

International Standards in Establishing National Parks and Other Protected Areas

Virtually every country in the world has legal or customary measures for conserving or protecting biodiversity through management control over defined areas of land or sea. However, the objectives for establishing and managing these areas range widely, and responsibility for management may rest with organisations as diverse as statutory authorities or non-governmental organisations. These protected areas are found in countries of every political, cultural, social, and economic background and with a vast range of physical circumstances, ranging from small and crowded to large and relatively unpopulated.

The database on protected areas managed by the World Conservation Monitoring Centre (WCMC) includes tens of thousands of sites varying in size from a few hectares to millions of hectares. There are more than 200 different designations used to describe these areas, ranging from the familiar terms *National Park* and *Wildlife Sanctuary* to the less familiar *Muttonbird Reserve* and *Zapovednik*. To add to this confusion, even familiar terms like "national park" mean different things in different countries.

Some 20 years ago, protected area professionals working with the International Union for Conservation of Nature and Natural Resources (IUCN) developed a series of protected area categories defined by management objective (IUCN 1978). However, over the years since, the role of protected areas in both biodiversity conservation and sustainable develop-

ment has been widely appreciated (McNeely and Miller 1984; McNeely 1993), leading to some significant changes in protected area management. This resulted in a need to review the ways in which protected areas are categorised.

During the late 1980s and early 1990s protected area professionals working with the IUCN Commission on National Parks and Protected Areas (CNPPA) thoroughly reviewed the issue, and at the IVth World Congress on National Parks and Protected Areas, held in Caracas, Venezuela (1992) confirmed a number of changes to the system previously developed by IUCN. The results of the discussions in Caracas are reported on by McNeely (1993), in particular Recommendation 17 and the report of Workshop IV.1, "Talking the same language: an international review system for protected areas."

The revised system was approved

by the IUCN General Assembly at Buenos Aires in 1994, and details of revised categories were then published in the *IUCN Guidelines for Protected Area Management Categories* (IUCN 1994). This paper describes the new categories and their application.

Definition of a Protected Area

In order to be able to categorise protected areas, one must first define what constitutes a protected area. The IUCN Protected Areas Management Category system is based on the following definition, agreed at the IVth World Congress on National Parks and Protected Areas (IUCN 1993). A protected area is:

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

Conceptually, this definition encompasses *all* protected areas and there should be no protected areas *outside* this definition. All protected areas within this definition should fall within one of the six categories defined. On the other hand, there may be sites that meet the criteria for a particular category, but which do not qualify as a protected area because they do not fall within the definition given above.

Categorisation by Management Objective

Definitions of protected area management categories represent a

compromise between the needs and situations of countries around the world. Understandably, they are not a perfect fit for all areas, but serve as a guide for interpretation and application at the regional and national levels. Protected areas are categorised according to their management objectives. This type of classification system serves a number of valuable purposes in the international context as it:

- Emphasises the importance of protected areas;
- Demonstrates the range of purposes protected areas serve;
- Promotes the idea of protected areas as systems rather than units in isolation;
- Reduces confusion of terminology;
- Provides an agreed set of international standards;
- Facilitates international comparison and accounting; and
- Improves communication and understanding.

The revised IUCN protected area management categories are listed below. The first five categories are similar to those used in the 1978 classification, although the definitions differ to varying degrees as a result of experience in using the previous classification system. The addition of Category VI arose particularly as a result of advice from some developing countries, which saw value in giving specific recognition to those largely natural areas which

were protected in order to ensure the supply of a sustainable flow of goods and services (e.g., forest production)

to local communities.

The categories are summarized in Table 1.

Table 1. IUCN protected area categories

Ia. Protected area managed mainly for science (<i>Strict Nature Reserve</i>)
Ib. Protected area managed mainly for wilderness protection (<i>Wilderness Area</i>)
II. Protected area managed mainly for ecosystem protection and recreation (<i>National Park</i>)
III. Protected area managed mainly for conservation of specific natural features (<i>Natural Monument</i>)
IV. Protected area managed mainly for conservation through management intervention (<i>Habitat/Species Management Area</i>)
V. Protected area managed mainly for landscape/seascape conservation and recreation (<i>Protected Landscape or Seascape</i>)
VI. Protected area managed mainly for sustainable use of natural ecosystems (<i>Managed Resource Protected Area</i>)

Application of the IUCN protected areas management category system is guided by six principles.

1. The basis of categorisation is by primary management objective. This principle is the most important of all. There are, in fact, a wide variety of potential primary management objectives for protected areas, and many areas have multiple objectives. Categorisation is made according to the priority assigned to relevant objectives, as demonstrated in the following matrix (Table 2). At least three-quarters of the area should be managed for the primary purpose.

2. Assignment to a category is not a comment on management effectiveness. The distinction between the primary management objective and the effectiveness of man-

agement is often overlooked. For instance, where Category II areas are poorly managed, there is a temptation to re-classify them as Category V areas. This is not the intent of the IUCN guidelines, which categorise by management objective. There are, in fact, two separate questions involved: firstly, "What is the aim of management?", which leads to assignment of a category, and secondly, "How well is the area managed?", which leads to an assessment of management effectiveness.

3. The categories system is international. The IUCN categories system has been designed for global use. The guidance is therefore broad and general rather than being prescriptive and specific. The system is intended to be interpreted flexibly.

Table 2. Potential primary management objectives, by category

Objectives	Ia	Ib	II	III	IV	V	VI
Scientific research	1	3	2	2	2	2	3
Wilderness protection	2	1	2	3	3	NA	2
Preserve species & genetic diversity	1	2	1	1	1	2	1
Maintain environmental services	2	1	1	NA	1	2	1
Protection of natural / cultural features	NA	NA	2	1	3	1	3
Tourism & recreation	NA	2	1	1	3	1	3
Education	NA	NA	2	2	2	2	3
Sustainable use of natural ecosystems	NA	3	3	NA	2	2	1
Maintain cultural / traditional attributes	NA	NA	NA	NA	NA	1	2

1 = Primary Objective; 2 = Secondary Objective; 3 = Acceptable Objective; NA = Objective Not Applicable

Because the IUCN classification system is based on broad guidelines, it is right that regions or countries should interpret them for their own applications. This flexibility allows national relevance to be built into the system through processes such as national and regional workshops, and the development of "rules of thumb" for application in different areas.

4. National (or state) names may vary. Throughout the world there are hundreds of different national names for protected areas. The IUCN guidelines are not intended to result in the re-naming of these reserves. National names will therefore continue to mean different things in

different countries. It also follows that national names and titles of international categories will often differ.

5. All categories are important. All categories are equally important and equally relevant to conservation. The categories indicate the necessity of developing *systems* of protected areas which use *all* the relevant categories. It should be noted, however, that some countries may not contain the potential for using all categories; for example, England does not contain wilderness.

6. The categories imply a gradient of human intervention. The IUCN categories imply a gradation of human intervention (Figure 1),

egory, being large and significantly free of human intervention, and having scientific research as the main use of the reserved areas.

Category Ib—Protected areas managed mainly for wilderness protection. *Definition:* Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

Guidance for selection:

- The area should possess high natural quality, be governed primarily by the forces of nature, with human disturbance substantially absent, and be likely to continue to display these attributes if managed as proposed.
- The area should contain significant ecological, geological, physiogeographic, or other features of scientific, educational, scenic or historic value.
- The area should offer outstanding opportunities for solitude, to be enjoyed, once the area has been reached, by simple, quiet, non-polluting, and non-intrusive means of travel.
- The area should be of sufficient size to make practical such preservation and use.

The wilderness concept originated in the United States and is demonstrated by the chain of wilderness areas located along the

Rocky Mountains. These have high natural quality, are significantly free of human intervention, and offer outstanding opportunities for solitude.

Category II—Protected areas managed mainly for ecosystem protection and recreation.

Definition: Natural area of land and/or sea designated to: (a) protect the ecological integrity of one or more ecosystems for present and future generations; (b) exclude exploitation and occupation inimical to the purposes of designation of the area; and (c) provide a foundation for spiritual, scientific, educational, recreational, and visitor opportunities, all of which must be environmentally and culturally compatible. *Guidance for selection:*

- The area should contain a representative sample of major natural regions, features, or scenery, where plant and animal species, habitats, and geomorphological sites are of special spiritual, scientific, educational, recreational, and tourist significance.
- The area should be large enough to contain one or more entire ecosystems not materially altered by current human occupation or exploitation.

The national park concept originated in the United States with the declaration of the Yellowstone National Park, and national parks are now found in all parts of the world.

For example, the Nahuel Huapi National Park in Argentina is declared for the protection of large ecosystems and provision of recreation. The Grand Canyon National Park in the United States is established for the same reasons, as well as for the spectacular canyon scenery. Rocky Mountain National Park, also in the United States, is large enough to protect natural regions and is oriented to visitor use with an extensive system of roads and interpretation.

The provision of public access for recreation may be a key factor in the development of Category II areas. For example, Canada's Banff and Waterton Lakes national parks were established last century to attract customers to the newly installed railways. Wildlife viewing may also be a key aspect of national parks, as in the Nairobi and Zambezi national parks in Africa, Corbett National Park in India, and Royal Chitwan National Park in Nepal. In Chitwan National Park villagers are also allowed seasonal access to retrieve thatching grass. This access is in keeping with the provision for subsistence resource use where it does not affect the primary management objective for a Category II area.

Category III—Protected areas managed mainly for conservation of specific natural features.

Definition: Area containing one, or more, specific natural or natural/cultural features which are of outstanding or unique value because

of their inherent rarity, representative or aesthetic qualities, or cultural significance. *Guidance for selection:*

- The area should contain one or more features of outstanding significance (appropriate natural features include spectacular waterfalls, caves, craters, fossil beds, sand dunes, and marine features, along with unique or representative fauna and flora; associated cultural features might include cave dwellings, cliff-top forts, archaeological sites, or natural sites which have heritage significance to indigenous peoples).
- The area should be large enough to protect the integrity of the feature and its immediately related surroundings.

The Victoria Falls National Monument in Zimbabwe protects the area of the falls, and is clearly a national monument. There might be concern, however, that the area protected is not, and could not be, adequate to ensure the integrity of the feature—probably a common problem with water features. Dinosaur National Monument in the United States protects a palaeontological site, and interpretation for public education is provided as well as protection of the fossil record of the site.

Category IV—Protected areas managed mainly for conservation through management intervention.

Definition: Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species. *Guidance for selection:*

- The area should play an important role in the protection of nature and the survival of species.
- The area should be one where the protection of habitat is essential to the well-being of nationally or locally important fauna, or to resident or migratory fauna.
- Conservation of these habitats and species should depend upon active intervention by the management authority, if necessary through habitat manipulation.
- The size of the area should depend on the habitat requirements of the species to be protected and may range from relatively small to very extensive.

Active intervention may be required in otherwise natural areas to encourage particular species. Examples of areas in Category IV include Luneburger Heide Nature Reserve in Germany, which was established to protect heathlands which are currently maintained through grazing, and the North Norfolk coast bird reserves in England, which contain human-made ponds in salt marsh areas, specifically designed to attract birds. Outside Europe, the Halegi Lake in Pakistan is an example of a Category IV site, with

waterways cleared for waterfowl.

Category V—Protected areas managed mainly for landscape/seascape conservation and recreation. *Definition:* Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological, and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance, and evolution of such an area. *Guidance for selection:*

- The area should possess a landscape and/or coastal and island seascape of high scenic quality, with diverse associated habitats, flora, and fauna, along with manifestations of unique or traditional land-use patterns and social organisations as evidenced by human settlements and local customs, livelihoods, and beliefs.
- The area should provide opportunities for public enjoyment through recreation and tourism within its normal lifestyle and economic activities.

The Category V protected landscape concept was developed in Europe, where long occupation of the land has resulted in distinctive landscape patterns. Protected areas that include such landscapes have humans living as an integral part of the landscape. Examples include the landscapes of the Pembroke Coast

and North York Moors national parks of the United Kingdom, areas with high scenic quality, diverse habitats, and traditional land-use patterns.

Category VI—Protected area managed mainly for sustainable use of natural ecosystems. *Definition:* Area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs. *Guidance for selection:*

- The area should be at least two-thirds in a natural condition, although it may also contain limited areas of modified ecosystems; large commercial plantations would not be appropriate for inclusion.
- The area should be large enough to absorb sustainable resource uses without detriment to its overall long-term natural values.

As this is a “new” category, examples selected are indicative of the potential of the category—it is possible that some of these sites may not, on reflection, be classified as Category VI. Likewise, it is also important to stress that Category VI areas must fall within the definition of a protected area.

Examples might include the safari areas surrounding the Mana Pools National Park in Zimbabwe, which are managed to maintain the natural

habitat and allow sustainable hunting, or the areas outside the core zones of the Sunderbans National Park in India, where quota-operated fishing allows sustained use by locals. Watershed areas such as the Matopos Hills in Zimbabwe, the Flathead National Forest in the United States, and Sinharaja in Sri Lanka may also qualify in the future if management is adapted to maximise the conservation potential of these areas. Other examples include mangrove areas along the Central American coast and the Caribbean such as the Kuña Yala area in Panama, where Kuña Indians approached the government to establish a protected area which allows local traditional use but excludes outside exploitation. All of these are large, substantially natural areas which can absorb sustainable resource use.

Conclusions

No classification system is perfect, and its value really depends not so much on whether each protected area can be “allocated” to one of the six categories without doubt or difficulty, but on whether the objectives of categorisation are met. Experience since the publication of the new guidelines (IUCN 1994) suggests that this process has certainly led to increased assessment of the roles of protected areas, and how protected areas with different roles and objects relate one to another.

For example, following publication of the guidelines, the Australian

Nature Conservation Authority worked with state authorities in Australia to convene a workshop on application of the categories. This led to the development of guidelines and "rules of thumb" for application of the categories in Australia (ANCA 1996). Perhaps more importantly it brought together the various state and federal authorities to review how the roles and objectives of protected areas varied throughout the country. There have also been reviews in other countries (for example the United Kingdom), and a European regional meeting on the application of categories is planned for later this year.

There is particular interest in Cat-

egories V and VI, the former because it is probably under-used as a management category, and the latter because it is a new category and as such is resulting in increased controversy and debate. Some of the issues were discussed at a Global Biodiversity Forum in Montreal last year, and an attempt to focus attention on how these relate to forest conservation has been drafted by Dudley and Stolton (1997). However these debates resolve themselves, the primary purpose of categorisation will have been achieved, as increased attention is given to the role of protected areas in helping to achieve conservation and development goals.

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