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WHC-06/30.COM/ INF.9

Paris, 29 June 2006

Original: English/French

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL
ORGANIZATION

CONVENTION CONCERNING THE PROTECTION OF THE WORLD
CULTURAL AND NATURAL HERITAGE

WORLD HERITAGE COMMITTEE

Thirtieth Session

Vilnius, Lithuania

8-16 July 2006

Item 9 of the Provisional Agenda: Evaluation of Outstanding Universal Value

INF.9: Joint ICOMOS-IUCN paper and papers by ICOMOS and IUCN on the application of the concept of outstanding universal value

This document provides a joint ICOMOS-IUCN paper and two papers respectively presented by ICOMOS and IUCN on the application of the concept of outstanding universal value with respect to the nomination of World Heritage properties

**Outstanding Universal Value:
A recommended approach proposed by ICOMOS and IUCN**

Over the years, ICOMOS and IUCN have contributed actively to discussions on the concept of outstanding universal value and the implementation of the Global Strategy. These contributions notably have included:

- Thematic and Regional studies (ongoing);
- Analyses of the World Heritage List and Action Plans identifying future priorities for ensuring a credible and complete World Heritage List (2004/2005);
- Participation in regional World Heritage meetings to guide the preparation of regional actions plans; and
- Background papers to the Kazan meeting on outstanding universal value (April 2005).

These contributions and the experience of ICOMOS and IUCN lead them to suggest that further work on the outstanding universal value concept should be guided by the following :

- Global and philosophical discussions on the outstanding universal value concept are needed but the ultimate goal should be to facilitate and improve evaluation by the Advisory Bodies, and decision-making by the WH Committee. The Advisory Bodies consider that discussions regarding the application of the WH criteria in relation to specific types of WH properties could be more useful in enhancing understanding of determinants for a property to meet outstanding universal value.
- There is a need to clarify further the unique role of the *World Heritage Convention* in the context of other international conventions and programmes (Ramsar, CMS, Convention on Intangible Heritage, UNESCO's MAB Programme). The credibility of the WH list needs to be seen through the protection of outstanding properties reflected through the application of outstanding universal value criteria and not as another way to protect sites that could be identified or protected by other agreements. There is a need to consider sites designated under different conventions and programmes in a complementary manner.
- The Centre and the Advisory Bodies could identify ways (e.g. dissemination, increasing awareness by decision makers) to make better use of the work undertaken by the ABs in preparing global, regional and thematic studies which are not always fully utilized by State Parties at present. This could prevent considerable energy and resources being expended in nominating properties that have little likelihood of passing the Statement of Outstanding Universal Value. Therefore any further work on this application of this concept can only have a positive impact if it is fully considered and applied by the State Parties. The World Heritage Committee likewise could consider asking the Advisory Bodies to make an initial assessment of properties on the Tentative list.
- According to the *Operational Guidelines*, outstanding universal value and Conditions of Integrity/Authenticity are complementary and supportive; they are not independent factors in the nomination process.

Currently the Advisory Bodies are working on Guidance Manuals for States Parties on the preparation of nominations and tentative lists, including approaches to global comparative analyses, thus providing practical guidance for the application of the concept of outstanding universal value. The ABs also continue to develop guidance for their evaluators on the application of the World Heritage criteria and conditions for authenticity and/or integrity, protection and management. For example, IUCN, with the support of the German Government, and the involvement of ICOMOS and the World Heritage Centre, also held a workshop for its evaluators in November 2005 to discuss the application

of the World Heritage criteria and conditions of integrity in relation to natural properties, and the results of this have fed into IUCN's guidance.

In 2006, ICOMOS and IUCN are presenting updated papers to the 30th session of the World Heritage Committee as contributions to the discussion by the World Heritage Committee on outstanding universal value and the implementation of the Global Strategy. These papers synthesize the guidance to date, highlighting conclusions from the analyses and recommending priority actions for the World Heritage community (Document *WHC 30 COM/INF9*, see below). In an effort to simplify the work of the Committee, this summary draws from those papers and seeks to propose to the Committee a practical approach for moving forward in the debate on outstanding universal value.

ICOMOS and IUCN consider that further discussion on the concept of outstanding universal value should concentrate on developing practical guidance on the processes undertaken by State Parties for the identification of properties of potential outstanding universal value. While a lot of useful guidance is already available to the Committee and States Parties ICOMOS and IUCN consider that it could be helpful to focus on a number of areas identified at the Expert Meeting in Kazan, These include:

1. **Analyses of trends in the evolution of the List** – the ICOMOS and IUCN analyses of the World Heritage List are “works in progress” and should be routinely updated to provide current information on the World Heritage List, its coverage, key trends in its evolution, and what those imply in relation to its long-term credibility.
2. **Database of decisions of the World Heritage Committee** – ICOMOS and IUCN have already launched work on an accessible database of Committee decisions and Advisory Body recommendations on all previous nominations that will support the preparation of comparative analyses.
3. **Resource Manuals** - A series of guidance Manuals will be presented by ICOMOS and IUCN to the Committee this year. These will include guidance on best practice in preparing tentative lists and nominations, with particular attention to comparative analyses, authenticity and integrity, and serial property nominations.
4. **Application of World Heritage criteria** – As the Statement of Outstanding Universal Value is dependant on the nominated property meeting the criteria for outstanding universal value, ICOMOS and IUCN consider that further guidance is needed on the application of criteria. This work is complementary to the database of decisions mentioned under item 2.
5. **Summary of Thematic and Regional Studies** – ICOMOS and IUCN consider that the compilation of a summary of existing studies could make these more easily accessible to State Parties and their decision-makers.
6. **Thematic and Regional Studies** -to support the Analyses of the List, these studies provide specific guidance on thematic areas. ICOMOS and IUCN have proposed priorities for these themes and require sufficient resources for their preparation.

In addition, ICOMOS and IUCN propose preparing a joint paper for submission to the 31st session of the World Heritage Committee in 2007 comparing and contrasting the approaches used by each institution in assessing outstanding universal value in natural, cultural and mixed properties to better inform the Committee and State Parties on how the Advisory Bodies implement the evaluation process.

In conclusion, ICOMOS and IUCN note that, whilst the concept of outstanding universal value has been defined in the *World Heritage Convention* and in particular in its *Operational Guidelines*; its

application might be influenced over time by cultural factors, new scientific findings and the evolving appreciation by society of its cultural and natural heritage.

Whilst a periodic assessment of this concept is required, ICOMOS and IUCN **recommend** that the World Heritage Committee support a clear approach to the development of practical guidance for the process of identifying and evaluating properties of potential Outstanding Universal Value, based on the implementation of the activities noted under points 1 – 6 above.

They further request that the Committee consider the resource implications of this work and identify means to support its further implementation. ICOMOS and IUCN would welcome further precise requests from the Committee on outstanding universal value issues, particularly in terms of the type of analysis and guidance required by States Parties, so as to assist in focusing any further work on this issue.

ICOMOS

THE WORLD HERITAGE LIST

OUTSTANDING UNIVERSAL VALUE

1. ICOMOS welcomes a discussion at the 30th session of the World Heritage Committee (Vilnius, 2006) on outstanding universal value, using paragraphs 6 to 10 of the recommendations of the Kazan experts meeting as a guide (Decision **29 COM 9** paragraph 7):

2. **Outstanding Universal Value**

To begin with, ICOMOS wishes to draw the Committee's attention to paragraph 7 of the recommendations of the Kazan experts meeting which it fully endorses:

7. Further the experts recognized that:

- a) Outstanding universal value like all values is attributed by people and through human appreciation;*
- b) The concept of outstanding universal value in the World Heritage Convention was widely drawn to allow for evolution over time;*
- c) The concept of outstanding universal value is given substance by applying the criteria set out in the Operational Guidelines;*
- d) To maintain outstanding universal value, the criteria and conditions of integrity and authenticity, management and legal or other adequate protection, must be applied rigorously and consistently;*
- e) In order to achieve the effective application of the criteria there is a need for better databases of heritage information and thematic and comparative studies, both regional and global;*
- f) The criteria have evolved and will continue to evolve to accommodate changing perceptions and interpretations of heritage; an understanding of the evolving application of outstanding universal value is demonstrated by past Committee decisions on inscription of World Heritage properties;*
- g) The corpus of past decisions forms an indispensable corporate memory for the application of outstanding universal value;*
- h) The Committee over time has moved towards inscribing properties which reflect the significance of cultural and biogeographical regions important to the whole of humanity;*

- i) *The concept of outstanding universal value implies a shared concern for the conservation of humanity's heritage;*
- j) *The concept of outstanding universal value is poorly understood in general and requires major communication efforts, both generally and at site level;*
- k) *The identification of outstanding universal value of a site needs wide participation by stakeholders including local communities and indigenous people;*
- l) *It would be helpful to develop monitoring measures to assess the success or otherwise of the rigorous application of the criteria to the concept of outstanding universal value.*

3. Importance of outstanding universal value

ICOMOS wishes to emphasise to the Committee that the concept of outstanding universal value is important not only for assessing nominations for World Heritage Listing but also for examining State of Conservation reports of properties already inscribed on the World Heritage List and the List of World Heritage in Danger and for Section II of Periodic Reporting.

ICOMOS considers that the concept of outstanding universal value is important not only at an international level but also at national and local levels for the day-to-day management of properties (paragraphs 51, 96, 108 and following of the *Operational Guidelines*): a good understanding of the values attributed to a site are a prerequisite for ensuring the sustainability of those values over time.

ICOMOS considers that the World Heritage Committee has thus rightly identified 2 priorities (paragraph 6 of **Decision 29 COM 9**):

- a) *the need to draw out references or obvious omissions concerning the values assigned by local communities and indigenous peoples, as related to World Heritage; and*
- b) *the relevance of assigning an adequate priority to both sustainable conservation and to the involvement of all stakeholders in the management of World Heritage properties.*

ICOMOS fully agrees with the World Heritage Committee that outstanding universal value should be a central aspect of State of Conservation reports (see paragraph 173 of the *Operational Guidelines* and **Decision 27 COM 7B.106.2**).

ICOMOS is working on an assessment of the State of Conservation report process with a view to obtaining more positive results for properties, and making the process more efficient and less cumbersome for State Parties, the World Heritage Centre and the Advisory Bodies. It is also looking at ways to use a proper benchmarks system and exploring links that need to be established with the Periodic Reporting process and with sustaining outstanding universal value through management processes.

ICOMOS will submit its conclusions to the World Heritage Committee for consideration within the framework of the evaluation processes as part of the agenda of the 31st session in 2007.

4. Assessing outstanding universal value

As acknowledged by the participants to the Kazan meeting (paragraph 7a), Outstanding Universal Value like all values is attributed by people and – even when rigorous assessment is underpinned by scientific literature and/or classification systems - there is always an element of human value judgement behind recommendations to inscribe natural and cultural heritage properties on the World Heritage List.

The concept of outstanding universal value has evolved over time (see paragraph 7b of the Kazan meeting recommendations) which is demonstrated by successive amendments to the criteria, and by requests of State Parties, within the framework of the Periodic Reporting process, to reconsider the criteria for inscription of some of their sites and to redraft statements of significance.

For cultural heritage sites, the concept of superlatives is not necessarily synonymous with outstanding. Limiting assessment of outstanding universal value to superlatives could lead to the conclusion that one culture is in some way superior to another which is contrary to the purpose of the convention. ICOMOS fully accepts the concept of diversity of cultures, and of their particular manifestation, and makes all efforts to assess outstanding universal value in that context. Likewise, ICOMOS considers that the concept of representativity cannot be disregarded for cultural heritage sites, but needs to be looked at in conjunction with outstanding universal value.

ICOMOS is concerned that there is an increasing tendency to nominate cultural properties which are more closely linked to national identity than to the ten criteria for assessment of outstanding universal value. Whilst fully respecting the link between heritage and national identity, ICOMOS is not in a position to assess values linked to national identity alone and has to present its evaluations in relation to the agreed criteria.

When submitting a Nomination, State Parties should demonstrate measures taken to ensure the proper protection and management of the site and the safeguarding of its values over time (paragraph 97 of the *Operational Guidelines*). ICOMOS considers that inadequate protection and/or management measures are not a sufficient reason to recommend ‘no inscription on the World Heritage List’ as these measures are capable of correction by the State Party if it so wishes. In such cases where the outstanding universal value is beyond doubt, ICOMOS would recommend a referral or deferral – depending upon the information still to be provided (see paragraphs 159-160 of the *Operational Guidelines*).

ICOMOS would welcome a system whereby the Committee allocated International Assistance to properties for which the outstanding universal value had been recognised but where the State Party had some technical difficulties in developing or finalising measures to ensure the adequate protection and/or management of the property (such as, for instance, lack of inventories, lack of management process). ICOMOS is convinced that such a system would produce positive results: it notes with satisfaction that some 2005 Nominations were successfully finalised with bilateral cooperation and that it can recommend inscription this year.

ICOMOS is aware that a lot of resources are put into Nominations. However, this does not mean that ICOMOS will automatically issue a recommendation to inscribe a proposed property on the World Heritage List, which has been the subject of a particularly detailed nomination: the Advisory Bodies need to be objective, rigorous and scientific in their evaluations (paragraph 148 of the *Operational Guidelines*).

ICOMOS is particularly concerned that the content of some proposals for Nominations is of poor quality and that for some cultural properties, there are no relevant research publications or studies available. This is particularly the case for cultural heritage in some parts of the world; the availability of background information is not necessarily related to the importance of the heritage for mankind. However, in the absence of background information, Advisory Bodies cannot always undertake a proper assessment of a property and this can be a serious handicap for those sites. ICOMOS cannot conduct this research in the time allotted and within its current mandate.

ICOMOS acknowledges that some nominations submitted with help from bilateral co-operation agreements were of the highest quality. From that perspective, it would be of interest to the Committee to give due consideration to (a better) use of the Tentative Lists. However, ICOMOS considers that systematic evaluations of Tentative lists, as suggested by the Kazan experts (paragraph 12 m), within available resources and on top of existing commitments would not be possible: even a quick review of the sites included on the Tentative Lists would require scientific research, checking of references, panel meetings etc. which could not be done under current arrangements. ICOMOS would welcome developing in a professional way any proposal or task requested by the World Heritage Committee, provided that the corresponding funds are allocated.

With regards to the selection of experts (paragraph 17 c of recommendations of Kazan meeting), ICOMOS already implements the principles suggested by the Kazan experts and has an even stricter policy. This policy has recently been updated at ICOMOS' Executive Committee meeting in January 2006 and is posted on the ICOMOS website.

ICOMOS expects that the new Nomination format, in combination with the new 2005 Operational Guidelines, will facilitate the task of State Parties, Advisory Bodies and the Committee in this respect: in presenting first outstanding universal value, then conservation issues and possible threats, it should be easier to conclude whether measures taken to protect and manage the site are adequate to ensure the sustainability of the outstanding universal value.

In line with the Kazan recommendations, ICOMOS is studying ways to present its corporate memory, its past recommendations and the final decisions of the Committee, in a format that is easy to access. This is part of a wider study of the way ICOMOS assesses outstanding universal value, authenticity and integrity, and the implications of this for Tentative lists and the nomination process.

ICOMOS will submit its conclusions to the World Heritage Committee for consideration within the framework of the evaluation processes as part of the agenda of the 31st session in 2007, together with recommendations, if appropriate.

5. Conclusion

ICOMOS is currently carrying out two surveys on assessing outstanding universal value and on the State of Conservation Report Process.

These surveys will include examining assessments of:

- the evolution of criteria over time;
- the application of the criteria by ICOMOS and the World Heritage Committee;
- the changes to criteria requested by the State Parties in the framework of the Periodic Reporting process;
- the use of the concept of outstanding universal value in the State of Conservation reports;
- the use of the concept of outstanding universal value for the identification of benchmarks for the properties inscribed on the List of World Heritage in Danger;
- the use of concept of outstanding universal value for preventive conservation and management.

ICOMOS will submit its conclusions on both of these surveys in one paper to the World Heritage Committee for consideration within the framework of the evaluation process as part of the agenda of the 31st session in 2007, together with recommendations, if appropriate.

ANNEX (see annex 5 of DocumentWHC-06/30.COM/15)

Other studies and/or publication being prepared:

- Thematic Study on Rock Art in North Africa
- Thematic Study on Associative Cultural Landscapes in the Pacific Region
- Guidance for Cultural Nominations
- Guidance for Management Plans and Processes for cultural properties

ICOMOS,
Paris, June 2006



THE WORLD HERITAGE LIST:
**Guidance and future priorities for identifying
natural heritage of potential *outstanding
universal value***

Paper prepared by IUCN

Draft of May 15, 2006

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1. INTRODUCTION

1.1 Aims and scope

This paper consolidates IUCN's technical advice to the World Heritage Committee and States Parties on:

- (i) the application of the concept of *outstanding universal value*, as enshrined in the World Heritage Convention and defined in terms of criteria in the Operational Guidelines, with respect to the nomination of World Heritage properties; and
- (ii) future priorities towards achieving a balanced and credible World Heritage List that fully reflects natural heritage of *outstanding universal value*.

The paper considers natural and mixed World Heritage properties, for which IUCN has an advisory role alongside that of ICOMOS (International Council of Monuments and Sites) for cultural World Heritage.

Previous work undertaken by IUCN for the World Heritage Committee has focused on:

- (i) identifying future priorities for a credible and comprehensive list of natural and mixed properties (IUCN, 2004), based on a strategic review by UNEP-WCMC (2004) of the world's major biogeographic regions, habitats and biodiversity hotspots in relation to the World Heritage network; and
- (ii) how IUCN assesses *outstanding universal value* in accordance with the four criteria for natural heritage, as presented to a Special Expert Meeting of the Convention held in Kazan (IUCN, 2005).

This and other work relating to the identification and assessment of *outstanding universal value* of natural heritage is reviewed and synthesized within the present paper, underpinned by the guidance provided in the World Heritage Convention and the latest version (2 February 2005) of the *Operational Guidelines for implementing the World Heritage Convention*.

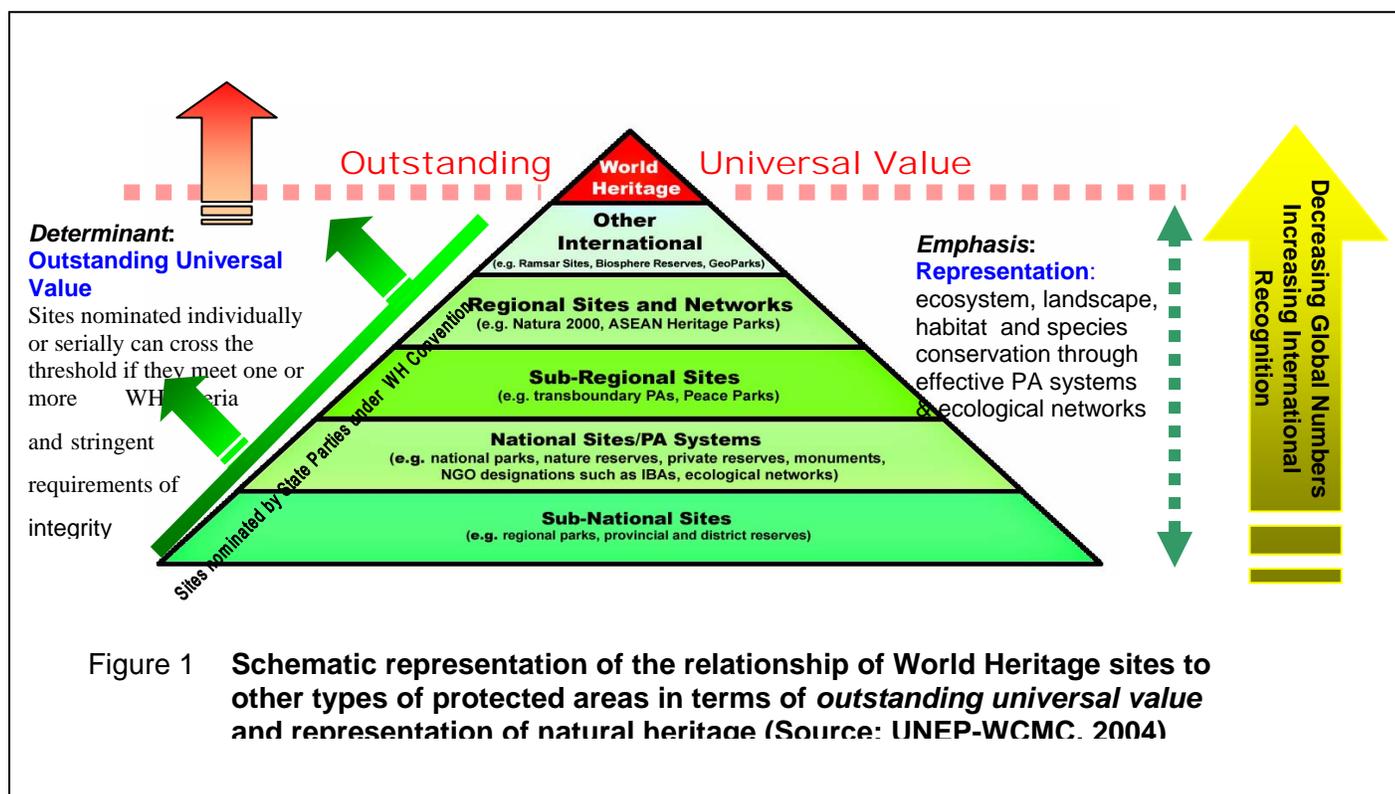
IUCN is currently preparing a World Heritage Resource Manual which will provide more detailed guidance on the preparation of World Heritage nominations for natural properties. This paper provides the technical context on the application of outstanding *universal value* to natural heritage, which will also be used to inform the Resource Manual.

1.2 Global Strategy for World Heritage

In 1994, the World Heritage Committee launched its *Global Strategy for a Balanced, Representative and Credible World Heritage List* to address the then preponderance of cultural over natural properties and the fact that most properties were located in developed countries, notably in Europe. Its aim was to ensure that the List reflects the world's cultural and natural diversity of *outstanding universal value*.

Although the Committee is on record as seeking to establish a representative, balanced and credible World Heritage List in accord with the Budapest Declaration on World Heritage¹, IUCN considers that it is not intended that the List should be completely representative of the earth's entire cultural and natural heritage as this would be contrary to the concept of *outstanding universal value*.

In the case of natural areas, conserving ecosystems, landscapes, habitats and species is the role of national, regional and other international protected area systems. The relationship between World Heritage properties and other types of protected areas with respect to *outstanding universal value* and representation is shown diagrammatically in Figure 1. While all protected areas are important for ensuring adequate protection and maintenance of ecosystems, landscapes, habitats and species, only a few qualify for inscription on the World Heritage List based on their meeting one or more criteria for *outstanding universal value*.



¹ Adopted at the 26th Session of the World Heritage Committee, 2002.

In particular, it should be noted that representation at the international level is an explicit objective of UNESCO's Man and Biosphere Programme, which seeks to establish a network of biosphere reserves "representative" of the world's biogeographic provinces. Similarly, the UNESCO Geoparks initiative aims to recognize a global series of geological sites in which protection of geological heritage is integrated with sustainable resource use and economic development.

Other international Conventions and Agreements include the Ramsar Convention for wetlands of international significance and, at regional level, the European Union Natura 2000 sites, and the Alpine and Carpathian Conventions. In addition, there are areas, such as the High Seas and Antarctica, for which the World Heritage Convention is less suited. In the latter case, the Antarctic Treaty offers a mechanism for collaboration in relation to its conservation.

To avoid any ambiguity or misunderstanding, therefore, no further reference is made in this IUCN paper to the term 'representative' in the context of World Heritage.

2. OUTSTANDING UNIVERSAL VALUE

2.1 What does *outstanding universal value* mean?

The World Heritage Convention is concerned exclusively with the identification, protection, conservation and presentation of cultural and natural heritage of *outstanding universal value* and their transmission to future generations, as laid out in Article 4 of the Convention.

The exclusive focus of the Convention on only those parts of heritage deemed to be of *outstanding universal value* applies consistently across the various types of cultural and natural heritage recognized under Articles 1 and 2, respectively. The challenge, therefore, is to distinguish between what is and what is not acceptable as being of *outstanding universal value* within the terms of the Convention, in order to develop and maintain a balanced and credible World Heritage List. The selective nature of the Convention is emphasised in paragraph 52 of the Operational Guidelines (UNESCO, 2005):

"The *Convention* is not intended to ensure the protection of all properties of great interest, importance or value, but only for a select list of the most outstanding of these from an international viewpoint. It is not to be assumed that a property of national and/or regional importance will automatically be inscribed on the World Heritage List."

The term *outstanding universal value* is used to qualify all cultural and natural heritage recognized under the World Heritage Convention but it is not specifically defined in the Convention. It is defined, however, in the Operational Guidelines (Box 1).

Box 1 Definition of *outstanding universal value*

49. Outstanding universal value means 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.

IUCN (2005) considers the following principles are helpful in understanding the concept of *outstanding universal value*:

- **Outstanding:** For properties to be of outstanding universal value, they should be exceptional. IUCN has noted in several expert meetings 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 the properties to be inscribed on the World Heritage List, as well as their importance to all people of the world. By definition, properties cannot be considered for outstanding universal value from a national or regional perspective.
- **Value:** What makes a property outstanding and universal is its ‘value’. This implies defining the worth of a property in terms of its global importance, based on a set of clear standards or criteria that are consistently applied.

2.2 How is *outstanding universal value* applied to natural properties?

Natural heritage is defined in Article 2 of the World Heritage Convention as follows:

“natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;

geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;

natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.”

The World Heritage Committee, is responsible for establishing the criteria for the assessment of *outstanding universal value* (Article 11, paragraph 2 of the *Convention*). These criteria are set out in Table 1.

Table 1 Natural World Heritage criteria for assessment of *outstanding universal value* and corresponding conditions of integrity

Natural World Heritage criterion	Corresponding condition of integrity
(vii) Contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.	92. Be of outstanding universal value and include areas that are essential for maintaining the beauty of the property
(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.	93. Contain all or most of the key interrelated and interdependent elements in their natural relationships.
(ix) Be outstanding examples representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.	94. Have sufficient size and contain the necessary elements to demonstrate the key aspects of processes that are essential for the long-term conservation of the ecosystems and the biological diversity they contain.
(x) Contain the most important and significant natural habitats for <i>in-situ</i> conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.	95. Be the most important properties for the conservation of biological diversity. Only those properties that are the most biologically diverse and/or representative are likely to meet this criterion. Properties should contain habitats for maintaining the most diverse fauna and flora characteristic of the biogeographic province and ecosystems under consideration.

Source: Operational Guidelines, February 2005

There are three key tests, as set out in the paragraphs 77 and 78 of the *Operational Guidelines*, which the World Heritage Committee applies to decide whether or not a property is of *outstanding universal value*:

1. A property must meet one or more of the ten criteria for *outstanding universal value*, of which i-vi apply to cultural heritage and vii-x to natural heritage (Table 1).
2. A property must also meet certain conditions of integrity (cultural and natural properties) and/or authenticity (cultural properties only).
3. A property must have an adequate protection and management system in place to ensure its safeguarding, including appropriate legal, boundary and buffer zone provisions and a management plan or system that ensures uses supported by the property are ecologically and culturally sustainable.

Integrity is defined and amplified further with respect to natural properties nominated under criteria (vii) - (x) in the *Operational Guidelines* (Box 2). In addition, a corresponding condition of integrity has been defined for each of the criteria under which natural properties may be nominated. These conditions are summarized in Table 1 for each criterion (vii - x).

Box 2 Definition of integrity and its application to natural properties

88. Integrity is 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 outstanding universal value;*
- 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.

90. For all properties nominated under criteria (vii) - (x), biophysical processes and landform features should be relatively intact. However, it is recognized that no area is totally pristine and that all natural areas are in a dynamic state, and to some extent involve contact with people. Human activities, including those of traditional societies and local communities, often occur in natural areas. These activities may be consistent with the outstanding universal value of the area where they are ecologically sustainable.

(Source: Operational Guidelines, February 2005)

These criteria and associated conditions provide the basis for: (a) States Parties to justify the nomination of a property for World Heritage status; and (b) Advisory Bodies and the World Heritage Committee to evaluate the property and determine whether or not it merits inscription on the World Heritage List. In assessing nominated properties, IUCN is also guided by paragraph 148 (b and c) of the Operational Guidelines, which states that the Advisory bodies should:

“be objective, rigorous and scientific in their evaluations;
be conducted to a consistent standard of professionalism;”

2.3 Trends and practices in the nomination of properties and application of *outstanding universal value*

An understanding of the practical application of the concept of *outstanding universal value* can be gained from examining historic trends in the nomination of natural and mixed natural/cultural properties and the criteria under which properties have been inscribed on the World Heritage List. It should be noted that the criteria have changed from being arranged in two separate lists (v-x six cultural and i-iv four natural), prior to the 2005 Operational Guidelines, to a single list of ten criteria (i-vi cultural and vii-x natural). The relative order of the old natural criteria has changed, with natural criterion (iii) becoming new criterion (vii), followed by the other natural criteria in their former order. Also, the precise wording of the criteria has changed over time, the most significant amendments were made in 1992.

As of April 2006, 160 natural and 24 mixed natural/cultural properties have been inscribed on the World Heritage List. The annual percentage of successful nominations, shown in Figure 2, has fallen with some fluctuation from about 70% to 50% and lower during the life of the Convention. This trend reflects a variety of factors relating to *outstanding universal value* and other key tests that should be taken into account when considering whether or not a property merits nomination, including:

- During the first decade of the Convention, many of the most iconic, well-known and outstanding natural properties were nominated and immediately inscribed on the List.
- Although the annual number of nominations has risen in subsequent decades, an increasing proportion of these have been deferred or not inscribed. The main reason for this is that the evaluation process has become more robust:
 - (a) largely as a result of better information becoming available to facilitate more objective comparative analyses; and
 - (b) partly through more rigorous application of the Conditions of Integrity, in accordance with the Operational Guidelines.

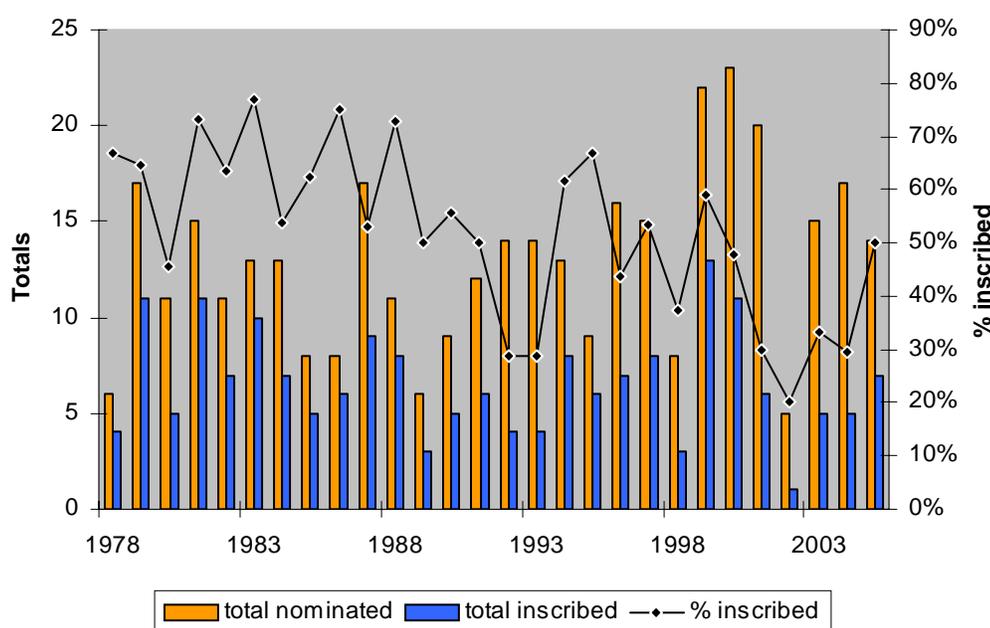


Figure 2 Natural and mixed natural/cultural properties nominated and inscribed on the World Heritage List during the life of the Convention

The extent to which the four criteria for assessing *outstanding universal value* have been applied to natural and mixed natural/cultural properties is summarised in Table 2.

The following trends are evident:

- A small though significant proportion of natural sites (20%) has been inscribed on the basis of a single criterion, particularly in the case of criteria (viii) and (x).
- In terms of frequency, criteria have been applied fairly evenly across natural properties with the apparent exception of criterion (viii). This observation is complicated, however, by the fact that prior to 1994 *outstanding universal values* for earth science were included within categories (i) and (ii), which are now (vii) and (ix), respectively, under the revised numbering system of 2005. There is currently a reassignment exercise to deal with these changes in the criteria.

Table 2 Frequency of the use of the different natural World Heritage criteria

Type of World Heritage property Basis of inscription	Natural World Heritage criteria			
	Natural phenomena vii	Geological processes ¹ viii	Biological processes ix	Biodiversity conservation x
Natural properties				
Inscribed on basis of single criterion	6	11	3	12
Inscribed on basis of several criteria ²	90	50	95	95
Mixed natural/cultural properties				
Inscribed on basis of several criteria ²	21	5	11	10

¹ Geological properties are underrepresented, as no account is taken of changes to the definitions of criteria in 1994.

² Properties inscribed on the basis of this criterion in combination with one or more other criteria. (Note that, by definition, mixed natural/cultural properties also meet at least one of the cultural World Heritage criteria.)

Further analysis of the data for natural properties in Figure 3a shows that the majority (80%) has been inscribed on the basis of two or more criteria, with two criteria being the most frequent category (51%). In the case of the application of two criteria, there is a high coincidence (38%) of criteria (ix) and (x) (i.e. biological processes and biodiversity conservation) and to a lesser extent criteria (ix) or (x) with (vii) (natural

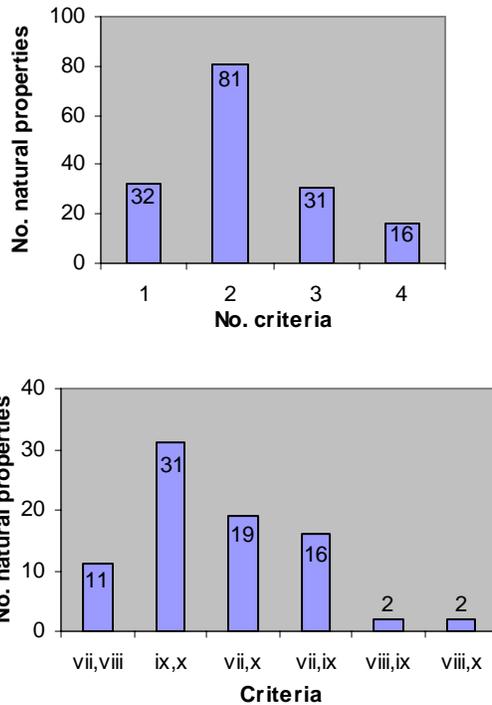


Figure 3 **(a) Number of natural properties inscribed on basis of 1, 2, 3 or 4 criteria**
(b) Number of natural properties inscribed on basis of different combinations of two criteria

phenomena or beauty). Criterion viii (geological processes) features in combination with (vii) in fewer cases (14%) and rarely with either criterion ix or x (Figure 3b).

The main points emerging from this analysis of historic trends and practice are:

- There is an overall increase in the proportion of nominated natural and mixed natural/cultural properties that are not inscribed on the World Heritage List over the life of the Convention. This highlights the increasing rigour applied by the Advisory Bodies and by the World Heritage Committee. It also highlights the need to improve the tentative listing and nomination processes so that properties with a higher likelihood of meeting the criteria of outstanding universal value are identified and nominated by States Parties. Also that properties which are unlikely to pass the test of *outstanding universal value* are eliminated at the outset.
- In practice, the majority (80%) of natural and mixed natural/cultural properties have been inscribed on the World Heritage List on the basis of at least two of the natural World Heritage criteria.
- Criteria vii (natural phenomena) and ix (biological processes) are rarely used in isolation. Criterion (vii) is most often used in combination with (ix) or (x), less often with (viii). Criterion (ix) is most often used in combination with (x), as might be expected since properties representing biological processes of

outstanding universal value are quite likely to contain the most important habitats for biological diversity conservation, and sometimes with (ix).

- More detailed analysis of the decisions of the World Heritage Committee would provide a valuable insight into the extent to which nominated properties have not met any of the criteria for *outstanding universal value* as opposed to failing the tests for integrity or protection and management.

3 HOW IUCN ASSESSES *OUTSTANDING UNIVERSAL VALUE*

3.1 IUCN's approach to applying *outstanding universal value* to natural heritage

The World Heritage Convention seeks to recognize the world's most exceptional properties of common importance to all of humanity. It is the role of IUCN, in its capacity as an advisory body to the World Heritage Committee, to help maintain the credibility of the Convention by applying the highest standards to its evaluation of natural heritage of potential *outstanding universal value*, based on the best available information and expertise. A similar role is undertaken by ICOMOS (International Council of Monuments and Sites) for cultural heritage.

It is important to understand that there are intrinsic differences between natural and cultural properties, as summarized in Table 3. Consequently, the two advisory bodies (IUCN and ICOMOS) tend to use different frameworks for assessing *outstanding universal value*, while endeavoring to maintain equivalent standards in interpreting and applying this concept. As noted, both Advisory Bodies are required under the Operational Guidelines to: “be objective, rigorous and scientific in their evaluations” and undertake their evaluations to a “consistent standard of professionalism”.

Table 3 **Key differences between natural and cultural properties and frameworks for their assessment of *outstanding universal value***

Natural properties	Cultural properties
<ul style="list-style-type: none"> • Most properties are distinct territorial units, often large, and distributed in most biomes and ecoregions of the world. • Values or qualities of properties tend to be associated with measurable characteristics, such as the diversity of species or number of endemic species (where such information is available). • Values of properties are usually linked to scientific information, which affords objective assessment. 	<ul style="list-style-type: none"> • Properties tend to be fragmented, diverse and not evenly distributed worldwide. • Values or qualities tend to depend on such factors as: materials used; when and how a property was created; history behind the property; and the value that society may attribute to those qualities. • Values of properties are usually linked to regional cultural identity for which assessment is often subjective.

<ul style="list-style-type: none"> Scientific assessment (both in relation to geographical and biodiversity features) is often informed by universally accepted classification systems. 	<ul style="list-style-type: none"> Evaluation of cultural heritage is less predisposed to being informed by classification systems since combination of the above factors tends to result in a high diversity of situations.
<p>Frameworks for assessment</p> <p>A topological framework (based on biogeographical differences and unique characteristics) is generally used to assess natural heritage, complemented by a thematic framework.</p>	<p>A typological framework (based on similarities) is generally used to assess cultural heritage, complemented by a chronological/regional framework and a thematic framework.</p>

Source: IUCN (2005)

In general, IUCN draws upon a wide range of information and international expertise in its evaluation of natural or mixed properties nominated for World Heritage status. This includes, but is not limited to, the following:

- The nomination dossier and its justification for the *outstanding natural value* of the property, based in particular on the criteria and a global comparative analysis.
- Data analysis and review of relevant literature, with support from UNEP-WCMC.
- The IUCN analysis of the World Heritage List (IUCN, 2004), which is based on a series of global classification and prioritisation systems reviewed by UNEP-WCMC (2004).
- Global, regional and thematic studies, developed by IUCN in partnership with other professional bodies.
- The views and recommendations of expert reviewers drawn from IUCN's extensive range of specialist networks (World Commission on Protected Areas and other IUCN Commissions, IUCN Regional and Country Offices, IUCN Global Thematic Programmes, IUCN Membership and partners).
- Feedback and recommendations from the field evaluation mission.
- A final review of all of the above information by the IUCN World Heritage Panel, which forms the basis of IUCN's recommendation to the World Heritage Committee.

The way in which IUCN applies each of the four criteria that define *outstanding universal value* for natural heritage is considered in the following sections, along with the range of tools commonly used to help assess *outstanding universal value*. Details of these tools (global, regional and thematic studies) are provided in Annex 1.

3.2 Criterion vii - Natural phenomena and natural beauty

Two distinct ideas are embodied in this criterion. The first, 'superlative natural phenomena', can often be objectively measured and assessed (the highest mountain, the most extensive largest cave system etc.). The second, that of

'exceptional natural beauty and aesthetic importance', is harder to quantify and tends to be assessed on the basis of a wide range of expert advice which compares the property under consideration to other comparable WH properties inscribed under this criterion (IUCN, 2005).

Properties nominated for inscription will have comparable sites distributed on a worldwide, rather than regional basis, so standards applied under this criterion need to meet the highest global standards. This global standard can help to distinguish the application of the aesthetic element of this criterion from more local or regional factors, which may be more relevant to the consideration of cultural landscapes².

A total of 117 properties have been inscribed in the WH List under this criterion, six on the basis of this criterion alone and the rest in combination with other criteria (Table 2).

A specific review and analysis of the world's heritage of natural phenomena and beauty is required to inform and guide assessment of properties nominated under this criterion. IUCN is proposing to develop guidance for the application of this criterion that could include the following considerations:

- interpretation of the basic terms (phenomena, beauty, aesthetics) as they relate to the Convention and Outstanding Universal Value;
- descriptive analyses of landscape and other cultural perspectives, including the extent to which local values have contributed to national identity and transcend national boundaries;
- an assessment of 'case law' and comparative analysis; and
- analysis of natural features that can contribute to aesthetic values.

3.3 Criterion viii - Geological processes

This criterion recognizes four different natural elements relevant to geological and geomorphological science: the earth's history, the record of life, ongoing geological process, and geomorphic or physiographic features (Table 1). Each of these elements is briefly described in Box 3.

²Cultural landscapes are part of the cultural heritage in which the "combined works of nature and of man" are manifest, as defined in Article 1 of the *Convention*.

Box 3 Description of natural elements of earth science recognized in criterion (viii)

(a) Earth's history

This subset of geological, as opposed to geomorphological, features is represented by phenomena that record important events in the past development of the planet such as:

- the record of crustal dynamics and tectonism, linking the genesis and development of mountains, volcanoes, plate movements, continental movement and rift valley development;
- records of meteorite impacts; and
- records of glaciations in the geological past.

Properties in this category are considered to be of *outstanding universal value* in exhibiting elements of earth history through rock sequences or associations rather than fossil assemblages.

(b) Record of life

This subset includes palaeontological (fossil) properties. An IUCN thematic study (Wells, 1996) considers the role of such properties in the World Heritage List and provides a framework for their assessment.

(c) Significant on-going geological processes in the development of landforms

This element is the first of two aspects related to geomorphology and ongoing geological processes, such as volcanic eruptions. It relates to active processes that are shaping or have shaped the Earth's surface. Properties recognised under this element include those that are of *outstanding universal value* as examples of:

- arid and semi-arid desert processes;
- glaciation;
- volcanism;
- mass movement (terrestrial and submarine);
- fluvial (river) and deltaic process processes; and
- coastal and marine processes.

(d) Significant geomorphic or physiographic features.

This second primarily geomorphological element represents the landscape products of active or past processes, which can be identified as significant physical landscape features. Criterion (viii) recognizes these features in relation to their scientific value: however, frequently they may also be of aesthetic value. Properties recognised within this part of the criterion may include those of *outstanding universal value* as:

- desert landforms;
- glaciers and ice caps;
- volcanoes and volcanic systems, including those that are extinct;
- mountains;
- fluvial landforms and river valleys;
- coasts and coastal features;
- reefs, atolls and oceanic islands;
- glacial and periglacial landforms, including relict landscapes; and
- caves and karst.

(Source: *Geological World Heritage*. Dingwall *et al.*, 2005)

A new global thematic study on *Geological World Heritage* with respect to criteria (vii) has been produced by IUCN (Dingwall *et al.*, 2005) to guide the assessment of *outstanding universal value*. The study shows that geological heritage comprises a major component of the current World Heritage network: a total of 71 properties in 42 countries are judged have geological features of *outstanding universal value*, although not all are inscribed under criterion (viii), as discussed in the previous section; and a further 53 properties are considered to demonstrate a significant degree of geological interest but not to the level of *outstanding universal value*.

The study identifies 13 themes to assist in understanding the operation of this criterion with respect to the four different earth science values embodied within it. The themes are listed and briefly described in Box 4. More work is required to understand the application of *outstanding universal value* within each of these themes.

Box 4 Conceptual framework of 13 themes proposed for the assessment of outstanding universal value of geological heritage

1. **Tectonic and structural features** Elements of global-scale crustal dynamics including continental drift and seafloor spreading. Major crustal landforms and structural features at plate boundaries. Geosyncline/anticline development and erosion; riftvalley systems.
2. **Volcanoes/volcanic systems** Major areas and types of volcanic origin and evolution. These may include examples of major features, such as the 'Pacific Ring of Fire', as a global-scale expression of volcanic activity and associated crustal movements.
3. **Mountain systems** Major mountain zones and chains of the world.
4. **Stratigraphic sites** Rock sequences that provide a record of key earth history events.
5. **Fossil sites** The record of life on Earth represented within the fossil record (see also Wells, 1996).
6. **Fluvial, lacustrine and deltaic systems** Land systems resulting from large-scale river erosion and drainage system development, lakes, wetlands and deltas.
7. **Caves and karst systems** Subterranean hydrological processes and landforms, together with their surface expressions.
8. **Coastal systems** The role of water at oceanic margins on large-scale erosional and depositional coasts and banks.
9. **Reefs, atolls and oceanic islands** Geo-biological and/or volcanic features in oceanic areas or with oceanic influences.
10. **Glaciers and ice caps** The significant role of ice in landform development in alpine and polar regions, including periglacial and nivation (snow) influences.
11. **Ice Ages** Global patterns of continental icesheet expansion and recession, isostasy, sea-level changes, and associated biogeographic records.
12. **Arid and semi-arid desert systems** Land systems and features reflecting the dominant role of wind (eolian processes) and intermittent fluvial action as agents of landform development and landscape evolution.
13. **Meteorite impact** Physical evidence of meteorite impacts (astroblemes), and major changes that have resulted from them, such as extinctions.

(Source: *Geological World Heritage*. Dingwall *et al.*, 2005)

3.4 Criterion ix - Ecological and biological processes Criterion x - Biological diversity

These two criteria are considered together because they are closely linked and often used in combination with each other. A total of 46 natural properties have been inscribed on basis of these criteria alone, either singly (Table 2) or in combination (Figure 3b), and a further 23 properties on the basis of criteria (vii), (ix) and (x).

Assessment of criterion (ix) depends on a scientific understanding of the world's ecosystems and their associated ecological and biological processes. A range of thematic studies have been generated to objectively assess *outstanding universal value* with respect to ecosystems, such as tropical forest, boreal forest, tropical marine and coastal, wetlands, mountains, and centres of plant and animal biodiversity. Others are proposed for arid lands, freshwater and the polar regions.

Criterion (x) is associated with one of the core competencies of IUCN, which is able to draw on the expertise of its Commissions (with more than 10,000 expert members worldwide) and key IUCN members, such as BirdLife International, WWF, Conservation International and The Nature Conservancy. A range of tools are available to assess this criterion, including the IUCN Red List, Centres of Plant Diversity, Endemic Birds Areas of the World, Conservation International's Biodiversity Hotspots and WWF's Global 200 Ecoregions for Saving Life on Earth.

A recent global study of the coverage of biogeography, major habitats and centres of high biodiversity within the World Heritage network by UNEP-WCMC (2004) provides a valuable tool for assessing the *outstanding universal value* of properties nominated under criteria (ix) and (x). The study provides analyses of two biogeographic classification systems, two habitat classification systems and three biodiversity prioritization schemes, each of which is briefly described in Box 5.

Box 5 **Classification and prioritization schemes used to assess *outstanding universal value* in relation to biological processes (Criterion ix) and biodiversity (Criterion x)**

Biogeography

- **Udvardy biogeographic system**

This classification system comprises 8 biogeographic *realms*, subdivided into 193 biogeographic *provinces*, and 14 ecosystem types or *biomes*. It has proved to be an effective framework for assessing potential natural World Heritage but does not cover the marine environment.

- **WWF Global 200 Ecoregions**

Global 200 refers to a subset of 238 Ecoregions considered to be of highest priority for conservation and derived from a total of 867 ecoregions. It comprises 142 terrestrial, 53 freshwater and 43 marine Ecoregions.

Habitats

- **IUCN Species Survival Commission Global Habitat Classification**

This scheme divides the world's terrestrial and marine habitats into a hierarchical series of 13 first-level habitat categories, 78 second-level categories and 154 third-level categories. The first-level habitat category has proved the most useful for World Heritage purposes.

- **Global Land Cover Characterisation**

This classification system, developed by Olson (1994a, 1994b), recognizes 94 ecosystem classes using 1 km² AVHRR (Advanced Very High Resolution Radiometer) data. Ecosystem classes are based on their land cover mosaic, floristic properties, climate and physiognomy.

Biodiversity

- **Conservation International Biodiversity Hotspots**

Conservation International has identified 25 biodiversity hotspots around the world, based principally on their high plant endemism and significant human impact. A region must contain 1,500 endemic plant species (0.5% of the global total). Such hotspots also support an enormous number of endemic animal species. CI notes that 44% of all vascular plant species and 38% of all animal species occur in less than 2% of the globe's terrestrial area.

- **BirdLife International Endemic Bird Areas**

BirdLife International has designated approximately 2% of the world's land surface as Endemic Bird Areas (EBAs), of which 218 have been identified on the basis of encompassing the breeding ranges of two or more bird species whose total breeding ranges are restricted to 50,000 km² or less. These cover the ranges of 93% of restricted range birds (2,451 species or approximately 25% of all known bird species).

- **WWF/IUCN Centres of Plant Diversity**

Principally on the basis of high diversity of species or numbers of endemic species, or both, 250 centres of plant diversity have been identified globally. Other criteria include habitat diversity, under threat of large-scale devastation, and importance as gene pools for plants of value to humans.

4 FUTURE PRIORITIES

4.1 Priorities for natural heritage

Criterion vii - Natural phenomena and natural beauty

The priority is to develop guidance for assessing *outstanding universal value* under this criterion (Section 3.2). Once this is available, it will be possible to identify key gaps in the World Heritage network and better assess the potential for *outstanding universal value* of properties nominated under this criterion.

Criterion viii - Geological processes

The global thematic study on *Geological World Heritage* provides a framework of 13 themes against which the existing World Heritage network has been assessed with respect to their coverage. The results of this analysis are summarized in Table 4 and full details are provided in Appendix 1 of Dingwall *et al.* (2005). The distribution of features having *outstanding universal value* is uneven across the different themes. This is to be expected as the scope of themes varies from the relatively specialised (e.g. karst, ice ages and meteorite impact) to those that are very broad (e.g. fluvial, lacustrine and deltaic systems). Given this variety in the scope of the themes, it appears that some themes, including volcanoes and karst, are recognised by a proportionately larger number of properties relative to other themes.

Table 4 **Number of natural and mixed natural/cultural properties featuring geological themes of *outstanding universal value* (Dingwall et al., 2005)**

Theme	Outstanding universal value		Other significant features
	Principal features	Possible features	
Tectonic and structural features	3	1	3
Volcanoes/volcanic systems	13	0	0
Mountain systems	11	4	9
Stratigraphic sites	2	0	0
Fossil sites	11	1	9
Fluvial, lacustrine and deltaic systems	10	4	6
Caves and karst systems	7	1	4
Coastal systems	8	2	8
Reefs, atolls and oceanic islands	1	1	2
Glaciers and ice caps	6	2	5
Ice Ages	7	6	6

Arid and semi-arid desert systems	4	0	3
Meteorite impact	1	0	0

Note: figures do not sum as some properties are assigned to more than one theme.

The priority is to develop guidance on potential *outstanding universal value* for each of these themes, with the exception of fossil sites for which such guidance already exists. Table 5 illustrates the extent to which the record of the evolution of life on Earth is captured by existing World Heritage properties. It does not necessarily follow, however, that properties of *outstanding universal value* can be identified for those geological periods or epochs currently not represented within the World Heritage network.

Table 5 Geological time periods covered by World Heritage fossil properties (Sources: Wells, 1996; Dingwall et al., 2005)

Geological period		Plant evolution	Animal evolution	World Heritage property
	Epoch			
Quaternary	Recent	Increase in herbaceous plants	Appearance of <i>Homo sapiens</i>	Naracoorte (Australia)
	Pleistocene 25	Repeated glaciation leads to mass extinction	Repeated glaciation leads to mass extinction First <i>Homo</i>	
Tertiary	Pliocene	Forests decline, grasslands spread	Appearance of hominids	
	Miocene		Appearance of first apes	Riversleigh (Australia)
	Oligocene		All modern genera of mammals present	
	Eocene		Bony fish abound in seas	Messel Pit (Germany) Wadi Al-Hitan (Egypt)
	Paleocene 65	Explosive radiation of flowering plants	Rise of mammals First placental mammals	
Cretaceous 135	First flowering plants	Dinosaurs extinct Modern birds	Dinosaur Provincial Park (Canada)	
Jurassic 195	Forests of gymnosperms and ferns over most of land	First birds Age of dinosaurs	Dorset/East Devon Coast (UK)	
Triassic 240	Gymnosperms dominant	Explosive radiation of dinosaurs First dinosaurs First mammals Complex arthropods dominant in seas First beetles	Dorset/East Devon Coast (UK) Ischigualasto-Talampaya (Argentina) Monte San Giorgio (Switzerland)	
Permian 285	Widespread extinction Decline of non-seed plants	Widespread extinction Therapsids (mammal like reptiles) appear Increase in reptiles and insects Decline of amphibians	Grand Canyon (USA)	

Carboniferous - Pennsylvanian - Mississippian 375	Gymnosperms appear. Widespread forests of giant club moss trees, horsetails and tree ferns create vast coal deposits	Early reptiles First winged insects Increase of amphibians	Mammoth Cave (USA)
Devonian 420	First seed plants Development of vascular plants: club mosses and ferns	Amphibians diversify into many forms First land vertebrates – amphibians	Miguasha (Canada)
Silurian 450	First vascular plants First land plants	Golden ages of fishes First land invertebrates – land scorpions	
Ordovician 520		First vertebrates – fishes Increase in marine invertebrates	Gros Morne (Canada)
Cambrian 570	Algae dominant	Trilobites dominant Explosive evolution of marine life	Burgess Shale (Canada)
Precambrian	First algae/bacteria		

Millions of years ago

IUCN is developing partnerships with the International Association of Geomorphologists and the International Union of Geological Sciences in order to deepen the understanding of each of the 13 themes, identify future priorities and strengthen processes for review and evaluation.

Criterion ix - Ecological and biological processes
Criterion x - Biological diversity

A wide range of guidance and tools has been developed for the assessment of these two criteria. Key priorities are the development of thematic assessments for arid and semiarid lands and freshwater ecosystems, and regional assessments of the polar regions.

A summary of the results of the 2004 UNEP-WCMC study, as refined by IUCN (2004), is provided in Table 6 in terms of coverage of biogeography, habitats and centres of high biodiversity within the World Heritage List³ and opportunities for nominating properties of potential *outstanding universal value*. Habitats and priority conservation areas currently not included or well represented within the World Heritage network are listed in column two of Table 6 but, importantly, only some of these (or components of them) are considered by IUCN to be of potential *outstanding universal value* (column three).

A number of conclusions have been drawn from the above analyses by IUCN (2004):

³ The analysis covers 149 natural and 23 mixed natural/cultural properties inscribed up to 2003. It does not include properties inscribed in 2004 and 2005.

- Natural and mixed natural/cultural properties on the World Heritage List cover almost all biogeographic regions, biomes (ecosystems), and habitats of the world with a relatively balanced distribution.
- The biomes (ecosystems) most commonly found in World Heritage properties are mountains, humid tropical forests, tropical dry forests and mixed island systems.
- There are opportunities for listing natural heritage of *outstanding universal value* within the following biomes: tropical grasslands/savannas, lake systems, tundra and polar deserts, temperate grasslands, and cold winter deserts.

Second-level habitats	<p>Sub-Antarctic forest Sub-Antarctic shrubland Sub-Antarctic grassland Permanent saline, brackish or alkaline lakes Seasonal/intermittent saline, brackish or alkaline lakes/flats Permanent saline, brackish or alkaline marshes/pools Kelp or macroalgae beds Coastal freshwater lagoons Karts & subterranean hydrological systems</p>	<p>Succulent Karoo Flooded grasslands (e.g. Okavango, Sudd swamps) Red Sea corals Namib desert Madagascar moist forests Western Ghats High latitude and sub-polar tundra Central Asian deserts Montane forests in Polynesia and New Caledonia Sub-Antarctic habitats in southern Chile, southern Argentina and South Georgia</p>
Conservation International Biodiversity Hotspots	<p><i>Hotspots not represented:</i> New Caledonia Central Chile Succulent Karoo</p> <p><i>Hotspots not well represented:</i> Southwest Australia California Floristic province</p>	<p>New Caledonia Central Chile Succulent Karoo</p>
BirdLife International Endemic Bird Areas	144 (66%) not represented, of which 51 classed as 'critical'	Unlikely to qualify for <i>outstanding universal value</i> solely on EBA status
WWF/IUCN Centres of Plant Diversity	193 (77%) not represented	Some CPDs likely to be of <i>outstanding universal value</i>

- There are also some terrestrial and marine habitat types within a number of these and other biomes that may have potential for World Heritage inscription. They are listed in Box 5 and include sites that have been identified as priorities by Conservation International, IUCN/SSC, WWF and BirdLife International. Concerned State Parties should give high priority to prepare new nominations for properties located in any of these areas.

Box 5 **Ecosystems and habitats considered being of potential *outstanding universal value*, based on information summarized in Table 6**

Grasslands

Sudd-Sahelian savanna and flooded grasslands

Sub-Antarctic grasslands, including South Georgia

Sub-polar and arctic tundra

Wetlands

Flooded grasslands such as Okavango and the Sudd swamps

Volga and Lena River deltas

Western Ghats rivers

Deserts

Succulent Karoo

Namib desert

Central Asian deserts

Socotra desert

Forests

Madagascar moist forests

Forests in southern Chile and southern Argentina

Dry and moist forests in New Caledonia

Western Ghats forests

Marine

Red Sea corals

Andaman Sea (sites within the marine ecoregion)

Benguela Current (marine)

Marine sites within the following WWF ecoregions: Fiji, Palau and Tahiti

Maldives/Chagos atolls

4.2 Improving the process for identification of potential *outstanding universal value*

Tentative lists and harmonization

Each State Party to the Convention is obliged to submit to the World Heritage Committee an inventory of cultural and natural heritage within its territory, referred to as a Tentative List, considered to be of *outstanding universal value* and intended for nomination in subsequent years (Article 11 - 1). Nominations are not considered unless the property has already been included within a State Party's Tentative List⁴.

Tentative Lists provide an important planning and evaluation tool early on in the process of identification of *outstanding universal value*. Not only are States Parties encouraged to consult widely among stakeholders (site managers, local and regional governments, local communities, indigenous peoples, NGOs and other interested partners and stakeholders) within their own country but also they can be guided by the analyses of the World Heritage List, specific thematic studies and other technical reviews by the Committee's Advisory Bodies (ICOMOS and IUCN) in the development of their Tentative List. Such information is intended to assist States Parties in identifying gaps in the network and comparing themes, regions, geo-cultural groupings and biogeographic provinces for prospective World Heritage properties.

States Parties are encouraged to harmonize their Tentative Lists at regional and thematic levels. This process enables States Parties to collectively assess their respective Tentative List to identify opportunities and common themes. The outcome of harmonization can result in improved Tentative Lists, new nominations from States Parties and cooperation amongst groups of States Parties in the preparation of nominations. Advisory Body support in this process can be provided through the provision of technical documents and studies. For natural and mixed properties this includes material outlined in Annex 1. Thus, 'tentative listing' is an iterative process that plays an important part in generating sound understanding and consensus on the identification and nomination of properties that may meet the criteria for *outstanding universal value*.

From IUCN's perspective, the following issues need to be addressed with respect to the preparation of Tentative Lists:

- Most existing Tentative Lists are poor in technical quality, biased towards potential cultural nominations and have not been harmonized at regional levels. They are of limited value in their present state as a planning tool for implementing the Convention in respect of natural properties.
- It is important that States Parties draw on examples of 'best practice', such as for Canada, New Zealand and Madagascar, in preparing their own Tentative

⁴ Decision 24COM para.VI.2.3.2 of the 24th Session of the World Heritage Committee, 2000

Lists and also make more effective use of the various studies by IUCN and other bodies (Annex 1) to inform their preparation.

- States Parties should place more emphasis on natural and mixed properties in the preparation of their Tentative Lists, thereby ensuring a reasonable balance between cultural and natural World Heritage in accordance with the Operational Guidelines (2004, para 57).

Nomination and inscription of properties

A critical component of a nomination is the proposed Statement of Outstanding Universal Value of the property. This Statement must make clear why the property is considered to be of *outstanding universal value*, based on a global comparative analysis with similar properties, whether or not they are on the World Heritage List. The comparative analysis must explain the importance of the nominated property in the international context.

Key shortcomings of many nominations, from IUCN's perspective include:

- The justification for inscription is not clearly linked to each of the criteria for which the property is proposed to be of *outstanding universal value*. States Parties should note that the practice of nominating properties under as many criteria as possible, in the hope that this will increase chances of listing, is unhelpful and as likely to weaken as to strengthen the nomination.
- The global comparative analysis is often poorly developed, often focusing on national or regional rather than global comparisons.
- The conditions of integrity are not always presented clearly and objectively. For example, cartographic information should allow for a proper assessment of the location of the values of the nominated property in relation to the status of their protection within the whole nominated areas. Threats, both existing and potential, should be clearly defined and measures for their management or mitigation provided.
- The management plan for the nominated property may be of poor quality, often lacking clear management objectives and unclear as to its status of approval, institutional responsibilities and level of implementation.

Finally, it is important to note that on occasion the Committee has inscribed natural and mixed natural/cultural properties by overruling the recommendation from IUCN. While this is a prerogative of the Committee as the decision-making body of the Convention, it is vital that the inscription process is guided by technical considerations, based on the criteria for *outstanding universal value*, and not political factors, which would otherwise undermine the credibility of the World Heritage List and also reduce support from potential donors and development agencies.

4.3 Transboundary and serial nominations

Provisions within the Operational Guidelines for the nomination of transboundary and serial properties have increasingly been used by States Parties. Such provisions provide opportunities to enhance existing World Heritage properties through extensions, as well as to establish new properties in cases where it is the series of properties as a whole (which could transcend the political boundaries of the States parties involved) and not its individual components, which fulfil the criteria for *outstanding universal value*.

There are currently seven natural and one mixed natural/cultural transboundary properties, each of which encompasses the boundaries of two States Parties. Transboundary nominations are supposed to be submitted jointly by States Parties, in accordance with Article 11.3 of the Convention, and the Operational Guidelines encourage States Parties to establish a joint committee or similar body to oversee the management of the entire property.

A serial World Heritage property comprises a series of naturally related components that are geographically separated from each other. The series as a whole must be of *outstanding universal value*, though not necessarily each individual part. By definition, therefore, it is possible to have a serial, transboundary property. The first serial property, the Central Eastern Rainforest Reserves of Australia, was established in 1986 and later extended in 1994.

IUCN considers that the following issues need to be addressed with respect to transboundary and serial nominations:

- In the case of transboundary properties, some nominations have been prepared by only one of the States Parties involved. Thus, there has been limited or no information on the values of the property belonging to the other State Party.
- The rationale for using a serial approach is often unclear, with inadequate explanation and evidence of how all the proposed components adequately fulfil criteria for *outstanding universal value*.
- Clearer directions and guidelines are required to ensure that serial nominations are properly prepared and that the individual sites are effectively managed after inscription.

IUCN also notes that the following questions guide its evaluation of serial properties:

- What is the justification for the serial approach ?
- Are the separate elements of the property functionally linked ?
- Is there an overall management framework for all of the units ?

5. CONCLUSIONS

The following conclusions are drawn on the application of the concept of *outstanding universal value*:

Implications of *outstanding universal value*

- By definition, the World Heritage List comprises the most exceptional natural places on earth. It is not intended to be representative of all natural heritage. This is the role of national, regional and other international protected areas systems.
- The key test for inscription of natural and mixed properties on the World Heritage List is that such properties must be of outstanding universal value with respect to one or more of the four criteria relating to natural heritage.
- Since the test for inclusion in the World Heritage List is that of *outstanding universal value*, it follows that the List cannot be open-ended and that there will be some kind of eventual limit on the total number of natural and mixed properties.
- As for any natural resource, natural and mixed World Heritage properties (both existing and potential) are not distributed evenly around the globe, nor does it follow that there will be at least one site of outstanding universal value in every country.
- Full use should also be made of other international instruments and agreements to complement the aims of the World Heritage Convention, many of which are designed to address the issue of representativeness.

Application of *outstanding universal value* to natural heritage

- There are intrinsic differences between natural and cultural properties, requiring different frameworks (topological and typological, respectively) for assessing outstanding universal value. It is important that rigorous standards in applying these frameworks are adopted by the advisory bodies, IUCN and ICOMOS.
- There is an increasing proportion of nominated natural and mixed properties that are not inscribed on the World Heritage List. This indicates a need to:
 - (a) Improve the tentative listing and nomination processes to eliminate properties unlikely to pass the test of *outstanding universal value* at the outset;
 - (b) Undertake more detailed analysis of the decisions of the World Heritage Committee to provide information on the extent to which nominated

properties have not met any of the criteria for *outstanding universal value*, as opposed to failing the tests for integrity or protection and management.

Technical guidance and tools for assessing *outstanding universal value*

- Technical guidance is required for the assessment of:
 - (a) properties featuring superlative natural phenomena of exceptional natural beauty that are nominated under Criterion (vii); and
 - (b) serial nominations.
- Thematic studies are vital to providing an internationally accepted scientific foundation for the nomination and evaluation of potential World Heritage properties. Existing studies should be updated periodically, taking into account recommendations arising from the Periodic Reporting process, and from decisions of the World Heritage Committee. Further guidance is required for assessing *outstanding universal value* with respect to:
 - (a) the 13 major thematic areas for geological heritage, with the exception of fossil sites for which guidance already exists; and
 - (b) arid lands (including deserts), freshwater (wetlands, lakes, rivers) and the polar regions.
- Such guidance, informed by further thematic and regional studies, and new scientific knowledge will inevitably highlight further opportunities for improving the balance and credibility of the World Heritage List.
- The Udvardy biogeographical system continues to provide a useful entry point for the broad classification and global comparative analysis of natural heritage concerning biological science. This must be complemented by the use of other classification and prioritization systems which need to be integrated into a Geographic Information System that can be routinely updated to provide current information on the World Heritage List and its coverage of particular themes and biodiversity hotspots as required.

Priorities for natural heritage of potential *outstanding universal value*

- Suggestions regarding important geological and biological heritage that should be included in the World Heritage List is identified in Section 4.1. Priority biomes (ecosystems) of potential *outstanding universal value* include: tropical grasslands/savannas, lake systems, tundra and polar deserts, temperate grasslands, and cold winter deserts. Within these and other biomes a range of habitats have been prioritised as set out in Box 5.
- Transboundary and serial world heritage concepts provide further opportunities for State Parties to prepare new nominations using a range of innovative approaches.

Priorities for the further application of the concept of *outstanding universal value*

- It is vital to maintaining the credibility of the World Heritage List that the inscription process is guided by technical considerations, based on assessment of the criteria for outstanding universal value, and not political considerations.

- A range of measures relating to the development and harmonization of Tentative Lists and the nomination of properties is required to strengthen the objectivity of the process of identifying natural and mixed properties that potentially meet the criteria for *outstanding universal value*. These include but are not limited to the following:
 - (a) More emphasis on natural heritage in the preparation of Tentative Lists to ensure a better balance between cultural and natural World Heritage.
 - (b) Development and harmonization of Tentative Lists at regional levels so that they become a more effective tool in the identification of natural and mixed properties of potential *outstanding universal value*.
 - (c) Greater clarity in the Statement of Outstanding Universal Value as to why and with respect to which criteria the nominated property is of *outstanding universal value*, based on rigorous global comparative analysis.

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ANNEX 1

Sources of information for Global Comparative Analyses and the review and update of Tentative Lists

IUCN technical and thematic studies:

- The World's Greatest Natural Areas: an indicative inventory of natural sites of World Heritage Quality (1982).
- Earth's geological history: a contextual framework for assessment of World Heritage fossil site nominations (1994).
- Global Overview of Wetland and Marine Protected Areas on the World Heritage List (1997).
- A Global Overview of Forest Protected Areas on the World Heritage List (1997).
- A Global Overview of Human Use of World Heritage Natural Sites (1997).
- A Global Overview of Protected Areas on the World Heritage List of Particular Importance for Biodiversity (2000).
- Which oceanic islands merit World Heritage status? (1991).
- Report of the working group on application of the World Heritage Convention to islands of the Southern Ocean (1992).
- Future directions for natural WH sites in East and Southeast Asia. Filling the Biome Gaps: a thematic approach to achieving Biodiversity conservation through World Heritage, Les Molloy (2000).
- Potential natural World Heritage sites in Europe, Lars-Erik Esping (1998).
- A Global Representative System of Marine Protected Areas, World Bank/IUCN. 4 vols. (1995)

Reports from selected regional meetings and UNESCO World Heritage initiatives to identify potential natural World Heritage Sites:

- Task force to select a global inventory of fossil sites (1991);
- Nordic World Heritage - proposals for new areas for the UNESCO World Heritage List (1996);
- Identification of potential World Heritage sites in Arab countries (1999);
- Tropical Forests (Berastagi meeting report, 1998);
- Identification of WH properties in the Pacific (1999);
- Regional Workshop on the Nomination of World Heritage Sites, Mozambique (2000);
- Seminar on Natural Heritage in the Caribbean, Suriname (2000);
- Central Asian meeting (2000);
- Karst sites in East and South East Asia (2001);
- Alpine Arc meetings (2000-2001).
- Tropical marine and coastal sites (Vietnam workshop, 2002).
- Boreal forest protected areas (Russia, Oct. 2003).