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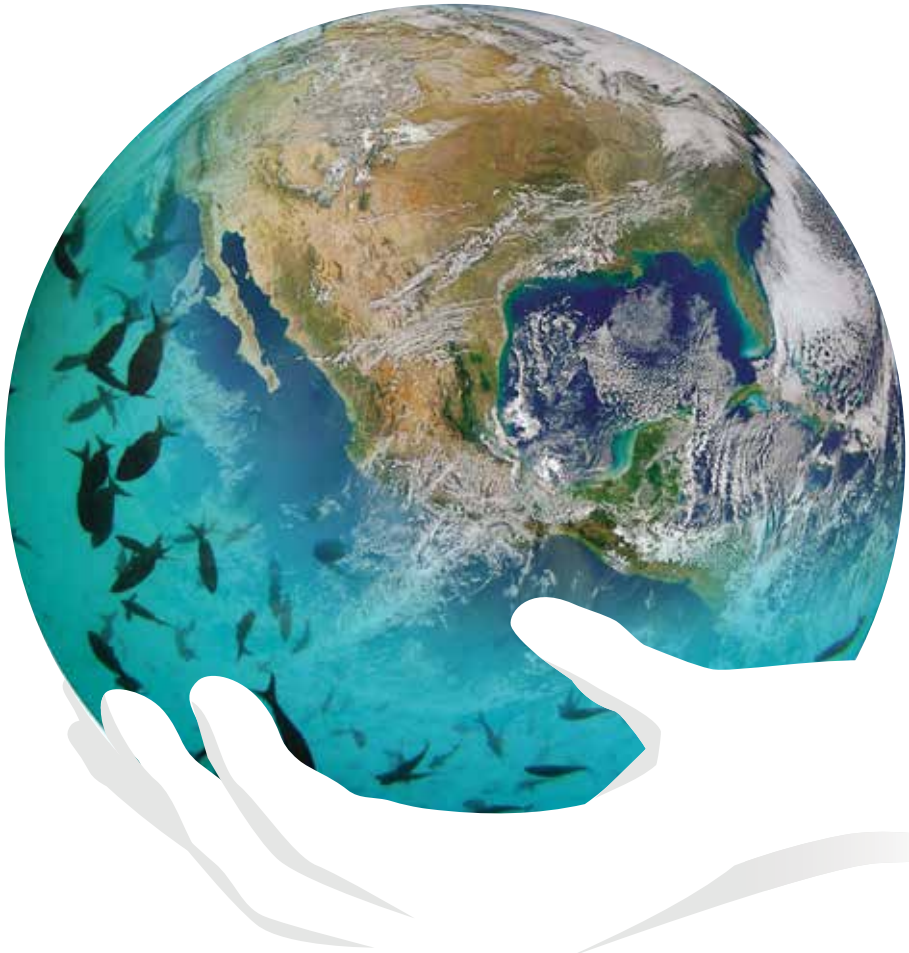
Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas



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WCPA WORLD COMMISSION ON PROTECTED AREAS

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IUCN PROTECTED AREA DEFINITION, MANAGEMENT CATEGORIES AND GOVERNANCE TYPES

IUCN defines a protected area as:
A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

The definition is expanded by six management categories (one with a sub-division), summarized below.
Ia Strict nature reserve: Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values
Ib Wilderness area: Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition
II National park: Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities
III Natural monument or feature: Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove
IV Habitat/species management area: Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category
V Protected landscape or seascape: Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values
VI Protected areas with sustainable use of natural resources: Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims

The category should be based around the primary management objective(s), which should apply to at least three-quarters of the protected area – the 75 per cent rule.

The management categories are applied with a typology of governance types – a description of who holds authority and responsibility for the protected area. IUCN defines four governance types.
Governance by government: Federal or national ministry/agency in charge; sub-national ministry/agency in charge; government-delegated management (e.g. to NGO)
Shared governance: Collaborative management (various degrees of influence); joint management (pluralist management board; transboundary management (various levels across international borders)
Private governance: By individual owner; by non-profit organisations (NGOs, universities, cooperatives); by for-profit organsations (individuals or corporate)
Governance by indigenous peoples and local communities: Indigenous peoples' conserved areas and territories; community conserved areas – declared and run by local communities

For more information on the IUCN definition, categories and governance type see the 2008 *Guidelines for applying protected area management categories* which can be downloaded at: www.iucn.org/pa_categories

Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas

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ABOUT IUCN

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges.

IUCN works on biodiversity, climate change, energy, human livelihoods and greening the world economy by supporting scientific research, managing field projects all over the world, and bringing governments, NGO's, the UN and companies together to develop policy, laws and best practice.

IUCN is the world's oldest and largest global environmental organization, with more than 1,000 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world.

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Preamble

In 1996 the World Conservation Congress in Montreal recommended (Resolution 1.37) *inter alia* that, as part of the IUCN Marine and Coastal Programme, World Commission on Protected Areas (WCPA) should "develop guidance on the application of the IUCN Guidelines for Protected Area Management Categories in the marine environment". This was followed by a recommendation by Kelleher and Recchia (1998)[1] that "… an elaboration of the classification scheme to indicate different types of zones occurring within MPAs ", was needed given the difficulty experienced in applying a single IUCN category to multiple use marine protected areas (MPAs). Wells and Day (2004)[2] subsequently reviewed the problems in applying the IUCN protected area management categories in the marine environment and highlighted issues that needed to be addressed.

In 2007, a discussion paper (Laffoley *et al.,* 2007)[3] was presented at the WCPA Marine Summit in Washington DC explaining the need for further guidance and outlining the main areas to be covered. Prior to the publication in 2008 of the revised IUCN-WCPA's ***Guidelines for Applying Protected Area Management Categories*** (referred to as the ***2008 Guidelines*** throughout the remainder of this document) (Dudley, 2008)[4], a meeting was held in Almeria, Spain, at which a paper was presented by WCPA Marine (Laffoley *et al.*, 2008)[5] re-iterating the need for explanation of how the guidelines should be applied to MPAs. The meeting participants agreed that supplementary guidelines should be prepared.

The development of the supplementary guidelines started in 2010 when members of WCPA Marine undertook an online survey to highlight issues where more guidance was needed. Subsequently, a small working group (Jon Day, Sue Stolton, Nigel Dudley, Aya Mizumura and Marc Hockings) met in Townsville, Australia, to develop a preliminary draft using the results of the survey.

This draft was commented on by Dan Laffoley (Marine Vice-Chair) and WCPA Marine members, and then a revised draft (October 2010) was circulated to WCPA members for wider input. In addition, the draft guidelines were field-tested in the Maldives[6] and South Korea[7]. Subsequent comments from reviewers, as well as the results of the field-testing, were then considered in producing this final version of the supplementary guidelines.

The primary purpose of these supplementary guidelines is to increase the accuracy and consistency of assignment and reporting of the IUCN categories when applied to marine and coastal protected areas.

To avoid unnecessary duplication of text, these supplemental guidelines therefore must be read in association with the 2008 Guidelines.

Where cross referencing is required to the *2008 Guidelines* this is identified in the text.

[1] Kelleher, G. and Recchia, C. (1998). 'Editorial – lessons from marine protected areas around the world'. *Parks* 8 (2), IUCN, Gland.

[2] Wells, S. and Day, J. (2004). Application of the IUCN protected area management categories in the marine environment.' *Parks* 14 (3) IUCN, Gland.

[3] Laffoley, D.,Day, J., Wood, L. and Barr, B. (2007). 'IUCN Categories – Their Application In Marine Protected Areas', Discussion paper presented at WCPA Marine Summit, Washington DC, April 2007.

[4] Dudley, N. (Editor) (2008). *Guidelines for Applying Protected Area Management Categories.* Gland, Switzerland, see: http://www.iucn.org/about/union/commissions/wcpa/wcpa_puball/wcpa_pubsubject/wcpa_categoriespub/?1662/Guidelines-for-applying-protected-area-management-categories

[5] Laffoley, D., Day, J., Wood, L. and Barr, B. (2008). 'Marine Protected Areas'. In: Dudley, N. and Stolton, S. (Eds.) (2008). *Defining protected areas: an international conference in Almeria, Spain.* Gland, Switzerland: IUCN. 220pp.

[6] MWSRP (2011). *Guidelines for applying the IUCN Marine Protected Area Management Categories to Marine Protected Areas: a field testing report by the Maldives Whale Shark Research Programme (MWSRP).* Unpublished Report, September 2011. 5pp.

[7] Stolton, S, Shadie, P. and Hag Young Heo (2011). *Case study South Korea – Marine Categories.* Unpublished Report. 5pp.

At a glance

IUCN has developed a set of guidelines which define a protected area and categorise a protected area through six management types and four governance types (Dudley, 2008)[8]. These supplementary guidelines provide additional advice on using the IUCN guidance in marine protected areas (MPAs).

To qualify for one or more of the IUCN categories, a site must meet the IUCN definition of a protected area, as given in the ***2008 Guidelines***:

> ***"A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values"***

The appropriate IUCN category is assigned based on the primary stated management objective of the MPA (which must apply to at least 75% of the MPA – see section 5.1), or a zone within an MPA (the zone must be clearly mapped, recognised by legal or other effective means, and have distinct and unambiguous management aims that can be assigned to a particular protected area category – see section 5.4). The primary objectives of each IUCN category are listed in Table 1 as described in the ***2008 Guidelines***. A more detailed explanation is presented in section 4 of this document and in the *2008 Guidelines.*

Table 1: Definition and Primary Objectives of IUCN Protected Area Categories (Dudley, 2008).

IUCN Category	Definition	Primary Objective
Ia	*Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.*	To conserve regionally, nationally or globally outstanding ecosystems, species (occurrences or aggregations) and/ or geodiversity features: these attributes will have been formed mostly or entirely by non-human forces and will be degraded or destroyed when subjected to all but very light human impact.
Ib	*Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.*	To protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity, free of modern infrastructure and where natural forces and processes predominate, so that current and future generations have the opportunity to experience such areas.
II	*Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.*	To protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation.
III	*Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine caverns, geological feature such as a caves or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.*	To protect specific outstanding natural features and their associated biodiversity and habitats.

8 Dudley, N. (Editor) (2008). *Guidelines for Applying Protected Area Management Categories.* Gland, Switzerland.

IUCN Category	Definition	Primary Objective
IV	*Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.*	To maintain, conserve and restore species and habitats.
V	*Category V protected areas are where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.*	To protect and sustain important landscapes/ seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.
VI	*Category VI protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in natural condition, where a proportion is under sustainable natural resource management and where low-level non industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.*	To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.

Spatial areas which may incidentally appear to deliver nature conservation but **DO NOT HAVE STATED** nature conservation objectives should **NOT** automatically be classified as MPAs, as defined by IUCN. These include:

- Fishery management areas with no **wider stated conservation aims**.
- Community areas managed **primarily** for sustainable extraction of marine products (e.g. coral, fish, shells, etc).
- Marine and coastal management systems managed **primarily** for tourism, which also include areas of conservation interest.
- Wind farms and oil platforms that **incidentally** help to build up biodiversity around underwater structures and by excluding fishing and other vessels.
- Marine and coastal areas **set aside for other purposes** but which also have conservation benefit: military training areas or their buffer areas (e.g. exclusion zones); disaster mitigation (e.g. coastal defences that also harbour significant biodiversity); communications cable or pipeline protection areas; shipping lanes etc.
- Large areas (e.g., regions, provinces, countries) where certain species are protected by law **across the entire region.**

Any of the above management approaches could be classified as an MPA if instead they had a primary stated aim and are managed to deliver nature conservation.

1. Introduction

1.1 Why are supplementary guidelines needed for MPAs?

The IUCN categories are applicable to all types of protected areas, whether terrestrial or marine. The **2008** ***Guidelines for Applying Protected Area Management Categories*** (***2008 Guidelines***) provide considerable detail on the use and application of the categories, including for marine protected areas (MPAs). Specific sections of the *2008 Guidelines* are referred to throughout the document, and the section in these *2008 Guidelines* that deals with marine protected areas can be found on pages 55-58.

However, with the smaller number of MPAs compared with terrestrial protected areas, there is less experience and understanding of applying the categories to MPAs. Application of the categories to MPAs has often been inaccurate and inconsistent. For example, it is considered (Wood, pers. com, 2012) that, of those MPAs that have been categorised, about 50% have been wrongly allocated because the name of the MPA (e.g. National Park, Sanctuary, etc) has been used to determine the category, rather than the management objectives that the MPA was established to achieve. Confusion has also arisen when sites have been incorrectly assigned on the basis of activities that occur rather than using the stated management objectives. Furthermore, where protected areas include both land and sea, the objectives for the marine component of the protected area are often not considered when assigning the site's category.

These supplementary marine guidelines are thus aimed at ensuring that the IUCN categories can be effectively applied to all types of MPAs as well as to any marine components of adjoining terrestrial protected areas, provided a site meets the IUCN definition of a protected area. Inconsistencies in the application of, and reporting on, the categories reduce the efficacy and use of the system as a global classification scheme. These supplementary guidelines should increase the accuracy and consistency of both assignment and reporting. The categories are recognised by international bodies such as the United Nations and by many national governments as the global standard for defining and recording protected areas, and as such are increasingly being incorporated into legislation. Further information on these international conservation initiatives is given in Chapter 7 of the ***2008 Guidelines***.

1.2 Who are the supplementary guidelines aimed at?

These supplementary guidelines are intended primarily for policy makers, decision makers, senior managers, agencies and other institutions involved in the establishment and management of MPAs. The guidelines are less likely to be of direct relevance to MPA managers in their day-to-day work. However it is useful for MPA managers to understand the categories, as the category to which an MPA has been assigned can help a manager understand the management objectives and thus guide planning and implementation. The supplementary guidelines will also be useful to those involved in collecting, analysing and reporting data on MPAs.

Where MPAs are administered by fisheries agencies, the guidelines may be particularly useful as such departments do not always have a good knowledge of the IUCN categories system. They also do not necessarily have a close relationship with the main national agency responsible for terrestrial protected areas, which usually has responsibility for national reporting. In these cases, it is particularly important that fishery agency officials, policy makers, and those agencies and institutions involved in MPA management read the ***2008 Guidelines*** before using these supplementary guidelines to ensure that the basic principles of the categoriy system are understood.

1.3 How to use these guidelines

The primary guidance to assigning categories is the ***2008 Guidelines***, which provide more detail on the general principles than is given here. The *2008 Guidelines* must be consulted first, as it is essential that anyone responsible for assigning categories fully understands the categorisation system and how it is applied. These supplementary guidelines should thus be used in conjunction with the *2008 Guidelines* and must not be considered a stand-alone document. These supplementary guidelines however provide specific information that will help with the application of the categories to MPAs, and examples to explain this process more clearly. IUCN WCPA is also producing more detailed information about the process for assigning the IUCN definition, categories and governance types in the form of ***IUCN/WCPA standards on the process for recognising protected areas and assigning management categories and governance types***, due to be published in late 2012.

Both the ***2008 Guidelines*** and the supplementary guidelines are technical advice from IUCN and set out rules and advice to help countries, regions and the world to make consistent decisions. Decisions about what is or is not a protected area are normally the responsibility of national governments, or, in the case of designations such as Natura 2000 and World Heritage Sites, committees made up of more than one government established under international agreements. Countries and such international bodies are therefore asked to respect and follow this guidance, in order to improve our perspective of what are being achieved using protected areas around the world, and to maintain the value of the categories as a global categorisation system.

The supplementary guidelines provide specific advice and standards about using the ***2008 Guidelines*** in MPAs. They provide examples of MPAs from around the world to illustrate many of the points made, and where possible, hyperlinks have been provided to websites providing further information about each example (although we recognise that these may become out of date and inoperative over time). These supplementary guidelines also include a summary of the main elements of the full *2008 Guidelines*, including the primary objectives of each category (for each topic, references to relevant page numbers in the printed/PDF version of the *2008 Guidelines* are also provided).

2. What is a Marine Protected Area?

2.1 The Definition of a Marine Protected Area

In applying the categories system, the first step is to determine whether or not the site meets IUCN's definition of a protected area as given in the ***2008 Guidelines*** (Chapter 2, page 8) which states:

> ***A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.***

If a marine area does not meet this definition, then it cannot be considered to be an MPA.

A detailed explanation of the definition is provided in the ***2008 Guidelines*** (Chapter 2, pages 8-9). This is summarised in Table 2 below, with a discussion of issues to consider when applying the definition to the marine environment and some examples to illustrate the definition.

Table 2: Explanation of protected area definition.

Phrase	Explanation provided in the 2008 Guidelines	Discussion and example of application in the marine realm
Clearly defined	*Clearly defined implies a spatially defined area with agreed and demarcated borders. These borders can sometimes be defined by physical features that move over time (e.g., river banks) or by management actions (e.g., agreed no-take zones).*	This implies that MPAs must be mapped and have boundaries that are legally defined. However, while some MPAs can be clearly defined (e.g. an entire bay bounded by headlands), for others it may be difficult to mark the boundaries, especially if the MPA is offshore. Even boundaries on the landward side, where tide levels can be used (e.g. Low Water Mark), can be difficult to establish (see Box 1). Increasingly, MPA or zone boundaries are defined by high resolution latitude and longitude coordinates, as determined by modern GPS instruments. **Example:** • The US National Marine Sanctuary System identifies sanctuaries legislated under the National Marine Sanctuaries Act with boundaries defined in a series of associated maps.
Geographical space	*Includes land, inland water, marine and coastal areas or a combination of two or more of these. "Space" has three dimensions, e.g., as when the airspace above a protected area is protected from low-flying aircraft or in marine protected areas when a certain water depth is protected or the seabed is protected but water above is not: conversely subsurface areas sometimes are* not *protected (e.g., are open for mining).*	All protected areas exist in three dimensions, but the vertical dimension in MPAs is often a substantial management consideration. In MPAs, management may need to address the airspace above the sea surface, the actual water surface, the water column (or parts of it), the seabed and the sub-seabed, or just one or a combination of two or more of these elements. For example, some MPAs protect just the seabed/benthos and not the water column above. It is therefore important that an MPA has a clear description of the dimensions that are actually protected. **Examples:** • In Australia's Great Barrier Reef Marine Park, the boundary is clearly defined by legal proclamation. The zones in the GBRMP are legally defined in the statutory Zoning Plan. The MPA goes to a depth of 1000 metres below the seabed and a height of 915 metres (airspace) above the surface of the water. • In Australia's Huon Commonwealth Marine Reserve in the South-east Marine Reserve Network, zoning is stratified by depth. Within the benthic sanctuary zone, the seabed and adjacent waters are fully protected. Above this, commercial fishing activity is allowed in the water column from the sea surface down to 500 metres depth.

Phrase	Explanation provided in the 2008 Guidelines	Discussion and example of application in the marine realm
Recognised	*Implies that protection can include a range of governance types declared by people as well as those identified by the state, but that such sites should be recognised in some way (in particular through listing on the World Database on Protected Areas – WDPA).*	**Example:** • The Government of Canada and the Council of the Haida Nation co-manage Gwaii Haanas National Park Reserve and Haida Heritage Site, and the Gwaii Haanas National Marine Conservation Area Reserve off the Pacific coast of Canada.
Dedicated	*Implies specific binding commitment to conservation in the long term, through e.g.:* • *International conventions and agreements* • *National, provincial and local law* • *Customary law* • *Covenants of NGOs* • *Private trusts and company policies* • *Certification schemes*	**Examples:** • The Galápagos Marine Reserve is designated under national law and is also an integral part of the Galápagos Islands World Heritage Site. • Vueti Navakavu in Fiji is a locally managed marine area (LMMA) established by the community and declared through local cultural protocol systems.
Managed	*Assumes some active steps to conserve the natural (and possibly other) values for which the protected area was established; note that "managed" can include a decision to leave the area untouched if this is the best conservation strategy.*	The requirement that a site is managed applies to both marine and terrestrial situations. As on land, many types of MPA management are possible. **Example:** • Bonaire National Marine Park in the Netherlands Antilles has clearly defined regulations that apply to all users of the park.
Legal or other effective means	*Means that protected areas must either be gazetted (that is, recognised under statutory civil law), recognised through an international convention or agreement, or else managed through other effective but non-gazetted, means, such as through recognised traditional rules under which community-conserved areas operate or the policies of established non-governmental organisations.*	As for terrestrial protected areas, 'effective means' include agreements with indigenous groups; **Example:** • Dhimurru Indigenous Protected Area, an area of land and sea in the Northern Territory of Australia, on the Gulf of Carpentaria, is run by the Dhimurru Land Management Aboriginal Corporation which works with the Traditional Owners to manage the protected area.
… to achieve	*Implies some level of effectiveness – a new element that was not present in the 1994 definition but which has been strongly requested by many protected area managers and others. Although the category will still be determined by objective, management effectiveness will progressively be recorded on the WDPA and over time will become an important contributory criterion in identification and recognition of protected areas.*	As for terrestrial protected areas, this implies some level of effectiveness and therefore requires that the MPA is subject to monitoring, evaluation and reporting. **Example:** • The assessment of management effectiveness of the Aldabra World Heritage Site in the Seychelles, undertaken as part of the Enhancing our Heritage project with the UNESCO World Heritage Centre, provides information on the extent to which the objectives of this MPA are being achieved.
Long term	*Protected areas should be managed in perpetuity and not as short term or a temporary management strategy.*	As with terrestrial protected areas, long-term protection (over timescales of human generations) is necessary for effective marine conservation. Seasonal closures of an area for a specific purpose (such as fish spawning, whale breeding, etc), in the absence of any additional biodiversity protection and any primary nature conservation objective are not considered to be MPAs. Seasonal protection of certain species or habitats may be a useful component of management in an MPA. **Examples:** • The Cockle Bay Shellfish Seasonal Closure area in New Zealand is NOT an MPA as it is only in force for the months of October to April when collection of shellfish is banned. • In the Marine Mammal Protection Zone of the Great Australian Bight Marine Park (Commonwealth Waters) the use of vessels is prohibited 1 May - 31 October each year to protect an important calving and breeding area for Southern Right Whales.

Phrase	Explanation provided in the 2008 Guidelines	Discussion and example of application in the marine realm
Conservation	*In the context of this definition conservation refers to the* in situ *maintenance of ecosystems and natural and semi-natural habitats and of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties*	**Examples:** • Ecological Reserves in the Florida Keys National Marine Sanctuary in the United States are designed to provide natural spawning and nursery areas for the replenishment and genetic protection of marine life and aim to protect and preserve all habitats and species found throughout the Sanctuary. • The inclusion of a minimum of 20% of all 70 bioregions within Australia's Great Barrier Reef Marine Park is designed to provide in situ protection of representative examples of all species and ecosystem processes.
Nature	*In this context nature always refers to biodiversity, at genetic, species and ecosystem level, and often also refers to geodiversity, landform and broader natural values.*	All protected areas, whether terrestrial or marine should aim to protect all the features of conservation importance within their boundaries. **Example:** • The overall objective of the Great Barrier Reef Marine Park is to provide for the long term protection and conservation of the **environment, biodiversity and heritage values** of the Great Barrier Reef Region.
Associated ecosystem services	*Means here ecosystem services that are related to but do not interfere with the aim of nature conservation. These can include provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other nonmaterial benefits*.	MPAs provide a wide range of ecosystem services: **Examples:** • Ecosystem services: The MPA network in Belize has been estimated to contribute nearly US$20 million annually in reef-related visitor expenditure. • Regulating ecosystem services, for example seagrass meadows, mangroves and kelp forests as carbon sinks: The four MPAs designated by the Malta Environment and Planning Authority to protect Malta's *Posidonia* (seagrass) beds together protect over 80% of this habitat in Malta. Areas set up for wave/wind power are generally NOT MPAs (see section 2.3).
Cultural values	*Includes those that do not interfere with the conservation outcome (*all *cultural values in a protected area should meet this criterion), including in particular:* • *Those that contribute to conservation outcomes (e.g., traditional management practices on which key species have become reliant)* • *Those that are themselves under threat.*	Areas set aside for cultural values are only protected areas under the IUCN definition, if they have nature conservation as a primary aim. However, many MPAs contain sacred sites or have significant cultural and heritage value and understanding of this is important. **Examples:** • Nosy Ve, an island in southern Madagascar protected under a local 'dina' agreement is both a sacred site and an area important for corals and as a tropic bird nesting colony. • Papahanaumokuakea Marine National Monument in the North West Hawaiian Islands is important for Native Hawaiians at genealogical, cultural, and spiritual levels.

Box 1

Boundaries of MPAs

There are a number of issues to consider when determining the boundaries of an MPA. On the landward side, it is important to make it very clear as to exactly what boundary is being used and this must be explained; for example 'Mean Low Water' is a different boundary from that of 'Lowest Astronomical Tide'. Wherever possible highest astronomical tide or high water mark should be used (highest astronomical tide generally suits areas with large tidal ranges, whereas high water mark suits small tidal ranges). Both low water and high water marks can result in boundaries that are difficult in legal and administrative terms because:

- The low water mark is usually covered by water. It is thus difficult to inform the public of its precise location, and therefore to enforce; in addition, low water mark moves with erosion and accretion and is often not marked on charts or defined in any publically available way.
- Boundaries based on high water mark may cause problems as, for example, what may appear to be relatively stable 'lines' can also be influenced by erosion and accretion. Also established rights of use often reflect terrestrial ownership of the adjacent land.
- In rivers, estuaries or narrow bays, there are no clear principles for defining low or high water and it may be unclear as to which bays and channels are part of a MPA, and which may be regarded as 'internal waters'.

Box 2

Offshore waters within and beyond national jurisdiction

Offshore waters are generally considered to be those that lie beyond a country's territorial seas, i.e. beyond 12 nautical miles from shore in most cases. They include the major part of all Exclusive Economic Zones (EEZs - waters under national jurisdiction out to a maximum of 200 nautical mile), as well as the high seas and seabed beyond the limit of national jurisdiction. For MPAs in offshore waters, designation should follow the *2008 Guidelines* as for any protected area. Thus, a site may be considered as an MPA provided it: (a) has defined boundaries that can be mapped; (b) is recognised by legal or other effective means; and (c) has distinct and unambiguous management aims that can be assigned to a particular protected area category.

Example:

The South Orkney Islands Southern Shelf Marine Protected Area was the first fully high seas MPA to be designated under the Convention on the Conservation of Antarctic Living Marine Resources with specific management aims and a responsible body: the Commission on the Conservation of Antarctic Marine Living Resources (CCAMLR).

2.2 Principles associated with the use of the protected area definition and IUCN category

The *2008 Guidelines* (Chapter 2, page 10) include the following principles (emphasis has been added to the most fundamental points) to help decide whether an area meets the definition of a protected area and what category it should be assigned to:

- *For IUCN, only those areas where the main objective is conserving nature can be considered protected areas; this can include many areas with other goals as well, at the same level, but in the case of conflict,* ***nature conservation will be the priority.***
- *Protected areas must prevent, or eliminate where necessary, any exploitation or management practice that will be harmful to the objectives of designation.*
- ***The choice of category should be based on the primary objective(s) stated for each protected area or legally-defined zone within a protected area.***
- *The system is not intended to be hierarchical.*
- *All categories make a contribution to conservation but objectives must be chosen with respect to the particular situation; not all categories are equally useful in every situation.*
- *Any category can exist under any governance type and vice versa.*
- *A diversity of management approaches is desirable and should be encouraged, as it reflects the many ways in which communities around the world have expressed the universal value of the protected area concept.*
- *The category should be changed if assessment shows that the stated, long-term management objectives do not match those of the category assigned.*
- *However, the category is not a reflection of management effectiveness.*
- *Protected areas should usually aim to maintain or, ideally, increase the degree of naturalness of the ecosystem being protected.*
- *The definition and categories of protected areas should not be used as an excuse for dispossessing people of their land or sea territory.*

2.3 When is a marine area that may achieve conservation outcomes not an MPA?

A **protected area** as defined by IUCN describes a precise set of management approaches with limits, and must have nature conservation as a **primary** rather than a secondary aim, as explained above. There are however many managed areas that protect biodiversity, either indirectly, incidentally or fortuitously. Indeed, it is a principle of the Convention on Biological Diversity's "ecosystem approach" that all land and water management should contribute to conservation, and as a result the distinction between what is and what is not a protected area is sometimes unclear. However, such areas do not necessarily fulfil the IUCN definition of a protected area. This is particularly the case in the marine environment where

there is a long history of spatial fisheries management and a growing interest in spatial planning and spatial management of other activities that often have no stated aim or interest in nature conservation – it is just an incidental or apparent link. Understanding the IUCN protected area definition is thus critically important.

Areas subject to some form of management **could** be MPAs or parts of MPAs in some cases, but MPA status should not be assumed and decisions must be made on a case-by-case basis, the essential criterion being **whether nature conservation is the primary objective**.

The following types of management area are **not** necessarily MPAs:

- Fishery management areas with **no wider stated conservation aims** (see section 2.3.1 for more detailed discussion).
- Community areas managed **primarily** for sustainable extraction of marine products, e.g. coral, fish, shells (these are discussed below in section 2.3.2 Indigenous and community conserved areas).
- Marine and coastal management systems managed **primarily** for tourism, even where these also include areas of conservation interest.
- Wind farms and oil platforms that **incidentally** help to build up biodiversity around underwater structures by excluding fishing and other vessels.
- Marine and coastal areas **set aside for other purposes** but which have an indirect conservation benefit: military training areas or their buffer areas (e.g. exclusion zones); disaster mitigation (e.g. coastal defences that also harbour significant biodiversity); communications cable and pipeline protection areas; shipping lanes, etc.
- Large areas (e.g., regions, provinces, countries) where certain species are protected by law across the entire region.

2.3.1. Fishery management areas

Temporary or permanent fishing closures that are established primarily to help build up and maintain reserve stocks for fishing in the future, and have no wider conservation aims or achievements are not considered to be MPAs. For example, Norway, Iceland and the Faroe Islands close areas to fishing at short notice if the percentage of juveniles or by-catch goes above a certain number. These areas do **not** qualify as MPAs. IUCN's advice is that areas set aside purely to maintain fishing stocks, particularly on a temporary basis, should not be considered to be protected areas even though they may well reflect good fishery management. For such sites to meet IUCN's definition of a protected area, managers would need to address the overall health and diversity of the ecosystem and have a stated primary aim to this effect.

Such areas however may be important components of the management of an MPA. For example, seasonal closures of fish spawning aggregation areas or pelagic migratory routes, at specific and predictable times of year for certain species when they are extremely vulnerable, may be essential to the effective management of an MPA.

Examples of MPAs with seasonally closed zones:

- Within the Great Barrier Reef Marine Park, Australia, there are seasonal closures to all reef fish fishing for specific periods at certain times of the year.
- The Galapagos Marine Reserve has seasonal closures to fishing of, for example, sea cucumbers.

Examples where management of fishing is essential to nature protection throughout the site:

- Eastport Marine Protected Areas in Canada consists of two MPAs (Duck Island and Round Island, both of which are no-take areas) within the 400 km^2 Eastport Peninsula Lobster Management Area; the larger management area is open to commercial exploitation of lobsters according to the fisheries management regime in place and is not itself an MPA, and the two no-take areas, each of which meets the definition of a protected area, play a key role in the lobster's management.

- Belize has eleven multi-species fish spawning aggregation sites that are closed to fishing permanently through marine reserves that restrict all fishing.

2.3.2. Indigenous peoples and community conserved territories and areas (ICCAs)

Indigenous peoples and community conserved territories and areas (ICCA) are defined by IUCN as: 'natural and/or modified ecosystems containing significant biodiversity values, ecological functions and benefits, and cultural values voluntarily conserved by indigenous peoples and local communities both sedentary and mobile – through customary laws or other effective means'. Determining when an ICCA is also a protected area, and therefore eligible for listing on the WDPA, is more complex than for some other protected area governance types (see *2008 Guidelines*, Chapter 3, pages 28-31) and has two stages:

1. **Agreement by the indigenous people or community involved**: no community-managed site should be identified as a protected area or listed on the WDPA without express consent by the community. Recognition and listing can bring benefits but also costs, such as increased exposure.

2. **Alignment with the IUCN definition of a protected area**: the 2008 definition of a protected area stipulates that for a site to be a protected area, priority must be given to nature conservation; other values present may be of similar importance but in the event of conflict between values, nature conservation must be considered the most important. As is the case with other governance types, community areas managed primarily for sustainable extraction of marine products would not be considered protected areas according to the IUCN definition unless nature conservation is the primary stated objective of the management regime.

Many ICCAs have been established by coastal communities in marine ecosystems. The ICCA Registry website is an online information portal and secure database, developed by UNEP-WCMC with support by UNDP's GEF Small Grants

Programme, that documents indigenous and community conservation areas including in the marine environment. It aims to increase awareness of the biodiversity values of areas managed by communities, and provide a wide range of information. As part of this process, it is hoped that further guidance on implementing the IUCN categories in terrestrial and marine ICCAs will be developed. Additional information is available through the ICCA Consortium, and the primary reference for determining whether marine community conservation area is an MPA should be the *2008 Guidelines*.

2.4 Governance

The IUCN protected area definition and management categories are 'neutral' about type of ownership or management authority. With respect to who holds decision-making and management authority and responsibility about protected areas, IUCN distinguishes four broad protected area governance types (governance by governments, shared governance, private governance and governance by indigenous people and local communities), which are described in the *2008 Guidelines* is reproduced in Annex I. All combinations of protected area categories and governance types are possible in an MPA. IUCN suggests that the governance type of a protected area be identified and recorded at the same time as its category in national environmental statistics and accounting systems and in protected areas databases. Protected area governance is described in detail in a new manual (Borrini-Feyerabend *et al.*, 2012)[9].

9 Borrini-Feyerabend, G., Dudley, N., Lassen, B., Pathak, N. and Sandwith, T. (2012). *Governance of Protected Areas: From understanding to action.*, IUCN, GIZ and ICCA Consortium.

3. Characteristics of the marine environment that affect protected area designation and IUCN category application

The marine environment has particular characteristics that are often absent or relatively uncommon on land. As a result, MPAs present management challenges that may need different approaches to those used for protected areas in terrestrial environments. These are described in Table 3.

Table 3: Characteristics of the marine environment that affect protected areas.

Characteristic	How does this characteristic affect MPAs?
Multi-dimensional environment	MPAs are designated in a fluid multi-dimensional environment. As a result, in some cases different management may be needed at different depths. In some MPAs vertical zoning has been used to achieve this. In others, there may be no vertical zoning, but the management put in place may nevertheless vary with depth. There is a general presumption against the use of vertical zoning, as there is increasing evidence of strong ecological bentho-pelagic coupling (see Section 5.5 below), and the subsequent vertically tiered management is particularly difficult, if not impossible, to effectively police and enforce. The sub-seafloor may also need management, if there is a potential impact such as mining below the seabed. This is similar to the situation in terrestrial protected areas where activities such as mining might potentially impact on the protected area below ground.
Currents and tides causing flows/ impacts	MPAs are subject to surrounding and 'up-current' influences from tides and currents. These are generally outside the control of the manager or management agency and cannot be managed. Although similar to the situation of airborne or wind-borne impacts on terrestrial protected areas, MPAs are perhaps more consistently subject to such influences.
Lack of clear tenure or ownership	Tenure and ownership in the marine environment is often different from on land, where there is usually clear public or private ownership. Under the United Nations Convention on the Law of the Sea (UNCLOS), nations have the right to use their Exclusive Economic Zones (EEZs), which extend from shore out to 200 nautical miles, and to establish management regimes such as MPAs. However, within an EEZ, there is generally no individual ownership of either the seabed or water column and the EEZ may often be used and accessed by all those belonging to the nation concerned. There are some exceptions, generally in inshore areas: thus in the UK, the Crown Estate owns about 50% of the foreshore (tidal land between Mean High Water and Mean Low Water as well as most of the seabed from Mean Low Water out to 12 nautical miles (i.e. the territorial sea); and in many countries, coastal communities may own or have tenure and rights over of certain marine areas or resources, as in Fiji where local communities have customary rights over traditional fishing grounds known as 'qoliqoli'. Outside the EEZs, i.e. on the High Seas, the oceans are invariably considered to be 'commons' which may be used and accessed by all nations. MPAs can represent a legitimate restriction on such rights under the UNCLOS or Regional Sea Agreements, according to provisions of the Convention on Biological Diversity (CBD) or Regional Fisheries Agencies (see box 2, page 15).
Multiple jurisdictions	Often the water column, seabed, sea life and foreshore are managed by different jurisdictions or government agencies, which may create difficulties for designation and management.
Difficulties in enforcement and management	Restricting entry to, and activities in, an MPA is often more difficult than for terrestrial protected areas (and often impossible) as there are usually multiple access points, the site is often remote and thus difficult and expensive to patrol, and under international law, rights of 'innocent passage' are afforded to all vessels. While controlling activities in the marine environment is more difficult than on land, modern satellite technology is making it easier.
Lack of visibility of features being protected	Being unable to see sub-tidal features poses particular problems in terms of management and enforcement. Illegal or unregulated activities may damage features within an MPA without anyone knowing, unless appropriate monitoring or surveillance is undertaken (and this may be expensive, requiring SCUBA diving).
Boundary demarcation	It is often difficult to know where the boundary of an MPA is, both seawards (where electronic charts, a Global Positioning System (GPS) or similar technology are needed), and on the landward side where boundaries based on high and low water marks may be difficult to locate in the field or may be only loosely defined (see discussion in Section 2.1). In a few cases, vertical zoning has been attempted, and horizontal boundaries have been established at certain depths if an MPA does not extend to either the sea surface (such as a protected area for a seamounts) or to the seabed. However, such boundaries are difficult if not impossible to mark and thus effective and practical compliance is also extremely difficult, if not impossible (see section 5.5).
Connectivity between ecosystems and habitats	The scale over which marine connectivity occurs can be very large. Since the extent of connectivity may be critical to the health of an MPA, sufficiently large areas must be considered to ensure adequate protection of ecosystem values.

4. The IUCN Protected Area management categories as applied to MPAs

The ***2008 Guidelines*** give a full description of each of the six categories of protected area management (Chapter 2, pages 12-23) and Table 9 (Chapter 6, pages 57-58) provides notes on applying the categories to MPAs. This section expands on this information and provides additional notes and examples to improve understanding of how categories can be applied to MPAs.

As outlined in one of the key principles (section 2.2 above), the choice of category relates to the primary stated objective(s) of the protected area. Categories may be assigned to a whole MPA or a separate zone within a multiple-zone MPA (see section 5.3 below). One problem that is difficult for category assignment in both marine and terrestrial protected areas is the frequent lack of clarity in the wording of the objectives of a protected area. Many MPAs have multiple objectives, having been set up with tourism or fisheries benefits, as well as biodiversity protection, in mind, and thus a **primary** objective may not be clearly identified. Nevertheless, the examples of the application of the categories to the MPAs cited below, and the national initiatives in a number of countries (e.g. Australia, Belize) to assign categories to all components of the MPA system, demonstrate that the categories can apply in the marine environment once they are well understood.

As with terrestrial protected areas, IUCN categories **are independent of the names of an MPA** (see ***2008 Guidelines***, page 11). This is important to understand, given the wide variability in typology of MPAs both between countries and within a single country: e.g. marine park, marine reserve, closed area, marine sanctuary, MACPAs/MCPAs (marine and coastal protected areas), nature reserve, ecological reserve, replenishment reserve, marine management area, coastal preserve, area of conservation concern, sensitive sea area, biosphere reserve, 'no-take area', coastal park, national marine park, marine conservation area, marine wilderness area. In addition to the wide range of names, the same name or title for a MPA may mean different things in different countries. For example, in Kenya 'marine reserves' have a multiple use approach while in neighbouring Tanzania 'marine reserves' are strictly no-take.

Category Ia

Strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.

Primary objective

- *To conserve regionally, nationally or globally outstanding ecosystems, species (occurrences or aggregations) and / or geodiversity features: these attributes will have been formed mostly or entirely by non-human forces and will be degraded or destroyed when subjected to all but very light human impact.*

Other objectives

- *To preserve ecosystems, species and geodiversity features in a state as undisturbed by recent human activity as possible;*
- *To secure examples of the natural environment for scientific studies, environmental monitoring and education, including baseline areas from which all avoidable access is excluded;*
- *To minimize disturbance through careful planning and implementation of research and other approved activities;*
- *To conserve cultural and spiritual values associated with nature.*

Notes relating to use of Category Ia

- Category Ia areas should usually be "cores" surrounded by other suitably protected zones or areas (i.e. the area surrounding the category Ia area should also be protected in such a way that it complements and ensures the protection of the biodiversity of the core category Ia area). Thus, for category Ia MPAs or zones, the use of the surrounding waters, marine connectivity and particularly "up-current" influences, should be assessed and appropriately managed.
- Although not specifically stated in the ***2008 Guidelines*** (since categories are assigned according to objective, not activity restrictions), removal of species or modification, extraction or collection of resources (e.g. through any form of fishing, harvesting, dredging, mining or drilling) is considered to be incompatible with this category (see section 5). However, there are limited exceptions: scientific research involving collection may be permitted if that collection cannot be conducted elsewhere and if the collection activity is minimized to that which is absolutely necessary to achieve the scientific goals of the study.

Examples:

MPAs

- South Orkney Islands Southern Shelf Marine Protected Area managed by the Commission for the Convention on Conservation of Antarctic Marine Living Resources

(CCAMLR) is a large (93,819 km^2) strictly protected marine area. It is assigned to category Ia (the entire CCAMLR area is considered to be category IV) – see Annex I for objectives.

- The eleven Marine Reserves within the Channel Islands National Marine Sanctuary, California are assigned to category Ia within the category IV National Park. The Marine Reserves are established for scientific purposes and to preserve biodiversity.

Zones within MPAs

- Macquarie Island Commonwealth Marine Reserve, Australia (See category IV). This MPA has a central Highly Protected Zone of 58,000 km^2 assigned to category Ia – see Annex 2 for objectives.

Category Ib

Usually large[10] unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

Primary objective

- *To protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity, free of modern infrastructure and where natural forces and processes predominate, so that current and future generations have the opportunity to experience such areas.*

Other objectives

- *To provide for public access at levels and of a type which will maintain the wilderness qualities of the area for present and future generations;*
- *To enable indigenous communities to maintain their traditional wilderness-based lifestyle and customs, living at low density and using the available resources in ways compatible with the conservation objectives;*
- *To protect the relevant cultural and spiritual values and non-material benefits to indigenous or non-indigenous populations, such as solitude, respect for sacred sites, respect for ancestors etc.;*
- *To allow for low-impact minimally invasive educational and scientific research activities, when such activities cannot be conducted outside the wilderness area.*

Notes relating to use of Category Ib

- In the ***2008 Guidelines***, Category Ib is called 'wilderness area' but the concept of 'wilderness' is more difficult to apply to the marine environment than to land. Provided a marine area is relatively undisturbed and free from human influences, qualities such as 'solitude', 'quiet appreciation' or 'experiencing natural areas that retain wilderness qualities' can however be achieved by diving beneath the surface. Thus Category Ib areas in the marine environment should be sites of relatively undisturbed seascape, significantly free of human disturbance (e.g. direct or indirect impacts, underwater noise, light pollution etc), works or facilities and capable of remaining so through effective management.
- As with Category Ia, removal of species and modification, extraction or collection of resources (e.g., through any form of fishing, harvesting, dredging, mining or drilling) is not considered compatible with this category (see section 5). Exceptions are: (a) as with Category Ia, collection for scientific research if that collection cannot be conducted elsewhere and (b) unlike Category Ia, in some circumstances, sustainable resource use by indigenous people to conserve their traditional spiritual and cultural values, provided this is done in accordance with cultural tradition.

Examples:

MPAs

- The Chassahowitza Wilderness (category Ib) covers 95 km^2 or 77% of the Chassahowitzka National Wildlife Refuge (category IV) in the USA. It comprises saltwater bays, estuaries and brackish marshes at the mouth of the Chassahowitzka River, and provides critical habitat to a diversity of wildlife, including endangered species such as the West Indian manatee and whooping crane.

Zones within MPAs

- Glacier Bay National Park and Preserve comprises two official protected area unity in S.E. Alaska, jointly managed by the U.S. National Park Service; the entire area covers 13,300 km^2 of land and sea, of which 10,784 km^2 is designated wilderness, with a cap on annual visitor numbers – this area is assigned to category Ib.

Category II

Large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.

Primary objective

- *To protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation.*

Other objectives

- *To manage the area in order to perpetuate, in as natural a state as possible, representative examples of physiographic regions, biotic communities, genetic resources and unimpaired natural processes;*
- *To maintain viable and ecologically functional populations and assemblages of native species at densities sufficient to conserve ecosystem integrity and resilience in the long term;*
- *To contribute in particular to conservation of wide-ranging species, regional ecological processes and migration routes;*

10 Size is less often a useful guide for categories in the marine environment; MPAs of all categories may be large; and Category Ib MPAs may be smaller than Category Ia MPAs.

- *To manage visitor use for inspirational, educational, cultural and recreational purposes at a level which will not cause significant biological or ecological degradation to the natural resources;*
- *To take into account the needs of indigenous people and local communities, including subsistence resource use, in so far as these will not adversely affect the primary management objective;*
- *To contribute to local economies through tourism.*

Notes relating to use of Category II

- Category II areas should be managed for "ecosystem protection", but should also provide for visitation, **non-extractive** recreational activities and nature tourism (e.g. snorkelling, diving, swimming, boating, etc.) and research (including managed extractive forms of research).
- Extractive use (of living or dead material) is not considered consistent with the objectives of category II because such activities (particularly fishing), even if undertaken at low levels, are recognised as causing ecological draw-down on one of more components of the overall food web, which is incompatible with ecosystem protection. However, as with category Ib, in some circumstances, extraction for research, sustainable resource use by indigenous people to conserve their traditional spiritual and cultural values.

Examples:

MPAs

- In South Korea, Hallyeohaesang National Park (76% of which is marine) and most of Dadohaehaesang National Park (80% of which is marine) are assigned to category II. The National Parks were previously assigned to category V as their main purpose was scenery protection; however priorities under the National Parks Act have changed and national parks are now considered "regions worthy of representing the natural ecosystem, nature and cultural scenery" (Shadie *et al.*, 2012)[11]. The southernmost group of islands, Baekdo Islands, within Dadohaehaesang National Park are more strictly protected and are being assigned to category Ia.
- Victoria, Australia has a network of 13 marine parks and 11 smaller coastal marine sanctuaries, all of which are no take areas and have been assigned to category II, although the sites do not have stated objectives with reference to the categories.

Zones within MPAs

- The Marine National Park Zones (known as green zones) within the Great Barrier Reef Marine Park in Australia are assigned to Category II (see section 5.4).

11 Shadie, P., Young Heo, H., Stolton, S. and Dudley, N. (2012). *Protected Area Management Categories and Korea: Experience to date and future directions*, IUCN and KNPS, Gland, Switzerland and Seoul, Republic of Korea.

Category III

Set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living component such as a specific coralline feature. They are generally quite small protected areas and often have high visitor value.

Primary objective

- *To protect specific outstanding natural features and their associated biodiversity and habitats.*

Other objectives

- *To provide biodiversity protection in landscapes or seascapes that have otherwise undergone major changes*
- *To protect specific natural sites with spiritual and/or cultural values where these also have biodiversity values;*
- *To conserve traditional spiritual and cultural values of the site.*

Notes relating to use of Category III

- Category III applies to MPAs designed to protect specific features such as: sea mounts or shipwrecks which have become aggregation sites for biodiversity and have important conservation value; key aggregation areas for iconic species; or other marine features which may have cultural or recreational value to particular groups, including flooded historical/archaeological landscapes.
- Extractive use (of living or dead material) is not considered consistent with the objectives of categories III, other than extraction for research, and sustainable resource use by indigenous people to conserve their traditional spiritual and cultural values may be compatible, provided this is done in accordance with cultural tradition (see section 5).

Examples:

MPAs

- Truk (Chuuk) Lagoon Underwater Fleet, in Micronesia is a historic shipwreck site supporting outstanding biodiversity.
- Blue Hole Natural Monument, Belize; this is an almost perfectly circular, over 24m deep underwater sinkhole, and is a unique geological feature on the Belize Barrier Reef, managed with the goal of protecting and preserving natural resources and nationally significant natural features of special interest or unique characteristics to provide opportunities for interpretation, education, research and public appreciation for the benefit of current and future generations, within a functional conservation area.

Category IV

Aim to protect particular species or habitats and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

Primary objective

- *To maintain, conserve and restore species and habitats.*

Other objectives

- *To protect vegetation patterns or other biological features through traditional management approaches;*
- *To protect fragments of habitats as components of landscape or seascape-scale conservation strategies;*
- *To develop public education and appreciation of the species and/or habitats concerned;*
- *To provide a means by which the urban residents may obtain regular contact with nature.*

Notes relating to use of Category IV

- Category IV is aimed at protection of particular stated species or habitats, often with active management intervention (e.g., protection of key benthic habitats from trawling or dredging). MPAs or zones aimed at particular species or groups can be classified as category IV, e.g., seabird, turtle or shark sanctuaries. Zones within an MPA that have seasonal protection, such as turtle nesting beaches that are protected during the breeding season, might also qualify as category IV.

Examples:

MPAs

- The Vama Veche 2 Mai (Acvatoriul Litoral Marin) Scientific Reserve, Romania. This Natura 2000 site is aimed at achieving a good conservation status for a number of habitats listed on the EU Habitats Directive, as well as a number of marine mammal species listed in Annex II of the Habitats Directive (Nita, Pers. comm., 2012).
- South Ari Atoll MPA in the Maldives will be assigned to Category IV, following field testing of this supplementary guidance. The objectives of the MPA are: To protect and preserve important Maldivian aggregation areas for the whale shark *Rhincodon typus*; and to provide a means to promote and ensure the long term conservation and protection of the South Ari ecosystem are in line with the criteria for this Category (MWSRP, 2011)[12].
- South Water Caye Marine Reserve, Belize (see Annex 1 for objectives).

Zones of MPAs

- Montague Island Habitat Protection Zone is Category IV in Bateman's Marine Park in New South Wales, Australia is designed to protect Grey Nurse Shark (*Carcharias taurus*) critical habitat.

12 *MWSRP (2011). Guidelines for applying the IUCN Marine Protected Area Management Categories to Marine Protected Areas: a field testing report by the Maldives Whale Shark Research Programme (MWSRP). Unpublished Report, September 2011. 5pp.*

Category V

Areas where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

Primary objective

- *To protect and sustain important landscapes/seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.*

Other objectives

- *To maintain a balanced interaction of nature and culture through the protection of landscape and/or seascape and associated traditional management approaches, societies, cultures and spiritual values;*
- *To contribute to broad-scale conservation by maintaining species associated with cultural landscapes and/or by providing conservation opportunities in heavily used landscapes;*
- *To provide opportunities for enjoyment, well-being and socio-economic activity through recreation and tourism;*
- *To provide natural products and environmental services;*
- *To provide a framework to underpin active involvement by the community in the management of valued landscapes or seascapes and the natural and cultural heritage that they contain;*
- *To encourage the conservation of aquatic biodiversity;*
- *To act as models of sustainability so that lessons can be learnt for wider application.*

Notes relating to use of Category V

- In a marine situation category V would apply to areas where local communities live within and sustainably use the seascape (see section 5), but where the primary objectives of the areas are nevertheless nature conservation protection.
- Category V is aimed at protection of landscapes, a concept that is more difficult to apply in the marine environment although the idea of protecting seascapes is gaining currency.

Examples:

MPAs

- Iroise Parc Naturel Marin, France – see Annex II for Objectives
- Apo Island, in the Philippines, mixes traditional use of marine resources with ecotourism, generating revenue for communities.

Category VI

Areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under low-level non-industrial sustainable natural resource management and where such use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Primary objective

- *To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.*

Other objectives

- *To promote low-level and sustainable use of natural resources, considering ecological, economic and social dimensions;*
- *To promote social and economic benefits to local communities where relevant; whilst conserving biodiversity;*
- *To facilitate inter-generational security for local communities' livelihoods – therefore ensuring that such livelihoods are sustainable;*

Notes relating to use of Category V

- MPAs aimed at maintaining predominantly natural habitats but allowing **sustainable** collection of some species (e.g. food species, ornamental coral or shells), can be assigned to category VI.
- The point where an area managed for resource extraction (i.e. does not meet the definition of a protected area) becomes a category VI marine protected area may be hard to judge and will be determined by reference to whether the area has a stated primary conservation aim, meets the overall definition of a protected area and achieves verifiable ecologically sustainability as measured by appropriate metrics that reflect the objectives of nature conservation (as well as the 75% rule – see below Section 5.1). Careful consideration needs to be given as to whether activities such as seabed mining and some types of commercial fishing practices (e.g. dredge trawling) should be permitted in regard to their inherent unsustainability, and their consistence with the objectives of this category (see Section 5.4 below).

Examples:

MPAs

- Misali Island Marine Conservation Area, Zanzibar, Tanzania was set up to protect important marine corals and other biodiversity whilst allowing sustainable use.
- Australia's South-east Marine Reserves Network consists of 14 Commonwealth Marine Reserves designed to protect representative examples of seafloor features and associated habitats in this biogeographical region. These are assigned to different IUCN categories according their objectives and zoning. East Gippsland Commonwealth Marine Reserve is a Multiple Use Zone and is assigned to category VI.

Zones within MPAs

- The Habitat Protection Zone (dark blue zone) in the Great Barrier Reef Marine Park is Category VI (see section 5.4).

5. Applying the categories to different zones in an MPA

5.1. Applying a category to an entire MPA

In many cases, as with terrestrial protected areas, an MPA will have a primary stated aim of nature conservation with a set of objectives that will allow the site in its entirety to be assigned to an IUCN protected area management category. This is the preferred approach, particularly where a site is small. However, since many large MPAs have zones with different objectives, it is possible to assign individual zones to different categories as described in section 5.4 below.

In some exceptional cases, there may be small areas of a protected area allocated to uses that might not be compatible with the primary objective of the protected area, but which are clearly essential or unavoidable. Examples include tourist accommodation in large protected areas, where the revenue is essential for the maintenance of the protected area; or the habitation of people whose livelihoods depend on the area. Fishing cannot generally be considered, however, as one of these essential, unavoidable, or indeed appropriate activities.

In such cases, when assigning a category, the primary objective of the protected area should apply to at least three quarters of the protected area. Known as the '75% rule', as explained in the ***2008 Guidelines*** (chapter 4, page 35), this means that the remaining 25% of land or water within a protected area can be managed for other essential and unavoidable purposes so long as **these uses are compatible with the definition of a protected area and the management category it is being assigned to**.

Examples of MPAs where this applies include:

- Habitation by the Moken (Sea Gypsies) in the Mu Koh Surin Marine National Park, Thailand (category II) (Sudara and Yeemin, 2011)[13].
- The Kosi Bay Nature Reserve, a coastal/brackish protected area which is part of the much larger iSimangaliso Wetland Park in Kwazulu Natal, South Africa; within the Nature Reserve only the local Thonga people may harvest intertidal invertebrates and in the marine reserve of El Hierro Mar de Las Calmas, the Canary Islands, both of which are otherwise strictly protected.

The 75% rule is not an excuse, for example, to allow widespread low level artisanal fishing within the core category I – III area itself. All living parts are inter-related within a marine ecosystem, and closure of an area to extraction of all fish or living resources means just that – it is the core principle for category I-III MPAs as the no-take of mammals, birds and vegetation is for terrestrial category I-III protected areas.

5.2. Combined or adjoining terrestrial and marine projected areas

A separate determination of the relevant IUCN category may be appropriate where a predominantly terrestrial protected area includes a marine component. In such cases, the two components should not necessarily be reported as two separate protected areas (e.g. an MPA and a terrestrial protected area). The 75% rule may be appropriate in determining the appropriate category for reporting purposes, if the terrestrial component is at least 75% of the total area. If however, legislation is in place requiring distinct management arrangements for the marine area, it may be appropriate to consider it as an MPA in its own right.

5.3. 'Nested sites'

One or more protected areas are sometimes "nested" within another protected area with a different category. The most common model is a large, less strictly protected area (e.g. a category V or VI protected area) containing smaller, more strictly protected areas (e.g. category III or IV protected areas) which have different objectives. In such cases distinct **protected areas nested within larger protected areas** can have their own category. Essentially this situation is a variation on zoning, but in this case each "zone" meets the status of an MPA itself.

An example of this is the Channel Island National Marine Sanctuary, USA, with 11 Marine Reserves within it.

5.4. Applying the categories to zones within an MPA

As explained in the ***2008 Guidelines*** (Chapter 4, pages 36-38), categorisation of different zones within a protected area is allowed provided three specific requirements are met:

(a) the zones are clearly mapped;

(b) the zones are recognised by legal or other effective means; and

(c) each zone has distinct and unambiguous management aims that can be assigned to a particular protected area category.

Separate categorization of zones is thus possible when primary legislation allows or requires for the description and delineates zones within a protected area, but not when primary legislation

13 Sudara, S. and Yeemin, T. (2011). *Demonstration Site Baseline Assessment Report: Mu Koh Surin Marine National Park, Thailand.* Unpublished case study for ICRAN.

simply allows for the concept of zoning through, for example, a subsequent management planning process. Figure 2 in the ***2008 Guidelines*** (page 38) gives a decision tree for deciding if a zone is suitable for having its own category. IUCN considers that in most cases it is not necessary to assign different categories to zones in protected areas, but it may be appropriate in much larger protected areas where individual zones are almost protected areas in their own right.

Many MPAs are zoned because of their multiple use nature, with each zone type having different objectives and restrictions (some allowing greater use and removal of resources than others). Many Australian MPAs have been zoned. One of the first was the Great Barrier Reef (GBRMP) Marine Park, with zoning initially applied in various sections of the park in the 1980s-90s. The initial zoning has been periodically reviewed and updated, and since 2003 the entire GBR has been covered by a single amalgamated Zoning Plan. Zoning schemes subsequently implemented by other jurisdictions in Australia (e.g. for Queensland (State) Marine Parks and the federal marine reserve network) have used the broad zoning framework developed for the GBRMP, but have modified this to suit their own situations. In all cases, the zones have a statutory basis and meet the criteria of the various IUCN categories.

Table 4: Zone types within the Great Barrier Reef Marine Park[14].

Zone Name	Equivalent IUCN category	Objectives	Area (km²)	% of GBRMP
Preservation Zone	Ia	to provide for the preservation of the natural integrity and values of areas of the Marine Park, generally undisturbed by human activities.	710	<1
Scientific Research Zone	Ia	(a) to provide for the protection of the natural integrity and values of areas of the Marine Park, generally free from extractive activities; and (b) subject to the objective mentioned in paragraph (a), to provide opportunities for scientific research to be undertaken in relatively undisturbed areas.	155	<1
Commonwealth Islands	II	(a) to provide for the conservation of areas of the Marine Park above the low water mark; and (b) to provide for use of the zone by the Commonwealth; and (c) subject to the objective mentioned in paragraph (a), to provide for facilities and uses consistent with the values of the area.	185	<1
Marine National Park Zone	II	(a) to provide for the protection of the natural integrity and values of areas of the Marine Park, generally free from extractive activities; and (b) subject to the objective mentioned in paragraph (a), to provide opportunities for certain activities, including the presentation of the values of the Marine Park, to be undertaken in relatively undisturbed areas.	114530	33
Buffer Zone	IV	(a) to provide for the protection of the natural integrity and values of areas of the Marine Park, generally free from extractive activities; and (b) subject to the objective mentioned in paragraph (a), to provide opportunities for: (i) certain activities, including the presentation of the values of the Marine Park, to be undertaken in relatively undisturbed areas; and (ii) trolling for pelagic species.	9880	3
Conservation Park Zone	IV	(a) to provide for the conservation of areas of the Marine Park; and (b) subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use and enjoyment, including limited extractive use.	5160	2
Habitat Protection Zone	VI	(a) to provide for the conservation of areas of the Marine Park through the protection and management of sensitive habitats, generally free from potentially damaging activities; and (b) subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use.	97250	28
General Use Zone	VI	to provide for the conservation of areas of the Marine Park, while providing opportunities for reasonable use.	116530	34
Total			**344400**	**100**

14 The GBRMP does not include State islands, intertidal waters, Queensland internal waters, or port areas.

The GBRMP is a single very large MPA covering 344,400 km^2 on the north east coast of Australia, in which a wide range of commercial and recreational activities and uses are allowed, including extraction other than mining or drilling for oil. The zones are assigned to different categories as shown in Table 4.

The statutory Zoning Plan for the GBRMP provides details on what, and where, specific activities are allowed, and which activities require a permit. Within each zone type, certain activities are allowed 'as-of-right' (that is, no permit is required, but users must comply with any legislative requirements in force), some specified activities can only be carried out with a permit, and some activities are prohibited. All the zones are mapped, recognised in law, and have unambiguous objectives that mean they can each be assigned to an IUCN category.

5.5. Vertical zoning

In a very few cases, parts of MPAs have been formally vertically zoned, to take account of the three-dimensional nature of the marine environment. Thus a zone may be distinguished for part of the water column with a different management regime from that of the seafloor: benthic fishing is usually prohibited in the zone that includes the seabed, but pelagic fishing is usually still allowed in the water column.

IUCN's position is a strong presumption against vertical zoning. It often does not make ecological sense, as how benthic and pelagic systems and species interact is not yet fully known, and surface or mid-water fisheries may in fact impact on the benthic communities below. For example, exploitation and even preparation of the seabed for exploitation in the form of deep sea mining may have a major impact on the ecosystem components on and above the sea floor. We are only just beginning to develop a scientific understanding of the vertical ecological connections that exist in marine ecosystems. Furthermore, enforcing vertical zoning is extremely difficult if not legally impossible.

The three-dimensional nature of the marine environment can nevertheless be recognised by designating a single zone that clearly stipulates what can and cannot occur in each realm – pelagic and benthic. For example, the Habitat Protection Zone in the Great Barrier Reef Marine Park in Australia is designed to protect sensitive benthic habitats from any damaging activities such as trawling but allows other types of fishing (e.g. trolling, line fishing, netting) to occur in the overlying waters. However, the benthic and pelagic habitats are not categorised separately, even though the importance of managing different parts of the marine environment is recognised through an integrated approach. Similarly, the GBRMP Buffer Zone (category IV) allows for trolling of pelagic fish only, and prohibits all other fishing thus protecting the seafloor habitats and associated species, but there is also no vertical zoning.

An example where vertical zoning has been implemented is In the Huon Commonwealth Marine Reserve in Australia, a cluster of cone-shaped seamounts on the seabed are protected through a category Ia benthic sanctuary zone, while the remainder of the marine reserve (i.e. the seabed surrounding the seamounts, and the water column above) is designated as a category VI multiple use zone. Different commercial fishing methods are permitted at different depths, determined through a comprehensive fishing risk assessment.

6. Relationship between the categories and different activities

Fishing and extraction of wild living resources is still very widespread in the marine environment, and more so than on land (marine fisheries are the last wild commercial 'harvest' in the world), though hunting is obviously a significant issue for some terrestrial protected area. Many people thus still make their living from the exploitation of wild marine resources. As a result, the conflict between fishing and MPAs tends to be a much greater issue than that between extraction of living resources in terrestrial protected areas.

This has implications for assignment of the IUCN protected area management categories to MPAs. In the conservation community as a whole, there is a general understanding that the more highly protected areas (Categories I-III) should be closed to extraction, and as a result these categories have become associated with no-take areas. However, there are many who feel that limited extraction (whether for research or traditional use) carried out under appropriate management can still result in the objectives of a highly protected MPA being achieved. As a result, those MPAs that have been assigned to categories so far include no-take MPAs assigned to all six different categories, and conversely, open-access MPAs also assigned to all categories (Wood, pers. comm., 2012).

Table 5: Matrix of marine activities that may be appropriate for each IUCN management category.

Activities	Ia	Ib	II	III	IV	V	VI
Research: non-extractive	Y*	Y	Y	Y	Y	Y	Y
Non-extractive traditional use	Y*	Y	Y	Y	Y	Y	Y
Restoration/enhancement for conservation (e.g. invasive species control, coral reintroduction)	Y*	*	Y	Y	Y	Y	Y
Traditional fishing/collection in accordance with cultural tradition and use	N	Y*	Y	Y	Y	Y	Y
Non-extractive recreation (e.g. diving)	N	*	Y	Y	Y	Y	Y
Large scale low intensity tourism	N	N	Y	Y	Y	Y	Y
Shipping (except as may be unavoidable under international maritime law)	N	N	Y*	Y*	Y	Y	Y
Problem wildlife management (e.g. shark control programmes)	N	N	Y*	Y*	Y*	Y	Y
Research: extractive	N*	N*	N*	N*	Y	Y	Y
Renewable energy generation	N	N	N	N	Y	Y	Y
Restoration/enhancement for other reasons (e.g. beach replenishment, fish aggregation, artificial reefs)	N	N	N*	N*	Y	Y	Y
Fishing/collection: recreational	N	N	N	N	*	Y	Y
Fishing/collection: long term and sustainable local fishing practices	N	N	N	N	*	Y	Y
Aquaculture	N	N	N	N	*	Y	Y
Works (e.g. harbours, ports, dredging)	N	N	N	N	*	Y	Y
Untreated waste discharge	N	N	N	N	N	Y	Y
Mining (seafloor as well as sub-seafloor)	N	N	N	N	N	Y*	Y*
Habitation	N	N*	N*	N*	N*	Y	N*

Key:

No	N
Generally no, unless special circumstances apply	N*
Yes	Y
Yes because no alternative exists, but special approval is essential	Y*
* Variable; depends on whether this activity can be managed in such a way that it is compatible with the MPA's objectives	*

The extensive debate that has resulted (for example, Fitzsimons (2011) and Robb *et al.* (2011)[15]) has meant that people may forget that categories are not applied to protected areas according to management regimes (and therefore the activities being seen to occur), but rather according to the stated objectives. From IUCN's point of view, the key point is that all activities that are allowed to take place within a protected area must be compatible with its stated conservation management objectives regardless of the IUCN category. If categories are assigned according to the **management objective** of an MPA, the issue of whether it is no-take should not be a priority during the assignment process, as strict regulation of exploitation is a management action that then must follow on from this particular objective.

Nevertheless, because of the debate on this issue, some guidance is provided in this section on the types of activity that may be appropriate within different categories. Note that such an exercise has not been undertaken for terrestrial protected areas, and this issue is not addressed in detail in the ***2008 Guidelines***. Table 5 provides a summary of the various activities that may be appropriate in MPAs (and marine zones of predominately terrestrial protected areas) according to the different management categories. However, **this table should NOT be used as the basis for assigning categories, which MUST be based on the stated nature conservation objectives for the MPA.** The table provides some generic guidance to illustrate the broad relationship and acceptability or otherwise between activities and the different category types.

6.1 Commercial and recreational fishing and collection of living resources

Recreational and commercial fishing practices may be unsustainable and incompatible with the objectives of an MPA. Fisheries that are adequately managed to provide long-term exploitation do not necessarily comply with ecological standards for nature conservation, in that, for example, they may have indirect trophic impacts. For a fishery management area to meet the definition of an MPA, it would need to demonstrate that it contributes to the maintenance of ecologically appropriate metrics, such as population structures (for example, it would be necessary to show that the population is not distorted by harvesting a certain size class or large proportions of old or young fish). Many research studies have shown the significance of no-take reserves both for biodiversity conservation and fisheries management (McCook *et al.,* 2010)[16].

Since commercial and recreational fishing always has some level of ecological impact, these activities are considered inconsistent with the objectives of MPAs in categories Ia, Ib and II, and frequently III. However, use of MPAs in categories Ib and II by indigenous people for traditional spiritual and cultural values and for sustainable resource use, if carried out in accordance with cultural traditions may be acceptable if subject to a formal agreement guiding these activities.

Recreational fishing is usually considered inappropriate in categories Ia and Ib and II MPAs. Many recreational fishers use "catch and release" which is considered by some to be non-extractive. However there are ecological impacts from catch and release (e.g. post-catch mortality) and so this is also not considered to be an appropriate activity in category I to III MPAs. In general, recreational fishing in MPAs should be regarded in the same way as recreational hunting in terrestrial protected areas.

Category II protected areas are however established to 'protect natural biodiversity... and supporting environmental processes' and so some people maintain that all types of recreational activities including recreational fishing should be allowed. In terrestrial parks, aking freshwater fish from rivers and streams on a subsistence and low-level sporting basis in category II parks may be allowed provided this is not done throughout the entire protected area (the 75% rule is applied), as it has less overall impact. In MPAs, as explained above, extractive forms of recreation (e.g. fishing, souvenir collection etc) can have damaging consequences. Closure to recreational and commercial fishing should therefore be seen as critical to category II MPAs in the same way as closure to hunting of mammals and birds and harvesting of vegetation is for terrestrial category II protected areas, since fish, invertebrates, and algae are all inter-related components of the marine ecosystem

Category III MPAs should also be closed to commercial and recreational fishing. Whether or not sustainable fishing is allowed in a Category IV MPA or zone will depend on its objectives. In some circumstances, fishing/collecting may be permissible where the resource use does not compromise the ecological/species management objectives of the site.

MPAs or zones that allow sustainable commercial or recreational fishing/collecting should be categorised as V or VI (note: as stated throughout this document MPAs must first meet the definition of a protected area and thus be primarily managed for nature conservation). Thus, in MPAs where it may be necessary to allow extractive activities, consideration should be given to whether the objectives of the MPA (or zone) mean that Category V or VI is more applicable than categories I-IV. Table 6 summarises the general guidance on the relationship between fishing/collection of living resources and the categories.

6.2. Mining (including oil and gas and most sand and gravel extraction)

Mining is unsustainable because it involves extraction of a finite resource. In addition, as in the case of gravel extraction, it may have a long term adverse effect on the benthos, and so would not be appropriate in an MPA. In accordance with IUCN policy on mining in protected areas, these activities

15 Fitzsimons, J. (2011). 'Mislabelling marine protected areas and why it matters – a case study of Australia'. *Conservation Letters* 4: 340-345. Robb, C.K., Bodtker K.M., Wright K., and Lash J. (2011) 'Commercial fisheries closures in marine protected areas on Canada's Pacific coast: the exception, not the rule'. *Marine Policy* 35, 309–316.

16 McCook, L., Ayling, T. and Cappo, M. (2010). *Adaptive management of the Great Barrier Reef: A globally significant demonstration of the benefits of networks of marine reserves*. PNAS Special Feature on Marine Reserves.

Table 6: Compatibility of fishing/collecting activities in different management categories – a preliminary assessment.

IUCN category	Long term and sustainable local fishing/ collecting practices	Recreational fishing/ collecting	Traditional fishing/ collecting	Collection for research
Ia	No	No	No	No*
Ib	No	No	Yes**	Yes
II	No	No	Yes**	Yes
III	No	No	Yes**	Yes
IV	Variable#	Variable#	Yes	Yes
V	Yes#	Yes	Yes	Yes
VI	Yes#	Yes	Yes	Yes

Key:

*	any extractive use of Category Ia MPAs should be prohibited with possible exceptions for scientific research which cannot be done anywhere else.
**	in Categories Ib, II and III MPAs traditional fishing/collecting should be limited to an agreed sustainable quota for traditional, ceremonial or subsistence purposes, but not for purposes of commercial sale or trade.
#	whether fishing or collecting is or is not permitted will depend on the specific objectives of the MPA.

should not be permitted in category I to IV MPAs. For example, the Great Barrier Reef Marine Park Act 1975 specifically prohibits all mining within the boundaries of the Great Barrier Reef Region.

Carefully managed mining that has been risk assessed as causing minimal impact in a small discreet part of an MPA may be permissible depending on national legislation relating to mining in protected areas generally or in a specific MPA but these areas should be assigned as category V or VI. In 2000, IUCN called for a moratorium on subsurface exploitation in categories I-IV, and in 2008 extended this to a call for a moratorium on categories V and VI as well (IUCN Resolution 4.136, Barcelona). However, as yet, no such agreement has been reached.

7. Reporting to the World Database on Protected Areas and the UN List of Protected Areas

Once an IUCN category is assigned and governance type allocated, the information should be reported to the UNEP World Conservation Monitoring Centre (UNEP-WCMC), so that information can be included in the World Database on Protected Areas (WDPA) and the UN List of Protected Areas. The WDPA is a joint product of UNEP and IUCN, prepared by UNEP-WCMC and IUCN WCPA working with governments, the Secretariats of MEAs (Multilateral Environmental Agreements) and collaborating NGOs. Reporting to the WDPA is described in the ***2008 Guidelines*** (Chapter 4, pages 40-41) and is the same for both terrestrial and marine protected areas. Since the process for reporting has expanded since 2008, it is summarised here.

There are two ways to report the assignment of a category onto the WDPA:

- **Official reporting:** The official UN reporting system for protected areas requires that the information held on protected areas be approved by governments. Reporting is voluntary, but is requested by a number of UN resolutions and policies, most recently in the CBD Programme of Work on Protected Areas. This form of reporting is government-led, and the process is managed by UNEP-WCMC. Further details are given in the ***2008 Guidelines*** (Chapter 4).
- **Individual site reporting via the internet:** It is now possible for anyone interested in protected areas to provide information and feedback to the WDPA. The public interface protectedplanet.net allows viewers to explore the world of protected areas through user friendly maps, pictures and information and, through a link with Wikipedia, to add information about individual sites. Core data on MPAs held on the WDPA is also available via the MPA-specific site protectplanetocean.net. MPA information can be accessed at this site via the interactive Marine Protected Area (iMPA) pages, which also allow MPA information to be edited and added. Full instructions concerning editing and adding information to the site (via the Google Groups application), and processes for checking this information, are provided on the iMPA site and updates to the core data are synchronised with the WDPA on a regular basis. Detailed ***Data Standards for the World Database on Protected Areas*** are available[17].

For areas in the high seas, and thus outside the extent of any national jurisdiction, the reporting mechanism has yet to be developed.

7.1 Reporting multiple categories within a protected area

The reporting of categories for protected areas where different zones have different categories (such as the Great Barrier Reef) is described in the ***2008 Guidelines*** (Chapter 4, pages 36-37) and in section 5.4 above. In the context of MPAs, two situations are worth further discussion:

- When reporting **"nested" protected areas** it is important to ensure spatial data is correct to avoid double counting, and so that databases do not overstate the amount of land or sea that has been designated. For example, the Great Barrier Reef Marine Park is sometimes reported as being category VI overall, but within this broad area several other categories are also recognised, i.e. Ia, II, IV and VI, (see examples given in previous sections). In the case of the Macquarie Island Commonwealth Marine Reserve (category IV), over one third of the reserve (58,000 km^2 out of a total of 162,000 km^2) is designated IUCN category Ia Highly Protected Zone.
- **Vertical zonation** can result in double counting when reporting on the IUCN categories. IUCN's current advice is that MPAs with vertical zoning should be reported according to the **least** restrictive category that has been applied within the site due to IUCN's serious concerns with compliance and enforcement. For example, if the benthic system is strictly protected and the pelagic area is open to managed resource use compatible with category VI, the whole area should be assigned a category VI. Thus Huon Commonwealth Marine Reserve (see section 5.5) should be **reported** as IV even though the seabed is **categorised** as Ia.

17 These can be downloaded from http://www.wdpa.org/

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Annex 1.
The IUCN protected area matrix: a classification system for protected areas comprising both management category and governance type

Governance types / Protected area categories	A. Governance by government			B. Shared governance			C. Private governance			D. Governance by indigenous peoples and local communities	
	Federal or national ministry or agency in charge	Sub-national ministry or agency in charge	Government-delegated management (e.g., to an NGO)	Transboundary management	Collaborative management (various forms of pluralist influence)	Joint management (pluralist management board)	Declared and run by individual land-owners	… by non-profit organizations (e.g., NGOs, universities)	… by for-profit organizations (e.g., corporate owners, cooperatives)	Indigenous peoples' protected areas and territories – established and run by indigenous peoples	Community conserved areas – declared and run by local communities
Ia. Strict Nature Reserve											
Ib. Wilderness Area											
II. National Park											
III. Natural Monument											
IV. Habitat/ Species Management											
V. Protected Landscape/ Seascape											
VI. Protected Area with Sustainable Use of Natural Resources											

Annex 2. Examples of MPA Objectives

Category Ia:

South Orkney Islands Southern Shelf MPA

- The protection of representative examples of marine ecosystems, biodiversity and habitats at an appropriate scale to maintain their viability and integrity in the long term.
- The protection of key ecosystem processes, habitats and species, including populations and life-history stages.
- The establishment of scientific reference areas for monitoring natural variability and long-term change or for monitoring the effects of harvesting and other human activities on Antarctic marine living resources and on the ecosystems of which they form part.
- The protection of areas vulnerable to impact by human activities, including unique, rare or highly biodiverse habitats and features.
- The protection of features critical to the function of local ecosystems.
- The protection of areas to maintain resilience or the ability to adapt to the effects of climate change.

Category II:

Mu Koh Surin Marine National Park, Thailand

The main objectives of the park are:

- Preserve and conserve natural resource and the environment in a condition whereby they can provide sustainable benefits to society.
- Provide opportunities to the public for education, research and recreation that is within the park's carrying capacity.

Category IV:

Macquarie Island Commonwealth Marine Reserve18 (with a category Ia zone)

Strategic Objectives for the Marine Reserve as a whole:

1. To protect the conservation values of the south-eastern portion of the Macquarie Island Region including protecting:
- the migratory, feeding and breeding ranges of marine mammals and seabirds.
- threatened species that depend on the area; and
- the unique benthic habitat.

2. To provide an effective conservation framework, to contribute to the integrated and ecologically sustainable use and management of the Macquarie Island Region.
3. To provide a scientific reference area for the study of ecosystem function within the Macquarie Island Region.
4. To manage the area as part of the National Representative System of Marine Protected Areas.

Management goals for the Highly Protected Zone of 58,000 km² (Category Ia):

- Provide a scientific reference area for further studies of natural ecosystems, including baseline areas.
- Protect threatened species and migratory and foraging marine mammals and seabirds from direct human disturbance.
- Protect pelagic species and the benthic communities from direct human disturbance.

Management Goals for the two Habitat/Species Management Zones (IUCN category IV):

- Minimise human impacts on the habitats of threatened species, migratory and foraging marine mammals and seabirds, and benthic and pelagic fauna that depend on the area.
- Promote scientific research and environmental monitoring as primary activities associated with sustainable resource management and use.

Management strategies for the Highly Protected Category Ia zone are:

- No commercial or recreational fishing.
- No mining operations, including petroleum and/or mineral exploration or extraction.
- No commercial tourism activities.
- Passive transit of vessels through the zone allowed.
- Non-intrusive scientific research compatible with the strategic objectives of the Marine Park and management goals for this zone allowed.
- No dumping of waste or littering, in accordance with the EPBC Regulations.

18 This is called the Macquarie Island Marine Park in the 2001-2008 Management Plan

Management strategies for the Habitat/Species Management Zones (Category IV) are:

- No mining operations, including petroleum and/or mineral exploration or extraction.
- Commercial fishing in accordance with a fishing concession granted by AFMA will be allowed in the Marine Park, subject to determinations or permits made by the Director under EPBC Regulations.
- Limited commercial tourism will be allowed under a permit issued by the Director under the EPBC Regulations.
- Scientific research that is compatible with the strategic objectives of the Marine Park and management goals for this zone will be allowed.
- In accordance with the EPBC Regulations, no dumping of waste or littering.

Additional management goals and management strategies relate specifically to scientific research and monitoring in the Marine Park.

Category IV:

South Water Caye Marine Reserve, Belize (Wildtrack, 2009)[19]

Overall goal:

To provide for the protection, wise use, understanding, and enjoyment of the natural resources of South Water Caye Marine Reserve in perpetuity.

Objectives:

- Maintain and conserve the natural resources of South Water Caye Marine Reserve for the benefit of current and future generations.
- Engage fishermen in the management of sustainable fisheries.
- Provide opportunities for recreation, interpretation, education, and appreciation for all visitors.
- Strengthen education and understanding of users and potential users of the dynamics of coral reef systems within South Water Caye Marine Reserve and the human impacts affecting them.
- Identify, implement and strengthen priority research and monitoring through on-site activities, collaboration and partnerships.

Category V:

Iroise Parc Naturel Marin, France[20]

Objectives:

- To maintain, conserve, restore biodiversity, natural heritage of habitats, species, landscapes, under protection status.
- To maintain key ecological functions (spawning areas, nursery, feeding zone, rest areas, productivity areas, etc.).
- To protect, preserve and restore cultural heritage.
- To promote sustainable management / development of socio-economic activities.
- To manage natural resources exploitation.
- To improve governance on the MPA territory.
- To improve water quality.
- To educate on environmental issues and improve public awareness.
- To foster scientific research.
- To create socio economic added values.

19 Wildtracks (2009). South Water Caye Marine Reserve World Heritage Site Management Plan 2010-2015

20 http://www.maia-network.org/homepage/marine_protected_areas/mpa_data_sheets/an_mpa_datasheet?wdpaid=388659&gid=178.

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Equilibrium RESEARCH

Agence des aires marines protégées

Australian Government
Great Barrier Reef Marine Park Authority

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