# A GLOBAL OVERVIEW OF PROTECTED AREAS ON THE WORLD HERITAGE LIST OF PARTICULAR IMPORTANCE FOR BIODIVERSITY

# A contribution to the Global Theme Study of World Heritage Natural Sites

# DRAFT

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## **EXECUTIVE SUMMARY**

This working paper provides a global overview of the current coverage of existing World Heritage Sites of particular importance for the conservation of biodiversity, and suggests existing protected areas of significant biodiversity value, which may merit future World Heritage nomination.

In 1996, IUCN initiated a project to prepare a global strategy for Natural World Heritage sites, and as part of this process began to prepare a series of thematic global overviews on World Heritage site coverage. This document is an updated addition to these theme studies.

A total of 141 sites, representing 65 countries and over 142 million ha of protected areas were identified as being of particular importance for biodiversity. The sites detailed in this study were selected on the basis of natural World Heritage sites that lay within or contained a site that had been defined as:

- 1. Criterion iv (significant biodiversity) (95 sites)
- 2. A WWF "Global 200" site (124 sites)
- 3. A Centre of Plant Diversity (CPD) (74 sites)
- 4. A Conservation International (CI) biodiversity hotspot (57 sites)
- 5. Vavilov Centres of Plant Genetic Diversity (40 sites)
- 6. An Endemic Bird Area (EBA) (71 sites)
- 7. Contains "Critically Endangered" taxa (60 sites)
- 8. Wetland of International Importance (Ramsar site) (16 sites)
- 9. An area of marine importance (contained coral reefs (14 sites), mangroves (18 sites) or turtle nesting beaches) (15 sites)

Global maps illustrating the distribution of the sites for each category were also produced. A coarse GIS analysis found only 6 out of 141 sites contained 8 of the 9 indicators listed above, no current natural and mixed World Heritage sites (as of November 1999) contained all 9 indicators. While terrestrial ecosystems are well represented, marine and wetland environments are not. Additionally over 90 sites were identified as potentially meriting consideration for future nomination.

It is hoped that this overview will assist IUCN in making comparative evaluations and provide the World Heritage Committee with a stronger scientific basis for making decisions on new World Heritage nominations.

# INTRODUCTION

# A global overview of World Heritage sites of particular importance for biodiversity

## 1.0 Overview

In 1996, IUCN initiated a project to prepare a global strategy for Natural World Heritage sites, and as part of this process began to prepare a series of thematic global overviews on World Heritage site coverage.

These overviews are intended to assist IUCN in making comparative evaluations of World Heritage site nominations and to provide the World Heritage Committee with a firmer scientific basis for making decisions. They also provide State Parties with the global perspective relevant to identifying potential World Heritage properties in their territories.

Global overviews of fossil sites, wetland and marine protected areas and forest protected areas have already been prepared, and two others are in development. In 1998 a preliminary working paper was compiled by the World Conservation Monitoring Centre (WCMC), providing an overview of World Heritage in the context of biodiversity conservation. The current document builds upon this first attempt, and addresses some of the key information needs identified in the 1998 study, as requiring further development.

The purpose of this document is twofold: firstly, it will provide an overview of current natural World Heritage sites of significant biodiversity value, and secondly, it will identify existing protected areas of high biodiversity value that may be considered for future inscription on the World Heritage List.

This overview identifies 141 natural and mixed World Heritage sites of particular importance for biodiversity. They represent 65 countries and over 142 million ha of protected areas. It also identifies 94 existing protected areas (ranked according to increasing levels of biodiversity value), that may merit future World Heritage nomination.

# 2.0 Issues to Consider

Biodiversity is a very broad area to cover, it is therefore important to define the issues that should be covered and the type of questions that should be addressed by an overview such as this.

Issues to consider when evaluating an area for biodiversity importance include:

- Biogeographic coverage
- Total number of species in area/species richness
- Degree of endemism
- Number of globally threatened species
- Importance for economically important species, including wild relatives

Questions to consider when looking at the existing World Heritage List in relation to biodiversity include:

• Which World Heritage sites are of particular importance for the protection/conservation of biodiversity?

- What types of biodiversity richness are currently missing from World Heritage sites?
- What sites might be of World Heritage quality in terms of biodiversity but are not currently listed?

# 3.0 What is Biodiversity?

One of the first things to identify in a study such as this is to determine what is meant by the term biodiversity. It is an imprecise term contracted from 'biological diversity'; that may be measured at genetic, species, habitat or ecosystem level.

The Convention of Biological Diversity (CBD) defines biodiversity as "the variability among living organisms from which all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the complexes of which they are part; this includes diversity within species, between species and of ecosystems themselves".

Depending on the type of study, an appropriate indicator of biodiversity should be used. In many instances species is generally considered to be the most useful measure of biodiversity assessments, at local, national, regional or global levels. Common measures of species biodiversity include the following:

#### Species richness

Species richness refers to the number or count of species occurring at a given area. It is one of the easiest and most straightforward methods of measuring biodiversity. Ideally the measure consists of a complete catalogue of all the species occurring in the area under consideration. However in practice this is very difficult to achieve, due to many species being very small, and thus being difficult to identify and count in situ. Additionally in many countries of the world a high proportion of smaller species have not been scientifically named. Indeed it is estimated that 80-95% of all living species have yet to be described. Species counts may reflect the biological richness of an identified area, however they do not reflect its uniqueness or indicate the area's importance in a wider context.

#### Endemism

A species may be defined as an endemic if it is confined entirely to that area, and occurs nowhere else. Endemism may be described in a geographical context, for example endemic to a mountain peak, desert basin, river system or lake or an island. The concept of endemism generally becomes more significant as the defined area reduces in size. Assessing the number of endemic species in an area is more difficult than counting the total number of species in a given area. The former activity cannot be carried out in isolation, as it relies on having a

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