblem prominently, consistently and repeatedly in order for the visitor to 'see' it and become familiar with it. The World Heritage emblem should also be displayed whenever possible on all products produced by the management authority of the World Heritage site, e.g. stationery (such as letterheads, envelopes, business cards, etc.), newsletters, publications (such as brochures, leaflets, posters, booklets, etc.), entrance tickets / passes, websites, audiovisual material, communication and educational displays and interpretive materials (such as information panels, wayside exhibits, trail markers, and related signage). The emblem should generally be used in full and unmodified form (top of page) although conceptual versions can be used in more artistic visualization, for example, on-site architectural elements such as displaying the emblem on lighting, glass, metal doors or floor tiles. However the emblem should not be used in places where it detracts from values such as scenic beauty.

5.3 Tourism at World Heritage sites

The global growth in tourism is well documented and today tourism is often described as the world's 'largest' industry. An increasing and significant proportion of this industry is centred on nature and associated cultural heritage.

Tourism: a delicate balancing act

At its best tourism can provide an outstanding opportunity to increase the understanding of natural and cultural heritage, as envisaged by the World Heritage Convention, while providing long-term financial support to site management, local communities and tourism providers. But poorly managed tourism or excessive visitor numbers at a site can pose major threats to OUV and degrade the quality of the visitor experience, for example if the facilities provided are inadequate.

World Heritage properties provide spectacular destinations that can attract large numbers of visitors, create economic benefits through the iconic World Heritage brand and make major contributions to regional and national economies. Managers of World Heritage properties, however, often do not see the economic benefits of tourism returned to on-the-ground management activities; yet research on visitor attitudes indicates that people are much more willing to pay fees if a substantial component of the revenue goes to operating costs or capital investments relating to protecting the site's values. The challenge when developing tourism plans and policies is to respect as paramount the conservation objectives (both tangible and intangible) of the World Heritage Convention, while engaging with tourism development that is sustainable *and* equitable.

Tourism policies and plans

The UN World Tourism Organization (WTO) defines **sustainable tourism** as: 'Tourism development that meets the needs of the present tourists and host regions while protecting and enhancing opportunity for the future. (The desired outcome is that resources will be managed) in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems'. IUCN has published a set of *Principles for Sustainable Tourism at World Heritage Properties* (see Appendix 3 and Resources, p. 88 for link), which recognizes and builds upon existing charters and guidelines to ensure best practice tourism at heritage places. The nine principles define cooperative stakeholder relationships among all relevant government agencies, public and private tourism sectors and civil society, including NGOs, visitors, the site's management authority, museums and community members. The principles seek to ensure that visitation to World Heritage sites and destinations contributes to the long-term sustainability of their heritage values and sense of place, while generating cultural and socio-economic benefits to the local population and surrounding region.

The overall aim of sustainable tourism and these principles is a good place to start when developing tourism policies. But each World Heritage property will be unique in relation to the number of visitors, attractions on offer, communities involved, etc. Providing specific guidance on tourism planning is thus difficult, so listed below are some basic elements that it may be useful to consider when developing tourism policies and planning. It is important to develop the capacity of World Heritage site staff in tourism management so ideally the development of plans and policies should not be left to external consultants with little input from site managers.

• Linking tourism to overall World Heritage management and conservation of OUV
Managers of natural World Heritage sites need to determine how they will work with visitors, the tourism industry and other stakeholders to develop effective and sustainable tourism

activities and actively support the protection of OUV. A good understanding of OUV (see Sections 2.1 and 2.2) is the starting point for any tourism-related planning and this should always be consistent with the overall management system and the management plan. Plans should further consider management capacity, stakeholder concerns, existing legislation and integration with other policies in place at the property. Consideration should be made of the contribution of tourism to the OUV in terms of awareness, understanding, financial support, etc.

• Zoning
Zoning is a component of planning and management that when used properly limits the spread and intensity of tourism impacts. This is achieved through carefully defining quantitative standards which specify the amount of change in the site condition that is acceptable. Such zoning focuses on balancing those places of greatest natural and cultural value with those places of greatest tourism demand. Often, but not always, these are one and the same. Effective zoning systems, when linked to appropriate management objectives and prescriptions, can accommodate the demands for access, quality visitor experiences, the need to support infrastructure and the aspirations and activities of relevant stakeholders.

• Community engagement in World Heritage tourism
Community engagement in tourism at World Heritage sites should where appropriate facilitate the involvement of local communities and indigenous peoples in meaningful and beneficial tourism ventures (see Section 2.5 for more guidance on working with local communities); tourism should respect local community uses of the site; empower communities to make decisions about the conservation and use of their heritage; and promote the development of capacity to ensure effective community participation.

• Understand tourists' views of the sites
Research, surveys and monitoring can help with the understanding of how tourists view and use a site. Researchers should profile the various groups of visitors and identify the types of tourism at the site; and examine tourists' travel patterns, activities and the attractions they visit to understand how the site managers can plan sustainable tourism development that protects the site's OUV. Satisfied and informed visitors are more open to contributing income through payment for visitor services and products. They are also more likely to promote the site to acquaintances and gain a better understanding and appreciation of the OUV, which in turn leads to greater opportunities for support of the World Heritage Convention.

• Connection with wider landscapes and destinations
World Heritage sites should be integrated into wider country or regional development plans for tourism, and should where possible influence these plans. As much of the tourism promotion, visitor activity and economic development associated with World Heritage sites occurs outside the site, and often beyond the direct influence of site managers, tourism development and visitor management requires the establishment of strong relationships with local authorities and tourism operators in order to influence development in buffer zones and surrounding areas. It is in the interests of managers to try and embed their sites within national tourism marketing and branding programmes and ensure that they derive some benefit from them.

• Monitoring and research
The World Heritage nomination process requires tourism to be assessed (see section 5h of the nomination format); including visitor numbers and trends, visitor facilities (e.g. interpretation/explanation, infrastructure, accommodation and rescue operations). The Periodic Reporting format (see Section 6.3) requests information on these aspects and includes rating of tourist facilities and capacity to manage tourism. Tourism plans should include monitoring and research and develop a list of indicators with justifications for their selection and

estimates of associated monitoring costs. Plans should also include details of how to train site staff in standardized methods of collecting data and determine how stakeholder partners can be involved in monitoring and setting standards for managing visitors. (The development of World Heritage monitoring and research is further discussed in Sections 6.1 and 6.2.)

• Facilities at the site
The nomination process requires that, where appropriate, visitor facilities should be in place at the site prior to it being added to the World Heritage List. The facilities should be regularly evaluated to ensure that they are meeting visitor needs and delivering tourism objectives, e.g. showcasing OUV and ensuring the delivery of local benefits. Having retail facilities in place can, for example, provide sustainable sources of revenue for management and local communities as well as create a demand for locally produced goods, foods, arts and crafts.

• Ensure that tourism industry links with the site are appropriate
Links between the tourism industry and the management authority of World Heritage properties are often reported as weak. Open, regular, two-way communications with tourism operators are the most important strategy for ensuring the development of sustainable tourism. Steps that can help to build this relationship include ensuring that managers have an understanding of the tourism market: how the tourism industry is organized and the tourism industry's vision and marketing of the site; e.g. understand how National Tourism Office officials and tourism industry representatives draw tourists to the site. In Australia the National Landscapes Programme, a joint initiative of Parks Australia and Tourism Australia, brings together tourism industry bodies and operators at the national planning level and many small tourism businesses at the local level. An example of this can be seen in the **Greater Blue Mountains Area**, where the site manager plays an active role on local tourism boards and planning groups in order to influence the industry and to protect the site's OUV.

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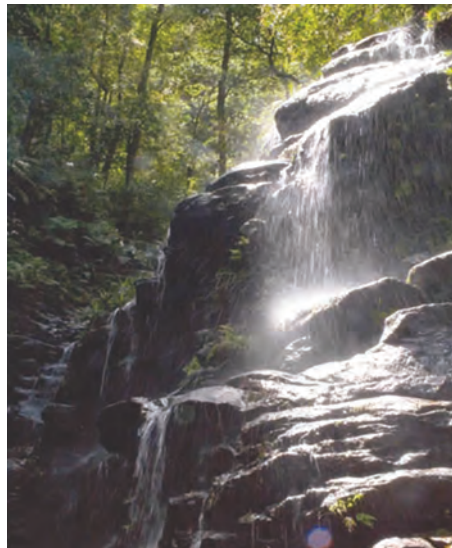
Greater Blue Mountains Area (Australia)

• Concessions
A concession is a permit, licence or lease that regulates commercial activities, organized non-profit activities and/or use of land and the building of structures on specific locations within a World Heritage site or buffer zone. Such activities should only be allowed if the conservation values of the site are protected and the concessions are consistent with the site's management plan. Concessions can be an important source of revenue. Many national protected area authorities around the world have policies and standard practices in relation to World Heritage site concessions and leasing management. The **Department of Conservation in New Zealand** has a particularly useful website which includes details of the concession structure for protected areas, including World Heritage sites (see Resources, p. 88, for link).

• Interpretation
A further prerequisite of tourism is the effective presentation of the whole site to explain its values, especially its World Heritage values. Site presentation and interpretation are covered in Section 5.2.

CASE STUDY

Contents

Education and training: the Jurassic Coast (United Kingdom)
Anjana K. Ford, Jurassic Coast Education Coordinator

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Pupils on boat trip along the Jurassic Coast (Dorset and East Devon Coast) (United Kingdom)

Dorset and East Devon Coast is England's first natural World Heritage site and is commonly known as the Jurassic Coast. It was listed as a World Heritage site in 2001 due to its outstanding geology, which represents 185 million years of the Earth's history in just 150 km. The international importance of the rocks, fossils and landforms are the core values of the World Heritage site and these factors play an important part in shaping our education aims and objectives. World Heritage status was achieved because of the site's unique insight into the Earth sciences, which depicts a geological 'walk through time' spanning the Triassic, Jurassic and Cretaceous periods. In order to increase awareness and understanding of the values of the Jurassic Coast as a World Heritage site and to give communities a sense of pride and ownership, four key objectives have been identified:

• To improve access to outdoor education facilities and create learning resources along the Jurassic Coast.
• To create resources focusing on the values of the World Heritage site and disseminate these effectively.
• To increase harmonization of the values of the World Heritage site with the formal school curriculum from 3–19 years.
• To increase opportunities for lifelong learning and engaging with the conservation of the Jurassic Coast.

A major success of our educational programme has been to support local schools across the Jurassic Coast that wish to become more involved in the engagement and interpretation of the World Heritage site. This has been achieved through creating educational resources that are relevant, engaging and fully supported by a programme of teacher training. Our education materials inspire teachers through setting the Jurassic Coast in a global context to emphasize the international importance of the site and to promote global citizenship in children and young people. In addition many of our projects help schools to interpret aspects of World Heritage through building an understanding of personal and local heritage (such as exploring family stories, local traditions and artefacts in local museums). For example we have led specific projects in local communities through schools where students have researched aspects of their local and world heritage and worked with an artist to create banners and flags for their towns. The Jurassic Coast also coordinated the first UK UNESCO World Heritage Site Youth Summit in 2009, where over eighty young people from around the UK came together to learn and discuss the importance of World Heritage sites. The objective of the youth summit was to help schools to learn more about their local World Heritage sites and open pathways for future work. Schools that develop exceptional projects on World Heritage are encouraged to apply for UNESCO Associated School status. This recognizes their pledge to ensure that they integrate the values of UNESCO into their teaching programme. We believe that this approach is a sustainable way of maintaining a World Heritage educational programme.

Interpreting World Heritage: Joggins Fossil Cliffs (Canada)

Jenna Boon, Director, Joggins Fossil Institute

The cliffs and the fossil record of life contained within them are the central features of the Joggins World Heritage site on the coast of Nova Scotia (eastern Canada). The Joggins Fossil Cliffs, inscribed in 2008, are the best representation of the biodiversity that existed in the 'Coal Age' or Carboniferous Period of Earth's history. Besides revealing millions of years of geological time, a fact that lends itself to chronological and thematic interpretation, the cliffs are also at the heart of both the scientific and cultural value of the site.

The Joggins Fossil Institute is an NGO which partners with various organizations to protect, promote and present the site for current and future generations. The institute uses varied resources to interpret the site's OUV. Through engaging interpretation, visitors and the local community become active participants in the stewardship of the site. In addition to traditional resources that include print materials, exhibition panels and displays of collections, the infrastructure at the site also communicates the significance of the cliffs. The design of the Joggins Fossil Centre, an interpretive and research facility, mimics the cliffs with its angular construction and use of local stone. The grounds are used for interpretation as well. While at play in the stone maze, children learn about extinction and a wind turbine is used as a reference for the height of the Bay of Fundy tides. The stairway from the Centre to the beach below is used as a tool to interpret geological time – from the present to the Carboniferous.

Group of tourists – Joggins Fossil Cliffs (Canada)

©Wally Hayes

Interpretation is facilitated through the exhibition gallery and staff who lead varied thematic tours. The content, length and delivery of guided tours vary for those with a cursory interest to those who have made geology and palaeontology their profession.

Ongoing research at the site is supported through a full-time curator of palaeontology who has affiliations with regional universities and provincial, national and international palaeontological organizations. Collections are stored and managed at the Joggins Fossil Centre and are also accessible electronically through the internet.

Local community members are provided with free access to the site and many participate actively in a volunteer programme that supports research and education. In particular, the local school uses the facilities for natural and social sciences teaching. Outreach activities are achieved through varied mechanisms and include social media and public lectures and workshops.

The Institute receives funding from various sources. The overall operating budget is about Can$600,000. The Institute earns about half of its revenue through provision of services including sales from the gift shop, catering, fees for tours, donations and cafe sales. The remaining funds come from various government and non-government grants.

Continual upgrading and improvement of human and physical resources at the site is driven by the outcomes of the evaluation process that encourages input from all stakeholders. As a result of the concerted and strategic actions for presenting and promoting Joggins Fossil Cliffs, protection is achieved with minimal resources being allocated for enforcement.

Sustainable tourism: Wadi Al-Hitan (Egypt)

Khaled Allam Harhash, Nature Conservation Sector, Egyptian Environmental Affairs Agency

In 2005, Wadi Al-Hitan (Whale Valley), was listed as the first natural World Heritage site in Egypt due to its unique number and quality of middle Eocene whale fossils (40–43 million years ago). The site's OUV is summarized by IUCN as 'the most significant site in the world to demonstrate the evolution of whales' from land-based to ocean-based animals (IUCN, World Heritage Nomination Technical Report, 2005).

Wadi Al-Hitan – Valley of the Whales World Heritage site (VWWHS) forms part of Wadi Al-Rayan Protected Area (WRPA), located in Faiyum Governorate within the Western Desert of Egypt. The valley lies in a magnificent desert landscape of wind-eroded pillars of rock, surrounded by sand dunes, hills, cliffs and escarpment-bounded plateau.

Managers and visitors site facilities – Wadi Al-Hitan (Whale Valley) (Egypt)

© UNESCO / Guy Debonnet

Several actions have been taken by WRPA to strengthen the management of the World Heritage site since its inscription, including the preparation of a management plan; the provision of economic benefits for neighbouring communities; and implementation of research, monitoring and reporting systems to support effective management and protection. The Faiyum government declared the Wadi Al-Hitan a major component of its ecotourism strategy due to the concentration and quality of its fossils and their accessibility and setting in an attractive and protected landscape.

Prior to inscription the area received about 1,000 visitors per year. This number has since risen dramatically and the visitor monitoring programme shows that the site received 13,000 visitors in 2009, with the total number of visitors between 2005 and 2009 reaching 46,000.

This increase in interest and number of visitors to the site has been managed in a number of ways. The visitor management plan expects visitors to stay in Wadi El-Hitan for two to three days, to use the WRPA Visitor Centre to view the Wadi El-Hitan DVD and interpretive displays and to visit the site itself. The WRPA identified selected boundaries to encompass the key features of interest, with a buffer zone that incorporates a slightly larger area. Fully equipped staff facilities have been set up to allow the permanent presence of protected area staff implementing day-to-day protection and management activities such as the demarcation of tracks, monitoring and controlling visitor movements, and for public awareness and law enforcement purposes. These facilities include outposts, checkpoints, camping sites, parking area, WC and footpaths. In addition, vehicular access inside the valley was closed.

An interpretative plan was prepared to establish the design, quality standards and content for tourism information including directional signs (along roadways) and interpretive signs that are informative, discreet and durable. The management has also helped the development of merchandising products that support local communities (e.g. selling their products in the cafeteria, initiation of a NGO called Friends of Whales Valley, camel riding for tourists, etc.) and prepared a business plan to ensure that site operations can be sustainably resourced.

All these actions and facilities play an important role in presenting the magical atmosphere of lasting interest for national and international visitors to the Valley of the Whales.

6 Delivering results

Determining if World Heritage managers, staff and other stakeholders have achieved their management objectives and are ensuring the effective conservation of the site's OUV is an essential element of successful management. Research and monitoring can help to inform managers that goals have been met and reporting results to the World Heritage Committee assures the international community that these sites of global significance are being effectively conserved. This final section of the Resource Manual reviews research, monitoring and reporting needs for World Heritage and concludes with further information on the *Enhancing our Heritage Toolkit*, a management effectiveness system devised specifically for natural World Heritage sites which can help managers and staff to assess their entire management system to ensure that site management is reaching the exemplary model that all World Heritage sites strive towards.

6.1 Monitoring at World Heritage sites

Monitoring is a vital tool to highlight management success and identify management programmes that need improvement. Without an effective monitoring programme World Heritage site managers will find it difficult to manage their site effectively and respond to World Heritage reporting requirements.

Developing monitoring programmes

Monitoring is a necessary step once a property has World Heritage status, but it should also be a fundamental part of managing any protected area. It provides the information needed to assess how the site is performing over time with respect to a wide variety of social and ecological issues, allowing managers to adapt as necessary.

One of the key reasons for developing and assessing targets and indicators, as discussed in Section 3.2 on management planning, is to draw up an effective monitoring plan that is directly linked to the management of OUV. The first step in developing such a plan is to agree on a set of **indicators** that planners use to collect and analyse the data required to meet information needs. When developing monitoring plans it is also advisable to consider the type of information the World Heritage Committee requires for its Periodic Reporting process (see Section 6.3). The various indicators suggested in this publication (see the boxes in each section and overview in Appendix 1) provide a first approximation for Periodic Reporting requirements. Most properties will also have objectives that relate to issues beyond the scope of their World Heritage nominations, which should also be regularly monitored.

Indicators may be either quantitative or qualitative, and should ideally:
• have a clear, predictable and verifiable relationship to the element being measured (e.g. if stability of forest ecosystems is being measured, indicators should include keystone species dependent on a functioning forest ecosystem);
• be sensitive to change and thus able to show that management actions are having an effect (e.g. if the quality of freshwater is being monitored, and activities include the reduction of water pollution, then the abundance of a species sensitive to that particular pollution could be chosen as an indicator);
• reflect long-term changes rather than short-term or localized fluctuations (e.g. if monitoring a particular species is important to understanding the overall health of all large mammals in a protected area, it is important to choose one likely to show long-term population changes, such as most large predators, rather than one that has regular short-term population fluctuations such as some antelope species);

INDICATOR

Monitoring
• *Are the values for which the site was inscribed on the World Heritage List adequately monitored?*
• *Are management plans, tools and decisions adapted and improved as a result of monitoring outcomes?*

- reflect changes that will have direct implications for management, including biological, social, cultural, economic and political changes (e.g. some indicators should also relate to direct pressures to the target likely to be present in the protected area, such as number of poachers apprehended);
- reflect changes on a scale and over a period that is relevant to management (e.g. it is important to avoid indicators that only reflect changes over many decades, because this is too slow to be addressed within the regular management cycle);
- be cost-effective in terms of data collection, analysis and interpretation (e.g. if possible avoid indicators that need specialized equipment or expensive techniques to collect);
- be simple to measure and interpret (i.e. something that can quickly be picked up by a new member of staff if the person responsible for monitoring the indicator leaves);
- be able to be collected, analysed and reported on in a timely fashion (e.g. if possible do not choose indicators that are in parts of the protected area that are often inaccessible, such as areas where heavy rain can make roads impassable);
- assess impacts of known pressures and detect new pressures (e.g. it is important to analyse the reasons for population fluctuations in indicator species rather than simply assume that they are responding to traditional threats, so for instance, longer-term climate change may be a greater factor than over-fishing for a particular marine indicator species).

Indicators alone are not enough. They should relate to management triggers, for example by setting thresholds a manager can use to decide when and if management ought to be adjusted in response to significant changes in monitoring indicators. A classic example would be monitoring soil compaction on walking trails to assess set levels of visitor use. Predetermined thresholds could trigger decisions to limit access or to close off areas to allow recovery.

When developing monitoring programmes it is important to review any current monitoring activity and to consider a variety of data-collecting methods. For example:
- **Use existing data sources:** Monitoring data may be available from existing, reliable sources. Although this may not exactly match identified monitoring needs, managers can consider modifying indicators to draw on existing sources and thus save time and money. For example, if river flow is an indicator, a government agency may have an automated stream flow gauge 20 km upstream that provides a reasonably reliable estimate of stream flows within the protected area.
- **Consider alternative methods:** There are many different ways of collecting data and monitoring indicators (see Resources, p. 88). Different methods require different levels of resources and it is worth researching the most cost-effective option as monitoring can be a major drain on protected area management resources.
- **Involve the local community in monitoring:** There is a growing body of work looking at complementary approaches to monitoring that involve local people. Such approaches present a cost-effective way of collecting data, can help to increase local involvement in management and may have the added bonus of increasing support for the protected area overall through greater understanding of management objectives. Locally based options may be particularly appropriate when local communities are actively using the natural resources within the protected area.

The best practice guidance given above provides a good background to the development of a monitoring plan. The type of information required is outlined below; based on **monitoring protocols**, which should be developed to ensure the quality and credibility of the monitoring. This should ensure that monitoring is carried out consistently, data are suitable for comparative analysis, and any changes detected are real and not due to differences in sampling, for example if staff change. Monitoring protocols should be tested and provision for review built into the protocol.

Background information
- **Objectives:** Why is monitoring being carried out? This should be linked to the indicator(s) monitored and the thresholds used.
- **Bibliography:** A list of relevant material (e.g. journal articles and reports) and information on previous activities (including constraints to monitoring activities).

Protocol design
- **Method:** Method or methods used (e.g. sampling, interviews, observation, line transect techniques, traps or strip census methodology).
- **Procedures:** Standardized procedures for collecting data, including area of monitoring, staffing requirements (e.g. numbers, required training, time allocated), equipment requirements (e.g. vehicles, binoculars, GIS, traps) and safety procedures.
- **Frequency of data collection:** Monthly, quarterly, annually, etc.
- **Data collection:** Indicators to be measured (e.g. species, number of sightings, fire frequency, average earnings of local communities).
- **Data analysis:** Advice regarding analysis and comparison (e.g. use of graphs, analysis software, comparisons, etc.)
- **Data management:** Records should include the monitoring results (data sets) and the history of monitoring development and revision.

Protocol adaptation
- **Review:** As with all management programmes, monitoring activities should be regularly reviewed to ensure that not only are the right things being monitored, but that monitoring is carried out in the most effective way (resources are not being wasted on monitoring nnecessary things), and that the results are used to improve management.
- **Revision:** Although protocols aim to ensure standardization of monitoring (for the reasons discussed above) they should also be adapted and revised if the review process so indicates. Revision may need to take place due to changes in technology, gaps in data need, budget changes, and changing conditions on the ground, including new pressures and new management approaches

Further advice on the development or refinement of monitoring is included in Tool 11a of the *Enhancing our Heritage Toolkit* (see Section 6.4), which describes the steps needed to develop a monitoring plan.

6.2 Research at World Heritage sites
Given the significance of World Heritage sites, it is crucial that managers have the information needed to manage them effectively. Research provides baseline information on site characteristics and can provide inputs to inform the development of management and action to enhance it.

Best practice research at World Heritage sites
Due to their uniqueness, many natural World Heritage sites are important for research into ecology and conservation biology. They can also be important places for monitoring long-term change, such as that associated with climate change. Such research should not compromise the management objectives of the site; and researchers should ideally cooperate with and share data with site managers and staff; although unfortunately this does not always happen. There are currently no globally acceptable standards for conducting research in World Heritage sites; there are however some useful resource documents, such as the **Code of Conduct** for Researchers developed for Flora & Fauna International's journal *Oryx* (see Resources, p. 88), which have been drawn on to provide the following overview of some important standards for researchers.

INDICATOR

Research
• Is there adequate knowledge of the property to support planning, management and decision-making to ensure that its OUV is maintained?

1. Researchers should consider the management needs and priorities of the World Heritage site, and in particular gaps in information for which further research is required, when developing research projects.
2. All research must have the necessary approvals and permits.
3. Intellectual property rights on data and results must be recognized and research should not infringe local rights in intellectual property; if research is carried out in a host country that has few legal requirements, researchers should follow the standards of their country of origin.
4. Copies of any reports and publications resulting from the research should be provided to all relevant institutions in the country where the research is being undertaken.
5. Ideally research methodologies should be shared with the appropriate World Heritage site staff.
6. The results of research should be reported back to relevant local and national organizations; and any practical implications for World Heritage management highlighted by the research should be noted.
7. Where research involves fieldwork in areas occupied by people, or affects species or ecosystems within which people have de facto or de jure tenure rights or cultural connections, it should be carried out in a way that respects local beliefs, economic and cultural interests, and rights.
8. Where relevant, research should involve the participation of local partners and stakeholders, and should if possible increase local capacity to understand and manage OUV.
9. Field researchers should adopt the highest precautionary standards to avoid the accidental introduction and distribution of invasive and pathogenic organisms.
10. Data collection involving the killing of an organism should only take place when such collection is absolutely essential to the scientific integrity of the research being undertaken and has been agreed by managers.

Managers of World Heritage properties should seek to partner with universities and research institutes to develop joint research that will both inform management and meet the needs of the research community for cutting-edge science. It is important that the relevant research questions are framed in collaboration. Ideally managers should also broaden their engagement with a wide range of research disciplines including social, health, education, political and economic research, all of which will bring important insights to improve conservation. The crucial issue is to see research findings analysed with respect to management, translated into policy, and used to inform management decisions.

Specific research projects can also play a positive role in maintaining the site and the OUV if they address particular management challenges. For example, in **Bwindi Impenetrable National Park** (Uganda), researchers from the Institute of Tropical Forest Conservation, which is based at the edge of the park, worked with local people to determine sustainable harvest levels for medicinal plants from designated zones. The identification of particular research needs in management plans can help sympathetic researchers to raise finance for their studies. The Seychelles Islands Foundation, for example, which manages **Aldabra Atoll** World Heritage site, provides a list of research priorities on its

Managers at work –
Bwindi Impenetrable National Park
(Uganda)

© UNESCO / Ron Van Oers

Park agency staff meeting – Manú National Park (Peru)

website (www.sif.sc/). Similarly, Cocha Cashu Biological Station located in **Manú National Park** World Heritage site (south-east Peru), was founded as a research site over twenty-five years ago, Research has been conducted on a diverse range of ecological topics, from primates, birds and jaguars to forest composition.

6.3 Reporting to the World Heritage Committee

States Parties are required to report to the World Heritage Committee on the state of conservation and the various management and protection measures in place at their sites. These reports allow the Committee to assess conditions at the sites and, if necessary, decide on the specific measures needed to resolve any issues which are impacting on the OUV.

Types of World Heritage reporting
There are three types of World Heritage reporting:
• **Reactive Monitoring** (see Section 2.3) reports on the state of conservation of World Heritage sites. Reactive Monitoring is, as it implies, reacting to any perceived threats to World Heritage properties which may adversely impact on OUV or integrity.

• **Periodic Reporting** aims to ensure more effective long-term conservation of the properties inscribed on the World Heritage List, as well as to strengthen the credibility of Convention implementation. All World Heritage sites are required to complete the Periodic Reporting process, which is carried out regionally over a six-year cycle. The timing for each round of reporting is agreed at World Heritage Committee meetings and States Parties are informed by the World Heritage Centre when reports are due.

Periodic Reporting serves four main purposes:
– to assess the application of the World Heritage Convention by the State Party;
– to assess whether the OUV of World Heritage sites is being maintained over time;
– to provide up-to-date information on the World Heritage sites and record changing circumstances and the state of conservation;
– to provide a mechanism for regional cooperation and exchange of information and experiences between States Parties concerning implementation of the Convention.

The Periodic Report contains two parts. *Section I* refers to the legislative and administrative provisions which the State Party has adopted and other actions taken for the application of the Convention, together with details of experience acquired. This particularly concerns the general obligations and commitments defined in specific articles of the Convention relating to the overall heritage of a country and should be completed by each State Party. *Section II* refers to the state of conservation of the OUV of each individual World Heritage

site located on the territory of the State Party concerned. It includes reporting on a wide range of issues relating to the management of the site and should be completed by or in association with site managers and staff, and ideally in discussion with stakeholders.

Periodic Reporting is carried out through a standard questionnaire developed by the World Heritage Centre. The web-based tool, accessible online through the World Heritage website, is organized around three components:

Pre-filled data: Records facts and intended to be a permanent data source, i.e. something which can be maintained over time. It is based on accessing information contained in the World Heritage database and as such forms a common understanding and core information base on each World Heritage property. The Periodic Reporting online tool allows for data to be confirmed, revisions to be made or in some cases provides information on World Heritage procedures that will allow data to be revised (i.e. changes in boundaries or revised criteria).

Assessment: Aims to assess the relevance and effectiveness of the processes in place for the protection and conservation of a country's natural and cultural heritage in general in Section I of the Periodic Report and specific properties on the World Heritage List in Section II. The assessment can be used to celebrate success and identify factors affecting heritage conservation, capacity requirements and training gaps.

Summary/recommendation tables: Use the utilities available through the online tool to synthesize the assessment results and help to formulate an action plan to undertake future activities to ensure effective conservation and management of heritage in general and World Heritage properties in particular.

• In 2007 a new form of monitoring, **Reinforced Monitoring**, was approved by the World Heritage Committee (World Heritage C-07/31.COM/5.2, see Resources, p. 89). This additional monitoring was developed because the Committee felt that the frequency of the two reporting mechanisms noted above may be insufficient to monitor the implementation of decisions, especially when protection of the integrity and authenticity of a property requires special attention. In such cases, Reinforced Monitoring describes a more frequent, systematic and proactive approach, to ensure all the relevant information is brought to the attention of the World Heritage Committee between its annual meetings. Reinforced Monitoring remains a cooperative process with the State Party but is considered a more flexible and need-based process, which can be initiated either by the Committee or by the Director-General at any time of year between Committee sessions.

In conclusion, it is important for managers to be aware of the reporting processes under the Convention and to respond accordingly. State of conservation monitoring should be viewed as another tool to support protection and enhancement of the site's OUV.
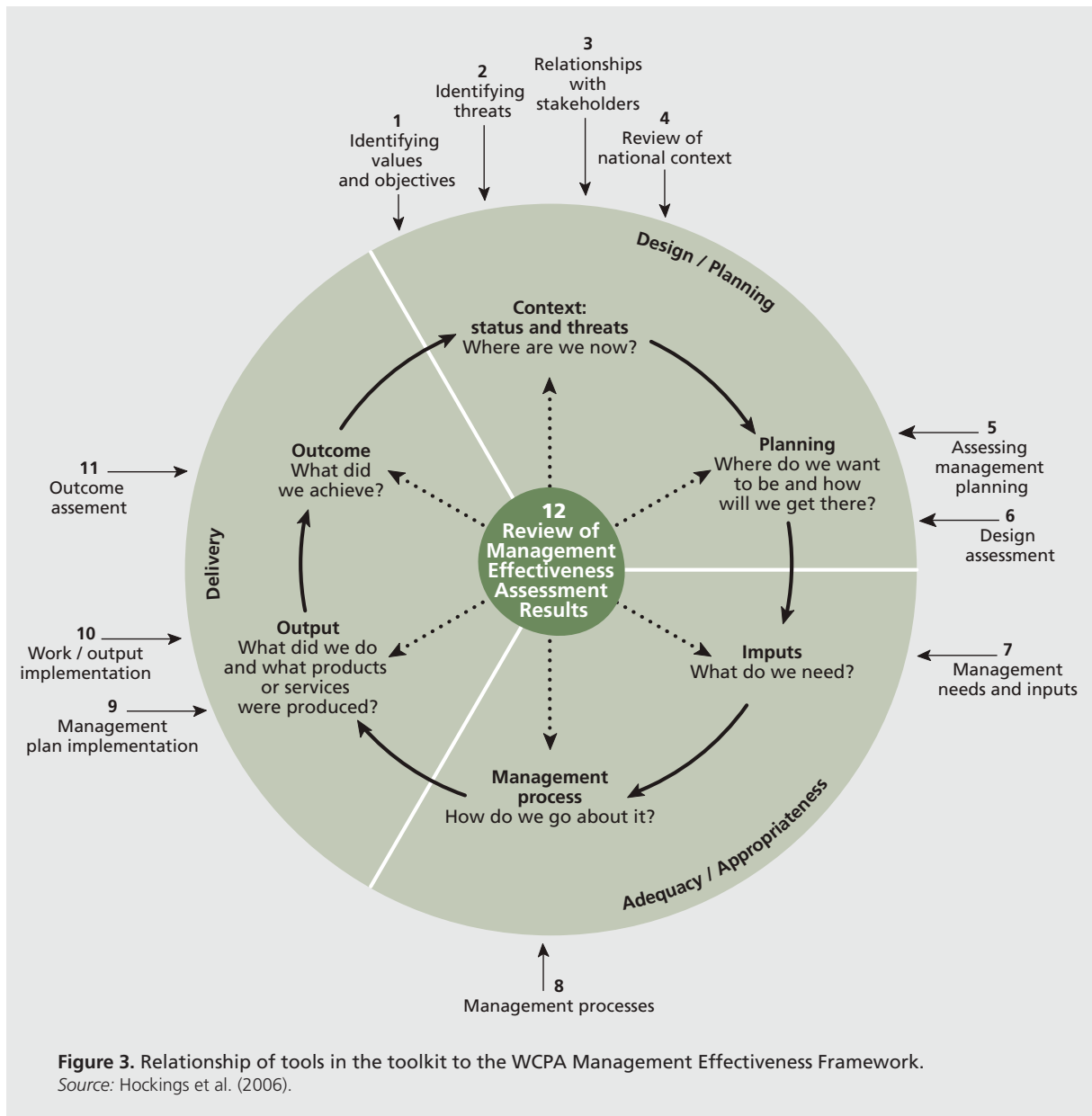
6.4 Monitoring management effectiveness: *Enhancing our Heritage Toolkit*

Since the late 1990s a series of mainly voluntary tools has been developed to assess the management effectiveness of protected areas. Such evaluations aim to assess how well protected areas are being managed – primarily whether they are protecting their values and achieving agreed goals and objectives. One of these tools, *Enhancing our Heritage*, has been specifically developed for natural World Heritage sites.

Introduction to management effectiveness
The term management effectiveness reflects three main 'themes' of protected area management:
• design issues relating to both individual sites and protected area systems;
• adequacy and appropriateness of management systems and processes; and
• delivery of protected area objectives including conservation of values.

Figure 3. Relationship of tools in the toolkit to the WCPA Management Effectiveness Framework.
Source: Hockings et al. (2006).

IUCN's World Commission on Protected Areas has developed a **Framework for Assessing the Management Effectiveness of Protected Areas** (Figure 3, see Resources, p. 89), which aims both to give overall guidance in the development of assessment systems and to encourage basic standards for assessment and reporting. The framework is a generic process within which the precise methodology used to assess effectiveness differs between protected areas depending on factors such as the time and resources available, the importance of the site, quality of data and stakeholder pressures, and as a result a number of assessment tools have been developed to guide and record changes in management practices. The WCPA framework sees management as a process or cycle with six distinct stages, or elements:

▶ it begins with establishing the **context** of existing values and threats,
▶ progresses through **planning**, and
▶ allocation of resources (**inputs**), and
▶ as a result of management actions (**process**),
▶ eventually produces goods and services (**outputs**),
▶ that result in impacts or **outcomes**.

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Of these elements the outcomes – basically whether or not the site is maintaining its core values – are the most important but also the most difficult things to measure accurately. The other elements of the framework are all also important for helping to identify particular areas where management might need to be adapted or improved.

Two globally applicable generic systems have been developed consistent with the WCPA framework to carry out this type of assessment (see resources, p. 89). The first is WWF's *Rapid Assessment and Prioritization of Protected Areas Management* (RAPPAM), which provides protected area agencies with a country-wide overview of the effectiveness of protected area management, threats, vulnerabilities and degradation. The second is the WWF/World Bank Global Forest Alliance's *Management Effectiveness Tracking Tool* (METT), which has been designed to track and monitor progress towards worldwide protected area management effectiveness standards. Both these systems are relatively cheap and simple to use assessment tools which can be implemented by protected area staff (or sometimes project staff), but neither provide a detailed assessment of outcomes. Many of the elements and experience in use of the METT became the inspiration for the revised Periodic Reporting format (sees Section 6.3).

Enhancing our Heritage Toolkit

Of particular relevance here is the *Enhancing our Heritage (EoH) Toolkit* which uses the WCPA framework to develop a range of more detailed assessment tools for managers of natural World Heritage sites. The toolkit can be used to develop comprehensive site-based systems for assessing management effectiveness. It was developed over a seven-year period, working primarily with World Heritage site managers in Africa, Asia, and Central and Latin America. There are twelve tools (see Figure 3):

- **Tool 1:** Identifying site values and management objectives: Identifies and lists major site values and associated management objectives, which together help to decide what should be monitored and analysed during the assessment.
- **Tool 2:** Identifying threats: Helps managers to organize and report changes in the type and level of threat to a site and to manage responses.
- **Tool 3:** Relationships with stakeholders: Identifies stakeholders and their relationship with the site.
- **Tool 4:** Review of national context: Helps understanding of how national and international policies, legislation and government actions affect the site.
- **Tool 5:** Assessment of management planning: Assesses the adequacy of the main planning document used to guide management of the site.
- **Tool 6:** Design assessment: Assesses the design of the site and examines how its size, location and boundaries affect managers' capacities to maintain site values.
- **Tool 7:** Assessment of management needs and inputs: Evaluates current staff compared with staff needs and current budget compared with an ideal budget allocation.
- **Tool 8:** Assessment of management processes: Identifies best practices and desired standards for management processes and rates performance against these standards.
- **Tool 9:** Assessment of management plan implementation: Shows progress in implementing the management plan (or other main planning document), both generally and for individual components.
- **Tool 10:** Work / site output indicators: Assesses the achievement of annual work programme targets and other output indicators.
- **Tool 11:** Assessing the outcomes of management: Answers the most important question – whether the site is doing what it was set up to do in terms of maintaining ecological integrity, wildlife, cultural values, landscapes, etc.
- **Tool 12:** Review of management effectiveness assessment results: Summarizes the results and helps to prioritize management actions in response.

The toolkit is designed for those involved in managing World Heritage sites and aims to provide both background information and specific tools that they can use to assess management of their sites. It aims to fit in with, rather than duplicate, existing monitoring, so that only those tools that address issues not already being monitored will be applied. The toolkit publication (see Resources, p. 89) contains details of all the tools, advice about how to carry out an assessment and a series of case studies on how the tools have been used in World Heritage sites around the world. The toolkit is increasingly popular in World Heritage sites in all biomes and is also starting to be used in cultural World Heritage sites.

CASE STUDY

Scientific monitoring as a management tool in Ichkeul National Park (Tunisia)
Maher Mahjoub, WCPA Vice-Chair, North Africa and West Asia and Marie
José Elloumi, Director, Unité des Ecosystèmes Naturels (Agence Nationale de
*Protection de l'Environnement, Tunisia)*

The lagoon system of Ichkeul National Park in northern Tunisia constitutes a remarkable wetland listed as a World Heritage site since 1980. It owes a large part of its ecological originality to the particularity of its water system, closely linked to the alternation of freshwater supply in winter and marine water in summer. This is what gives rise to a special aquatic vegetation that is the main food source for thousands of migratory waterbirds. Therefore, water is considered as an essential element for the survival of Ichkeul ecosystems.

Meteorological monitoring station – Ichkeul National Park (Tunisia)

© UNESCO / Marc Patry

In the 1990s, Ichkeul was threatened due mainly to the joint effects of long periods of drought and dam construction in upstream areas, leading to its inscription on the List of World Heritage in Danger in 1996. Due to these circumstances, water management in Ichkeul became an essential component of site management. It relies particularly on (i) upstream water management (considering Ichkeul water needs are supplied by releases from surrounding dams) and (ii) water exchange control with the sea via a regulation structure, 'sluice', built at the outlet of Lake Ichkeul on the Tinja River.

These measures have been completed by the implementation of a scientific monitoring programme conducted by the National Agency for Environment Protection (ANPE) since 1995. This monitoring, which covered initially abiotic parameters, has been extended since 2003 to biotic features relating to the ecosystem's state of conservation. Site conditions are therefore determined by regular monitoring of hydro-climatic parameters such as precipitation, water levels and salinity, flows coming into and out of the lake, while the ecosystem's state of conservation is assessed by monitoring biological indicators, as agreed by IUCN and according to methodologies used in previous studies. It consists of (i) mapping the lake vegetation, (ii) assessing plant species distribution in marshes by sampling, (iii) counting migratory waterbird populations in winter and nesting birds in summer, and (iv) monitoring fishing activities. This monitoring is also complemented by scientific research conducted by Tunisian universities in coordination with ANPE, making Ichkeul a living laboratory.

Since 2003 monitoring results have constituted the core of the annual State of Conservation reports, which are sent to the World Heritage Centre and are available on the ANPE website (www.anpe.nat.tn). These reports show that in recent years the site has recovered most of the values for which it was inscribed on the World Heritage List, motivating the World Heritage Committee to remove Ichkeul from the Danger List in 2006. Moreover, in its decision, the Committee congratulated Tunisia for the high quality of monitoring and reporting.

Ichkeul is probably one of the few World Heritage sites where scientific monitoring results are used directly for site management and where scientific monitoring and reporting is seen as a key component of whole site management and for the conservation of the site's OUV.
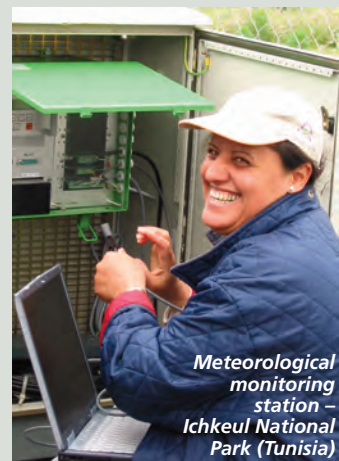
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CASE STUDY

Supporting effective management of World Heritage sites: Aldabra Atoll (Seychelles)

Frauke Fleischer-Dogley, SIF Chief Executive Officer

© Sue Stolton

Aldabra Atoll (Seychelles)

Seychelles is an archipelago in the Western Indian Ocean, spread out across some 115 islands. One of its most remote islands is Aldabra Atoll, which became a World Heritage site in 1982. Aldabra is a prime example of a raised coral atoll famous for its giant tortoises (the largest population in the world), rich terrestrial biodiversity and high proportion of endemics, rich and varied marine biodiversity, huge seabird colonies and limited human disturbance. Aldabra lies some 1,000 km from the main island Mahé, where 90 per cent of the population of Seychelles live and where the management agency for the atoll, the Seychelles Islands Foundation (SIF), is based. This remoteness has profound consequences for management.

Over the last twenty-five years, SIF has successfully managed the atoll, to preserve biodiversity and ecosystem processes. For most of this period a flexible, rather ad hoc approach to management worked reasonably well, but many difficulties and inefficiencies remained and the need for more effective management was recognized in order to maintain and enhance the value of the site. Aldabra thus became one of the nine sites which helped to develop the EoH Toolkit; and through this process designed an ongoing assessment system to enhance management effectiveness.

This was the first time that a holistic approach was applied when evaluating the management of Aldabra. The whole management cycle was analysed thoroughly and the tools developed under the project not only helped to assess current activities but identified and addressed major gaps. The assessments, for example, identified an urgent need for an updated management plan, and provided much of the information necessary to undertake the revision. The need to improve financial management was also highlighted and SIF was one of two pilot sites for the Shell Foundation – UNESCO/World Heritage Business Planning Skills Project (see Section 4.1) through which the organization received support in developing a business plan through two in-country training visits and additional mentoring support during the project period. The exercise developed capacity in strategic planning and budgeting; as a result SIF has been able to manage operational costs much better and in 2008 broke even for the first time. Increased capacity in monitoring and evaluation generally is helping the organization to be prepared for the challenges ahead and will ensure a timely submission of the next Periodic Report to UNESCO.

The assessment process was led by an expert local consultant, as SIF has a very small full-time staff, in close collaboration with SIF in Mahé, staff based on Aldabra, researchers and the SIF Board. Overall the process did not require large sums of money to address major gaps and build capacity, as the assessment results were incorporated into day-to-day management activities. The design of the assessment also provided a built-in mechanism to ensure follow-up to enhance management effectiveness. An additional benefit of note was that the documentation necessary to undertake the assessment provided, for the first time, an institutional memory within SIF.

Given the positive experiences in Aldabra, SIF decided to also undertake a management effectiveness assessment in the second World Heritage site in Seychelles that it manages – Vallée de Mai Nature Reserve.

CASE STUDY

Outlook for the Great Barrier Reef (Australia)
Jon Day, Director, Ecosystem Conservation and Sustainable Use, Great Barrier Reef Marine Park Authority

© UNESCO / J. Thorsell / IUCN

Great Barrier Reef (Australia)

The five-yearly Outlook Report *for the Great Barrier Reef (GBR) is a systematic approach that provides a regular and reliable means of assessing performance in an accountable and transparent manner. The* Outlook Report *was a recommendation of the 2006 Review of the Great Barrier Reef Marine Park Act. The report assesses the current state of the Great Barrier Reef ecosystem's environmental, social and economic values, examines the pressures and current responses and finally considers the likely outlook.*

There are eight assessments required by the Act (e.g. an assessment of risks to the GBR), with each assessment forming a chapter of the report. For each of the assessments, a set of Assessment Criteria allows an ordered analysis of the available evidence. An overall grade for each Assessment Criterion is provided, based on a series of grading statements. This approach has been developed specifically to meet the legislative requirements, but it is intended that future Outlook Reports *will follow the same process so that changes and trends can be tracked over time.*

The first Outlook Report *in 2009 was prepared by the GBR Marine Park Authority using the best available information. No new research was undertaken to develop the report; rather, the evidence used was derived from existing research and information sources. A number of Australian and Queensland Government agencies, researchers, industry representatives, interest groups and the community contributed to the development of the report.*

Two independent experts in protected area management, monitoring and evaluation, public policy and governance were commissioned to undertake an independent assessment of existing protection and management. Their report forms the basis of the assessment of existing measures to protect and manage the Great Barrier Reef ecosystem. In addition, four reviewers recognized as national or international experts in their fields were appointed by the Environment Minister to independently review the contents of the report.

This first Outlook Report *identified climate change, continued declining water quality from catchment runoff, loss of coastal habitats from coastal development and a small number of impacts from fishing and illegal fishing and poaching as the priority issues reducing the resilience of the Great Barrier Reef. However the majority of the adverse impacts originate outside the GBR so there is a need to work with many other agencies and jurisdictions to effectively address these issues.*

The full report and an 'In Brief' version are available on the web, as is the evidence (Outlook Online) that was used to develop the report. This has further links to some 600 pages of online evidence with direct extracts from the sources, providing a huge amount of additional information about the GBR. See www.gbrmpa.gov.au/corp_site/about_us/great_barrier_reef_outlook_report for details.

Managing Natural World Heritage

Resources

Resources for Section 2 (Context)

- The World Heritage Advisory Bodies and World Heritage Centre's guidance note on preparing *Retrospective Statements of Outstanding Universal Value for World Heritage Properties* can be downloaded from the publications page on the World Heritage section of IUCN's website: www.iucn.org/.

- The IUCN publication *Outstanding Universal Value – Standards for Natural World Heritage: Compendium on Standards for Inscriptions of Natural Properties on the World Heritage List* reviews the relevant material and World Heritage Committee Decisions to help interpret and apply discussions relating to OUV. The publication can be downloaded from www.iucn.org/.

- ICOMOS has compiled a study on *What is OUV? Defining the Outstanding Universal Value of Cultural World Heritage Properties*, analysing how the concept has evolved through time, the justification and use of criteria as well as conditions of authenticity and integrity. The publication can be downloaded from www.international.icomos.org/.

- Links to key conventions: Convention concerning Indigenous and Tribal Peoples in Independent Countries can be viewed at www.ilo.org/; Universal Declaration of Human Rights at www.un.org/en/documents/udhr/; United Nations Declaration on the Rights of Indigenous Peoples at http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf.

- World Heritage Paper Series, No. 13, *Linking Universal and Local Values: Managing a Sustainable Future for World Heritage*, provides a wealth of discussion material, case studies and a series of recommendations on linking universal and local values and can be downloaded from http://whc.unesco.org/en/series/13/.

- The Social Assessment of Protected Areas (SAPA) Initiative has bought together a range of organizations including UNEP-WCMC, IIED and Care International as well as IUCN, WCPA and CEESP, to try and address the lack of information on the social effects of protected areas. One output from this work has been a useful document, *Social Assessment of Conservation Initiatives: a review of rapid methodologies.* This booklet, which can be downloaded from http://www.careclimatechange.org/files/reports/SAPA_IIED_Social_Assessment.pdf, includes a review and assessment of twenty tools to provide managers with a practical guide to choosing tools for social assessment.

- Information on the work of the Indigenous Peoples of Africa Co-ordinating Committee (IPACC) can be found at www.ipacc.org.za/.

- The World Bank Indigenous Peoples Operational Directive OD 4.20 can be downloaded from www.ifc.org/.

- The Biodiversity Support Program's publication: *Is Our Project Succeeding: A Guide to Threat Reduction Assessment for Conservation* can be downloaded from www.rmportal.net/library/content/tools/biodiversity-support-program/tra.pdf.

- Sites currently on the List of World Heritage in Danger can be found at http://whc.unesco.org/en/danger.

- IUCN has developed a compendium of key decisions on the conservation of natural World Heritage properties via the List of World Heritage in Danger which includes an analysis of World Heritage Committee decisions regarding Danger listing and recommendations for future best practice for Danger listing. The publication can be downloaded from www.iucn.org/about/work/programmes/wcpa_worldheritage/.

- To inform the World Heritage Committee about threats to a site, contact the World Heritage Centre at wh-info@unesco.org or contact IUCN (see Contact information, p. 98).

• Paragraphs 177–91 of the *Operational Guidelines* provide full details of the processes relating to a property being inscribed on the List of World Heritage in Danger. Processes relating to deleting properties from the World Heritage List are set out in Paragraphs 192–98 (http://whc.unesco.org/en/guidelines/).

Resources for Section 3 (Planning)

• The ECOLEX environmental law information service is operated jointly by FAO, IUCN and UNEP. It aims to build capacity by providing the most comprehensive possible global source of information on environmental law. The ECOLEX database includes information on treaties, international soft-law and other non-binding policy, and technical guidance documents, national legislation, judicial decisions, and law and policy literature. The database can be accessed via www.ecolex.org and includes various World Heritage resources including, for example, the South African World Heritage Convention Act 1999 which incorporated the World Heritage Convention into South African law or the Australian Wet Tropics World Heritage Protection and Management Act of 1993.

• A short discussion on Community-Based Legal Systems and the Management of World Heritage Sites can be found in the World Heritage Paper Series, No. 13, *Linking Universal and Local Values: Managing a Sustainable Future for World Heritage* which can be downloaded from http://whc.unesco.org.

• Committee Rules of Procedure can be found at http://whc.unesco.org/en/committeerules#notes.

• The Decisions Database can be found at http://whc.unesco.org/en/decisions/.

• *Nominations and Management of Serial Natural World Heritage Properties – Present Situation, Challenges and Opportunities*, BfN-Skripten 248, 2009. www.bfn.de/fileadmin/MDB/documents/service/Skript_248.pdf.

• A report (WHC-10/34.COM/9B) detailing the conclusions and recommendations of an International World Heritage Expert Meeting on serial nominations and properties can be found at http://whc.unesco.org/document/103442.

• IUCN has prepared a guide to *Management Planning for World Heritage Properties: A resource manual for practitioners*, which can be downloaded from www.iucn.org.

• One of WCPA's Best Practice Guidelines series also looks at management planning. See www.iucn.org and Appendix 2 for details on the Best Practice series.

• Many of the tools in the *Enhancing our Heritage Toolkit* (see Section 6.4) have been used in the process suggested for defining management targets and preparing for management plan development. See World Heritage Paper Series, No. 23, *Enhancing our Heritage Toolkit*: *Assessing management effectiveness of natural World Heritage sites,* which can be downloaded from http://whc.unesco.org/en/series/23.

• World Heritage Paper Series No. 25, 2009, *World Heritage and Buffer Zones.* http://whc.unesco.org/documents/publi_wh_papers_25.pdf.

Resources for Section 4 (Capacity)

- Information on the *Business Planning for Natural World Heritage Sites – A Toolkit* can be seen at http://whc.unesco.org/en/businessplanningtoolkit/ and the toolkit can be downloaded from http://whc.unesco.org/uploads/activities/documents/activity-543-1.pdf.

- *Conservation Trust Fund: Investment Survey* produced by WCS in collaboration with RedLAC can be downloaded from the publications section of www.redlac.org.

- *Sustainable Financing of Protected Areas: A global review of challenges and options* is from the IUCN WCPA Best Practice series and can be downloaded from www.iucn.org.

- The Conservation Finance Alliance (CFA) is a collaborative network that aims to promote conservation finance solutions through exchanging information and expertise, primarily via its website: www.conservationfinance.org/. *The Rapid Review of Conservation Trust Funds*, 2nd edn, provides an excellent overview of the experience of protected area funds around the world over the past fifteen years, especially with respect to their creation, operation, and evaluation. This publication can be downloaded from the CFA website.

- The CBD online courses can be accessed at www.cbd.int/protected/e-learning/.

- Full details of the principles and priorities of International Assistance can be found in the *Operational Guidelines*, Section VII.D. The request should be submitted in English or French to the World Heritage Centre through the online format. Further guidance, information and application forms can be found at http://whc.unesco.org/en/intassistance/.

- Application forms for the Rapid Response Facility (RRF) can be found online and should be submitted by e-mail to: rrf@fauna-flora.org. For further details see www.rapid-response.org.

- A list of universities with World Heritage Studies Programmes can be found at http://whc.unesco.org/en/activities/121 and http://whc.unesco.org/en/partners/sector=28.

- World Heritage Institute of Training and Research for the Asia and the Pacific Region aims to strengthen implementation of the World Heritage Convention in the region, by building the capacity of all those involved with World Heritage site inscription, protection, conservation and management. The institute runs a range of training workshops and courses specific to World Heritage management. See www.whitrap.org/ for more information.

- The UNESCO–University and Heritage Forum (FUUH) is an informal network of higher education institutions run jointly by the World Heritage Centre and the Polytechnic University of Valencia (UPV). The Forum aims to disseminate information about activities implemented by universities through the use of the network database (which is accessible online); link heritage conservation professionals to academics; exchange students and professors; share programmes or activities (publications, research, projects, etc.) in particular the forum shares thesis abstracts (see www.universityandheritage.net/eng/index.html); and encourages the creation of university programmes and/or chairs in the fields of cultural or natural heritage conservation. For more information see www.universityandheritage.net/eng/index.html.

- The 2007 *Climate Change and the Great Barrier Reef: A vulnerability assessment,* by Johnson and Marshall, can be downloaded from www.gbrmpa.gov.au/.

- The Nordic World Heritage Foundation (NWHF) is a non-profit foundation supporting international activities within UNESCO programmes; details at www.nwhf.no.

• The African World Heritage Fund (AWHF) provides finance and technical support for the conservation and protection of Africa's natural and cultural heritage; more information, including an application form for funding, can be found at www.awhf.net.

• Funds-in-Trust (FIT) are donations given by countries to support specific projects with defined goals and objectives, two of which are specifically focused on natural sites: Japanese Trust Fund for the Preservation of the World Cultural Heritage (http://whc.unesco.org/en/partners/277) and Netherlands Funds-in-Trust (http://whc.unesco.org/en/nfit).

Resources for Section 5 (Management processes)

• The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity can be downloaded from www.cbd.int/doc/publications/addis-gdl-en.pdf; for more information see www.cbd.int/sustainable/addis.shtml.

• Another useful resource centre on the 'biocultural diversity of life', i.e. biological, cultural and linguistic diversity, can be found at the website of Terralingua (www.terralingua.org/), a 'virtual' volunteer organization with major programmes on issues such as mapping; measuring and monitoring; maintaining; networking and promoting policies for biocultural diversity.

• World Heritage Paper Series, No. 25, *World Heritage and Buffer Zones*, published in 2009, provides the most comprehensive guide to the issue, including position statements from the Advisory Bodies and World Heritage Committee and a series of detailed case studies, which can be downloaded from http://whc.unesco.org/en/series/25/.

• A project by WWF has focused on the benefits of protected areas for the last ten years and produced a series of Arguments for Protection reports looking at issues such as drinking water, faiths, crop genetic diversity, poverty, climate change, disaster mitigation and human health. An overview book, *Arguments for Protected Areas*, has been published by Earthscan (see http://www.routledge.com/books/details/9781844078813/) and the reports can be downloaded from http://wwf.panda.org/what_we_do/how_we_work/protected_areas/arguments_for_protection/.

• An analysis of the socio-economic impact potential of World Heritage sites, *World Heritage Status: Is there opportunity for economic gain?*, provides a useful overview of the potential social and economic benefits of World Heritage inscription and can be downloaded from www.lakeswhs.co.uk/documents/WHSTheEconomicGainFinalReport.pdf.

• UNESCO's Education Kit, *World Heritage in Young Hands*, can be downloaded from http://whc.unesco.org/en/educationkit/,

• UNESCO's Associated Schools Programme, commonly known as ASPnet, is a global network of more than 8,500 educational institutions in 180 countries. See www.unesco.org/en/aspnet/.

• Further details on the World Heritage Volunteers Initiative can be found at http://www.whvolunteers.org/.

• Details on tourism and World Heritage sites can be found at http://whc.unesco.org/en/sustainabletourism/.

- The *Principles for Sustainable Tourism at World Heritage Properties* are presented in the report of the Mogao Caves workshop in 2009 which can be found in the World Heritage document WHC-10/34.COM/INF.5F.1 and downloaded from http://whc.unesco.org/document/104570.

- More information on sustainable tourism from the World Tourism Organization (WTO) can be found at www.unwto.org/sdt/fields/en/policy.php?op=2&subop=1. WTO's new publication *Tourism and Biodiversity – Achieving Common Goals Towards Sustainability* can be ordered via the WTO website http://pub.unwto.org/epages/Store.sf/?ObjectPath=/Shops/Infoshop/Products/1505/SubProducts/1505-1.

- *Managing Tourism at World Heritage Sites: A Practical Manual for World Heritage Site Managers* can be downloaded from http://whc.unesco.org/uploads/activities/documents/activity-113-2.pdf.

- See the Department of Conservation in New Zealand website, which includes details on concessions at http://www.doc.govt.nz/about-doc/concessions-and-permits/.

- WCPA Best Practice Guidelines No. 8, *Sustainable Tourism in Protected Areas Guidelines for Planning and Management,* by Paul F. J. Eagles, Stephen F. McCool and Christopher D. Haynes can be downloaded from http://cmsdata.iucn.org/downloads/pag_008.pdf; and the WCPA journal, *Parks*, has dedicated one of its volumes to tourism – see *The Visitor Experience Challenge*, Vol. 16, No. 2, 2006 http://cmsdata.iucn.org/downloads/parks_16_2.pdf.

- ICOMOS has developed the Ename Charter (see www.enamecharter.org/) on the interpretation and presentation of cultural heritage sites, which provides useful definitions, objectives and principles of both activities.

- For more information on the World Heritage emblem see http://whc.unesco.org/en/emblem/.

- The World Heritage emblem can be downloaded from http://whc.unesco.org/en/emblem.

- *A Practical Guide to Evaluating Natural and Cultural Heritage Interpretation*, by Gillian Savage and Jane James, can be downloaded from http://www.magsq.com.au/_dbase_upl/workshopBG.pdf.

- *Interpreting Our Heritage* by Freeman Tilden, published in 1957, can be purchased second-hand from Amazon.com for less than US$10.

- Information on the Interpretive Guides Association can be found at www.interpretiveguides.org/.

Resources for Section 6 (Delivering results)

- The Code of Conduct for Researchers contributing articles for *Oryx – The International Journal of Conservation,* published on behalf of Fauna & Flora International, can be found at http://assets.cambridge.org/ORX/ORX_ifc.pdf and was published in *Oryx*, Vol. 35, No. 2, pp. 99–100.

- A guide developed by the International Fund for Agricultural Development, on *Methods for Monitoring and Evaluation,* provides details of thirty-four different methods for project monitoring and evaluation and can be downloaded from www.ifad.org/evaluation/guide/annexd/index.htm.

- Experiences of locally based monitoring schemes from seventeen countries can be found on the Monitoring Matters website: www.monitoringmatters.org/schemes.htm.

- The US Environmental Protection Agency (EPA) has published manuals for volunteer monitoring of lakes, streams, estuaries and wetlands, available at www.epa.gov/volunteer/ and the US Forest Service's 2006 guide on *Broadening Participation in Biological Monitoring: Handbook for Scientists and Managers* can be downloaded from www.treesearch.fs.fed.us/pubs/24897.

- Guidelines on Reactive Monitoring are given in section IV.A of the *Operational Guidelines* (Paragraphs 169–76). Guidance for States Parties in terms of the format for preparing State of Conservation reports on World Heritage sites and sites on the Danger List can be found at http://whc.unesco.org/en/soc/.

- The objectives of these Periodic Reports are defined in full in Section V of the *Operational Guidelines*. The web-based questionnaire can be found at http://whc.unesco.org/en/pr-questionnaire/. Guidance for completing the tool can be found at http://whc.unesco.org/fr/355/?page=help.

- Decision World Heritage C-07/31.COM/5.2 concerning Reinforced Monitoring can be found at http://whc.unesco.org/en/decisions/1258/.

- World Heritage Paper Series, No. 23, *Enhancing our Heritage Toolkit, Assessing management effectiveness of natural World Heritage sites*, can be downloaded from http://whc.unesco.org/documents/publi_wh_papers_23_en.pdf.

- *Evaluating Effectiveness: A framework for assessing management of protected areas* (2nd edn) by M. Hockings, S. Stolton, F. Leverington, N. Dudley and J. Courrau, published in 2006 by IUCN's World Commission on Protected Areas, can be downloaded from www.iucn.org/.

- For more information about management effectiveness in general and the wide range of methodologies available visit: /www.wdpa.org/ME/, which gives details of the *Rapid Assessment and Prioritization of Protected Areas Management* (RAPPAM) and the *Management Effectiveness Tracking Tool* (METT).

Appendix 1

Indicators

The Periodic Reporting questionnaire for World Heritage properties includes the question (4.8.2): 'Are key indicators for measuring the state of conservation used in monitoring how the Outstanding Universal Value of the property is being maintained?' A series of indicators has been suggested throughout the text of this Resource Manual, based on a range of questions in the Periodic Reporting. These are collated here with some notes on possible assessment measures. Further details on assessing the effectiveness of natural World Heritage site management may be found throughout the manual.

Indicators in this manual (section numbers in parentheses)	Explanatory notes on assessment measures	Link to Periodic Reporting questions
Conservation status of the property (2.1) • *Is the OUV of the property in good condition?* • *Is the OUV being adequately conserved (e.g. management and protection)?*	Measures could include trends and status of key species populations or habitats and management effectiveness assessments	Current state of the World Heritage property's OUV (question 5.3.3)
Statement of Outstanding Universal Value (2.2) • *Is the SOUV adequate or does it need to be revised?*	Assess whether the statement conveys the reasons the site is included on the World Heritage List	Is there a SOUV; does it need revising? (section 2 of the PR)
Threats to OUV (2.3 and 2.4) • *Is the OUV of the property seriously threatened?*	Threat assessment to help identify if the site is faced with specific and proven imminent danger or by potential threats which could seriously affect the site's OUV	Factors affecting the property: current and potential factors; negative (threats) and positive factors; and factors with impacts inside and outside of the property (sections 3 and 5.1)
Relationships with local people (2.5) • *Do relationships with stakeholders in the property help to facilitate effective conservation of the property's OUV?* • *Are the needs of local stakeholders addressed effectively within the management system for the property, and are benefits provided by the World Heritage site shared equitably with local people?*	Measures could include participation in governance; stakeholder consultation processes; cooperation with people living around the property; equitable benefit sharing	Local people relationships (questions 4.3.7 to 4.3.9)
Legal framework (3.1) • *Is the legal framework for the World Heritage site effective in maintaining its OUV?*	Presence of legislation, regulation or customary law; effective enforcement of legal frameworks	Adequacy of protective designation and legal framework (legislation and/or regulation) (section 4.2)
Management system and plan (3.2) • *Are the management system and plan adequate to maintain the property's OUV?*	Measures on monitoring plan implementation; management effectiveness assessments	Management system/ management plan (section 4.3)
World Heritage Committee decisions and recommendations (3.3) • *Has the State Party implemented the decisions and recommendations of the World Heritage Committee relating to the property?*	Are decisions known and acted upon and are processes in place to measure implementation?	World Heritage Committee recommendations (questions 4.8.4 and 4.8.9)

Indicators in this manual (section numbers in parentheses)	Explanatory notes on assessment measures	Link to Periodic Reporting questions
Boundaries (3.4) • *Are the boundaries of the property, including buffer zone, effective in relation to the management and protection of its OUV?*	Assessment of the adequacy of the boundary to protect OUV; are the boundaries known and respected locally?	Boundaries and buffer zones (section 4.1)
Sustainable finance (4.1) • *Are financial resources adequate to implement the management measures required to maintain the site's OUV?* • *Are the existing sources of funding secure and are they likely to remain so?*	Assessment of the scale of budget relative to need; security of budget; presence of business plan	Financial and human resources (questions 4.4.1 to 4.4.5)
Staff training and development (4.3) • *Are human resources adequate to manage the World Heritage property?*	Staff numbers, assessment of training and development needs; presence of capacity development programmes	Adequacy of human resources to manage the World Heritage property? (questions 4.4.9 to 4.1.15)
Sustainable use (5.1) • *Are effective mechanisms in place to ensure that resource use permitted in and around the World Heritage site is sustainable and does not impact negatively on its OUV?*	Assessment of effectiveness of policies, monitoring, use agreements, etc.	Questions within the factors affecting the property (section 3)
Education and interpretation programmes (5.2) • *Do education, interpretation and awareness programmes significantly enhance the understanding of the site's OUV among stakeholders?*	Assessment of awareness and understanding of the existence and justification for inscription of the World Heritage property among visitors and other stakeholders	Education, information and awareness-building (section 4.6)
Tourism and interpretation (5.3) • *Is there an understanding and promotion of the site's OUV in local and national tourism policies?* • *Does visitor management result in the maintenance of the OUV?*	Assessment of relations with the tourism industry, visitor surveys, visitor management plans, impact assessments, etc.	Visitor management (section 4.6)
Monitoring (6.1) • *Are the values for which the site was inscribed on the World Heritage List adequately monitored?* • *Are management plans, tools and decisions adapted and improved as a result of monitoring outcomes?*	Monitoring of the values for which the site was inscribed on the World Heritage List is developed around agreed indicators and established protocols and results fed back into management; development of management effectiveness assessment programmes	Monitoring (section 4.8)
Research (6.2) • *Is there adequate knowledge of the property to support planning, management and decision-making to ensure that its OUV is maintained?*	Measures relating to the number and appropriateness of research project looking at, for example, understanding stakeholders, pressures and threats, resource use, biodiversity, etc.	Scientific studies and research projects (section 4.5)

Appendix 2

Tools developed by other institutions that may be useful for World Heritage site managers

This Resource Manual can only give a simple outline of a management system, but fortunately there are many other sources of information, advice and experience for natural World Heritage managers and others to draw upon. This is a brief overview with links to extra material.

- IUCN World Heritage Programme guidance and advice documents: A continuously expanding range of documents can be found at www.iucn.org/about/work/programmes/wcpa_worldheritage/wheritage_pub/.

- Manuals and toolkits have been developed particularly by IUCN and WCPA, but also by individual protected area agencies, conservation organizations, government departments and even private companies. While not specifically developed for World Heritage, many of these contain useful information and are directly applicable to natural World Heritage sites. All WCPA Best Practice Guidelines can be found at www.iucn.org/about/union/commissions/wcpa/wcpa_puball/wcpa_bpg/

Box 3: *WCPA Best Practice Guidelines*

- *National System Planning for Protected Areas, 1998*
- *Economic Values of Protected Areas: Guidelines for Protected Area Managers, 1998*
- *Guidelines for Marine Protected Areas, 1999*
- *Indigenous and Traditional Peoples and Protected Areas, 2000*
- *Financing Protected Areas: Guidelines for Protected Area Managers, 2000*
- *Transboundary Protected Areas for Peace and Co-operation, 2001*
- *Sustainable Tourism in Protected Areas: Guidelines for Planning and Management, 2002*
- *Management Guidelines for IUCN Category V Protected Areas: Protected Landscapes/Seascapes, 2002*
- *Guidelines for Management Planning of Protected Areas, 2003*
- *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation, 2004*
- *Forests and Protected Areas: Guidance on the use of the IUCN protected area management categories, 2006*
- *Sustainable Financing of Protected Areas: A global review of challenges and options, 2006*
- *Evaluating Effectiveness: A Framework for Assessing Management Effectiveness of Protected Areas, 2006*
- *Identification and Gap Analysis of Key Biodiversity Areas, 2007*
- *Sacred Natural Sites: Guidelines for Protected Area Managers, 2008*

- The WCPA is also a partner on several key publications on protected area management, such as *Managing Protected Areas: A Global Guide*, edited by Michael Lockwood, Graeme Worboys and Ashish Kothari, Earthscan, 2006 (www.earthscan.co.uk/).

- World Heritage nomination documents, many of which contain useful information about issues such as OUV and criteria for assessment, but some also have detailed management plans that can provide useful templates for other sites. For example: the nomination file for **Teide National Park** (Canary Isles, Spain) on the World Heritage website (http://whc.unesco.org/en/list/1258/documents/) includes detailed information

Teide National Park (Spain)

Canadian Rocky Mountain Parks (Canada)

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on management, data collection and the development and interpretation of the SOUV. Similarly, the nomination file for the **High Coast / Kvarken Archipelago** natural World Heritage site (Finland) has plans for managing a site that has large areas in private ownership and also includes details of monitoring systems.

■ **Case studies from other sites:** Many of the larger natural World Heritage sites will have information freely available, often on websites or on application to managers, including current management plans, responses to problems and publicity and interpretative material – all of these can serve as models and sources of inspiration for other sites. For example: **Banff National Park** in Canada has a website that provides a model for providing information on travel to, staying in and using the park, safety issues and education (http://www.pc.gc.ca/pn-np/ab/banff/index_E.asp). Similarly the **Great Barrier Reef Marine Park** website has a comprehensive list of policies, position statements and guidelines for research also are available (see, for example, http://www.gbrmpa.gov.au/corp_site/about_us/policies).

■ **Online resources:** There are a number of important online resources that can help natural World Heritage sites. The World Heritage Centre has all its material about individual sites, plus its manuals, reports and toolkits, available online (http://whc.unesco.org/). Similarly the Convention on Biological Diversity maintains a clearing house for relevant information, including much about managing areas (www.cbd.int/) and the IUCN World Commission on Protected Areas has publications available in electronic form (www.iucn.org/about/union/commissions/wcpa/index.cfm). ConserveOnline is a global website collecting information on conservation practice (www.conserveonline.org/workspaces/cbdgateway/) and the Earth Conservation Toolbox also contains over 300 tools and methodologies particularly selected for management of large conservation landscapes (www.earthtoolbox.net/).

Managing Natural World Heritage

Appendix 3

Principles for Sustainable Tourism at World Heritage Properties

See Section 5.3 for a discussion on tourism at World Heritage sites.

Principle 1: Contribution to World Heritage objectives
Tourism development and visitor activities associated with World Heritage properties must contribute to and must not damage the protection, conservation, presentation and transmission of their heritage values. Tourism should also generate sustainable socio-economic development and equitably contribute tangible as well as intangible benefits to local and regional communities in ways that are consistent with the conservation of the properties.

Principle 2: Cooperative partnerships
World Heritage properties should be places where all stakeholders cooperate through effective partnerships to maximize conservation and presentation outcomes, while minimizing threats and adverse impacts from tourism.

Principle 3: Public awareness and support
The promotion, presentation and interpretation of World Heritage properties should be effective, honest, comprehensive and engaging. It should mobilize local and international awareness, understanding and support for their protection, conservation and sustainable use.

Principle 4: Proactive tourism management
The contribution of tourism development and visitor activities associated with World Heritage properties to their protection, conservation and presentation requires continuing and proactive planning and monitoring by site management, which must respect the capacity of the individual property to accept visitation without degrading or threatening heritage values. Site management should have regard to relevant tourism supply chain and broader tourism destination issues, including congestion management and the quality of life for local people. Tourism planning and management, including cooperative partnerships, should be an integral aspect of the site management system.

Principle 5: Stakeholder empowerment
Planning for tourism development and visitor activity associated with World Heritage properties should be undertaken in an inclusive and participatory manner, respecting and empowering the local community including property owners, traditional or indigenous custodians, while taking account of their capacity and willingness to participate in visitor activity.

Principle 6: Tourism infrastructure and visitor facilities
Tourism infrastructure and visitor facilities associated with World Heritage properties should be carefully planned, sited, designed, constructed and periodically upgraded as required to maximize the quality of visitor appreciation and experiences while ensuring there is no significant adverse impact on heritage values and the surrounding environmental, social and cultural context.

Principle 7: Site management capacity
Management systems for World Heritage properties should have sufficient skills, capacities and resources available when planning tourism infrastructure and managing visitor activity to ensure the protection and presentation of their identified heritage values and respect for local communities.

Principle 8: Application of tourism-generated revenue
Relevant public agencies and site management should apply a sufficient proportion of the revenue derived from tourism and visitor activity associated with World Heritage properties to ensure the protection, conservation and management of their heritage values.

Principle 9: Contribution to local community development
Tourism infrastructure development and visitor activity associated with World Heritage properties should contribute to local community empowerment and socio-economic development in an effective and equitable manner.

Appendix 4

Relationships between World Heritage properties and other designations

IUCN protected area definitions and guidance

It is desirable for nominations for natural World Heritage sites to be already declared as protected areas within a legal framework, or be protected under an adequate and effective customary law regime. Mixed cultural and natural sites may also be protected areas. However World Heritage site boundaries do not need to be the same as the protected area boundary as not all zones of a protected area may satisfy the requirements for World Heritage.

The IUCN definition of a protected area is 'a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values'. This definition is accompanied by six criteria of management (IUCN management categories, see glossary) and four types of governance regime, all of which can deliver the objective of management by *legal or other effective means*. Examples of each of these governance types can be found in a wide range of World Heritage properties:

- **Governance by government:** Seen as the standard form of governance where a government body (such as a ministry or park agency reporting directly to the government) holds the authority, responsibility and accountability for managing the protected area. The majority of natural World Heritage areas fall into this category, and are protected by some form of national parks and reserves legislation.

- **Shared governance or co-management:** Complex institutional mechanisms and processes to share management authority and responsibility among several (formally and informally) entitled governmental and non-governmental actors. Governmental actors may include a range of national, state / provincial and/or local agencies. Co-management can range from a situation where one managing body is obliged to consult with others to genuine joint management where various different actors sit on a management body with decision-making authority and responsibility. Decisions may or may not require consensus. For example, **Uluṟu-Kata Tjuṯa National Park** (Australia), the site of Uluṟu (Ayer's Rock), is managed partly by the Aboriginal community and partly by Parks Australia. Legal protection for the World Heritage site is afforded as a Commonwealth reserve under the Environment Protection and Biodiversity Conservation Act 1999.

- **Private governance:** Protected areas under individual, cooperative, NGO or corporate control and/or ownership, and managed under not-for-profit or for-profit schemes. The authority for management rests with the owners, who determine the conservation objective, develop and enforce management plans and remain in charge of decisions, subject to applicable legislation. For example, the **Atlantic Forest South-East Reserves** (Brazil) site includes private reserves and one large reserve on land owned by a pulp and paper company, as well as some state protected areas.

- **Governance by indigenous peoples and local communities:** There are two main subsets: (i) indigenous peoples' areas and territories established and run by indigenous peoples; and (ii) community conserved areas established and run by local communities. The subsets may not be neatly separated and can apply to both sedentary and mobile peoples and communities. IUCN defines this governance type as protected areas where the management authority *and responsibility rest with indigenous peoples and/or local communities*

through various forms of customary or legal, formal or informal, institutions and rules. For example, **East Rennell** (Solomon Islands), part of the largest raised coral atoll in the world, is under customary land ownership and management.

How is World Heritage site status distinguished from other intergovernmental conservation designations?

There are three other types of intergovernmental recognition of sites that need to be distinguished from natural World Heritage:

■ **Biosphere reserves:** Sites recognized under UNESCO's Man and the Biosphere Programme (MAB), which aim to test, demonstrate and share experience on ways of reconciling conservation of biodiversity with sustainable use. They are usually strict reserves (i.e. a **core area** devoted to nature conservation and legally protected) surrounded by **buffer zones** that practise integrated management of land, water and biodiversity and **transition areas**, or area of cooperation, in which sustainable development is promoted and developed. The emphasis for selection will be on places that innovate and display approaches to conservation and sustainable development rather than on the 'best' sites for their intrinsic nature values. There are over 500 biosphere reserves spread across more than 100 countries. See www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/ for further details.

■ **Ramsar sites:** The Ramsar Convention aims to promote the conservation and sustainable use of wetlands and has a list of Wetlands of International Importance, selected according to a number of criteria relating to them being representative, unique or important to biodiversity. Inclusion on the list implies government commitment to their conservation although many, probably most, Ramsar sites are not strict reserves. Ramsar has 159 contracting States Parties and almost 2,000 recognized sites. See www.ramsar.org/ for further details.

■ **Geoparks:** In addition, for geological sites, the developing concept of Geoparks is also relevant, and a number of World Heritage sites are also recognized within the Global Network of National Geoparks, coordinated by the Science Sector of UNESCO. A Geopark has clearly defined boundaries and a large enough area for it to serve local economic and cultural development (particularly through tourism). Each Geopark should display, through a range of sites of international, regional and/or national importance, a region's geological history, and the events and processes that formed it. The sites may be important from the point of view of science, rarity, education and/or aesthetics. See http://www.globalgeopark.org/ for further details.

These designations are not mutually exclusive, as some may be recognized by more than one of these international programmes or conventions.

Contact information

Name and address	Brief details	Responsibilities within the Convention
ICCROM Via di S. Michele, 13 I-00153 Rome Italy Tel: +39 06 585-531 Fax: +39 06 5855-3349 E-mail: iccrom@iccrom.org http://www.iccrom.org	ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) is an intergovernmental organization with headquarters in Rome, Italy. Established by UNESCO in 1956, ICCROM's statutory functions are to carry out research, documentation, technical assistance, training and public awareness programmes to strengthen conservation of immovable and movable cultural heritage.	The specific role of ICCROM in relation to the Convention includes: • being the priority partner in training for cultural heritage, • monitoring the state of conservation of World Heritage cultural properties, • reviewing requests for International Assistance submitted by States Parties, and • providing input and support for capacity-building activities.
ICOMOS 49-51, rue de la Fédération 75015 Paris France Tel: +33 (0)1 45 67 67 70 Fax: +33 (0)1 45 66 06 22 E-mail: secretariat@icomos.org http://www.icomos.org	ICOMOS (International Council on Monuments and Sites) is a non-governmental organization with headquarters in Paris, France. Founded in 1965, its role is to promote the application of theory, methodology and scientific techniques to the conservation of the architectural and archaeological heritage. Its work is based on the principles of the 1964 International Charter on the Conservation and Restoration of Monuments and Sites (the Venice Charter).	The specific role of ICOMOS in relation to the Convention includes: • evaluation of properties nominated for inscription on the World Heritage List, • monitoring the state of conservation of World Heritage cultural properties, • reviewing requests for International Assistance submitted by States Parties, and • providing input and support for capacity-building activities.
IUCN* Rue Mauverney 28 CH-1196 Gland Switzerland Tel: +41 (22) 999-0000 Fax: +41 (22) 999-0002 E-mail: worldheritage@iucn.org http://www.iucn.org	IUCN (International Union for Conservation of Nature) was founded in 1948 and brings together national governments, NGOs, and scientists in a worldwide partnership. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. IUCN has its headquarters in Gland, Switzerland.	The specific role of IUCN in relation to the Convention includes: • evaluation of properties nominated for inscription on the World Heritage List, • monitoring the state of conservation of World Heritage natural properties, • reviewing requests for International Assistance submitted by States Parties, and • providing input and support for capacity-building activities.
UNESCO World Heritage Centre 7, place de Fontenoy 75352 Paris 07 SP France Tel: +33 (0)1 45 68 18 76 Fax: +33 (0)1 45 68 55 70 E-mail: wh-info@unesco.org http://whc.unesco.org	Established in 1992, the World Heritage Centre is the focal point and coordinator within UNESCO for all matters relating to World Heritage. Ensuring the day-to-day management of the Convention, the Centre organizes the annual sessions of the World Heritage Committee, provides advice to States Parties in the preparation of site nominations, organizes international assistance from the World Heritage Fund upon request, and coordinates both the reporting on the condition of sites and the emergency action undertaken when a site is threatened. The Centre also organizes technical seminars and workshops, updates the World Heritage List and database, develops teaching materials to raise awareness among young people of the need for heritage preservation, and keeps the public informed of World Heritage issues.	

* Information on IUCN's World Heritage Programme can be found at **www.iucn.org/about/work/programmes/wcpa_worldheritage/**

IUCN has offices in over forty-five countries, several of which have specific programmes on protected areas and World Heritage site expertise. A full list of offices and contact details can be found at **www.iucn.org/where/**

For more information on IUCN World Commission on Protected Areas see **www.iucn.org/about/union/commissions/wcpa/**

United Nations
Educational, Scientific and
Cultural Organization

World Heritage
Convention

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