UNEP

CBD

CONVENTION ON BIOLOGICAL DIVERSITY

Distr.
GENERAL

UNEP/CBD/COP/8/INF/4
8 March 2006

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES TO THE
CONVENTION ON BIOLOGICAL DIVERSITY
Eighth meeting
Curitiba, Brazil, 20-31 March 2006
Item 27.1 of the provisional agenda*

SUMMARY REPORT OF THE CURRENT STATUS OF THE GLOBAL MARINE PROTECTED AREA NETWORK, AND OF PROGRESS MONITORING CAPABILITIES

Note from the Executive Secretary

The Executive Secretary is circulating herewith, for the information of participants in the eighth meeting of the Conference of the Parties, a report of the current status of marine protected areas globally, and an update on efforts to develop a comprehensive global database of marine protected areas in accordance with paragraph 38 of decision VII/5. This information will assist participants in assessing progress made in implementing the programme of work on protected areas in the marine environment.

2. The document is circulated in the form in which it was received by the Secretariat of the Convention on Biological Diversity.

* UNEP/CBD/COP/8/1.

/…

SUMMARY REPORT OF THE CURRENT STATUS OF THE GLOBAL MARINE PROTECTED AREA NETWORK, AND OF PROGRESS MONITORING CAPABILITIES

Louisa Wood, *Sea Around Us* Project, University of British Columbia Fisheries Centre

The 2003 Report of the Ad Hoc Technical Expert Group on Marine and Coastal Protected Areas (MCPAs) concluded that available information on MCPAs was both inadequate and out of date. At its seventh meeting, the Conference of the Parties in paragraph 38 of Decision VII/5, invited the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC), in collaboration with relevant organisations and authorities, to provide and maintain up to date information on marine and coastal protected areas, in line with specific criteria laid out in Annex III of the decision.

As part of the response to this invitation, a formal collaboration was formed between UNEP-WCMC, World Wildlife Fund (WWF) and the *Sea Around Us* Project at the University of British Columbia Fisheries Centre (UBC-FC), and with support from the IUCN World Commission on Protected Areas (IUCN-WCPA) to update the MCPA data in the World Database on Protected Areas (WDPA). This has resulted in MPA Global, a database initially developed from all of the existing marine-specific information available in the WDPA. The database was restructured to enable more marine-specific information to be stored, and address some of the suggestions made in Annex III of Decision VII/5. These are summarised in Table 1.

Since MPA Global was developed in January 2004, it has undergone substantial editing and verification. A total of 961 references have been used to edit the database. Around 800 sites erroneously listed in the WDPA as marine have been removed; around 1000 sites have been added from the WDPA which were not previously listed as marine; and 500 completely new sites have been added to MPA Global. In addition, new shapefiles of MPA boundaries have been obtained for 1600 MPAs, of which approximately 1000 are new to the WDPA version 6.2, and the remainder are updates to existing polygons. While further verification, editing, and data collection are still necessary, MPA Global currently represents the most up to date and comprehensive dataset on MPAs available. A subset of core data of the current version (end February 2006) has been included as a separate component on the WDPA 2006 CD, which will be released at COP8. The edits made to MPA Global core data are also currently being reintegrated with the WDPA, and there are deep links between the two websites.

The remainder of this report provides an overview of the current status of the global networks of MPAs, based on this updated dataset, as of October 2005, when the data were presented at the first International Marine Protected Areas Congress (IMPAC1).

Important note:
MPA Global currently follows the IUCN definition of MPA (i.e the area legally or non-statutorily designated must include area below the mean high water mark) for inclusion in the database. This is largely because implementation of the definition of MCPA is difficult without further clarification on how sites adjacent to marine habitats defined, e.g. a specified maximum distance between the centre of the MCPA and the mean high water mark. The application of the IUCN definition does not, however, affect the statistics relating to marine area protected that are presented here.

Table 1 Summary of components of Annex III to Decision VII/5 of the Seventh Conference of the Parties, 2004, that are directly relevant to MCPA database design and data collection, and how they have been addressed by MPA Global.

Component of Annex III	Response made in MPA Global
2. Critical information categories	
(a) Location information	Locational (country) information has been expanded into 2 fields: 'administrative' country and 'location'. This better reflects the spatial and political context of overseas territories, but has also been applied to Alaska and Hawaii, due to the large distance (and therefore ecological difference) from the contiguous USA. All MPAs currently listed in MPA Global have at least a latitude / longitude coordinate for the site's location. Minimum data requirements were imposed (including through the web interface – see component 8. below) for the addition of a new site to MPA Global, which included lat/long.
(b) MPA size information	Total area is already available in the WDPA, and was incorporated into MPA Global. A field for marine area was added to MPA Global. No field has yet been created to capture are under respective countries' jurisdictions for transboundary sites.
(c) Temporal aspects of protection/ management	A framework and data structure was developed to store information on how an MPA is regulated. Included within this framework is an indication of the permanence / seasonality of the regulation.
(d) Type of protection & management	The first two components of the three-tier system proposed in Annex III are in place: Data fields to capture no-take information were added to MPA Global: • qualititative drop-down list 'All/Part/None/Unknown' for sites where exact area is unknown; • quantitative area field
(e) Effectiveness and protection & management	Not yet addressed, but the web interface and database structure allows for this to be developed (see 8. below).
(f) Nationally-designated names	Like the WDPA, MPA Global stores 'Area Name' (e.g Great Barrier Reef), and 'Designation Type' (e.g. Marine Park) in separate fields.
(g) Habitats protected and managed	See response to component 4.
(h) – (j)	Not yet addressed, but the web interface and database structure allows for this to be developed (see 8. below).
(k) Contact details of data providers, and date data provided	This is an integral component of the online editing system (see 8. below)
4. Standard list of ≤15 habitat types, using a high level approach but including terms such as coral, seagrass, mangrove, seamounts etc.	The hierarchical data structure used in the WDPA was simplified in MPA Global to present/absent checkboxes. It currently contains 21 categories, with more extensive breakdown of oceanic features than in the WDPA, 4 substrate types (based on sediment size classification), and an option for 'breeding/spawning area'.
8. Provide a vehicle through which to consolidate and update global MCPA data.	Also in accordance with section 9, a web interface for searching, viewing, and editing the data was developed. It has been available since March 2004, at www.mpaglobal.org (or through www.seaaroundus.org). With additional resources, both the database structure and the online 'tabbed' interface layout for presenting individual MPA data can easily be expanded to present other categories, e.g. threats, species, etc. All editing is done through the web interface. Any registered user may submit an edit to any value in the database. The editing process also has a field-level referencing system, so all edits are explicitly referenced and attributed to the person who submitted the edit, with a date/time stamp. This automatically standardises data entry processes, increases the accessibility and transparency of the data collection and integration processes, as well as acknowledges individual contributions.

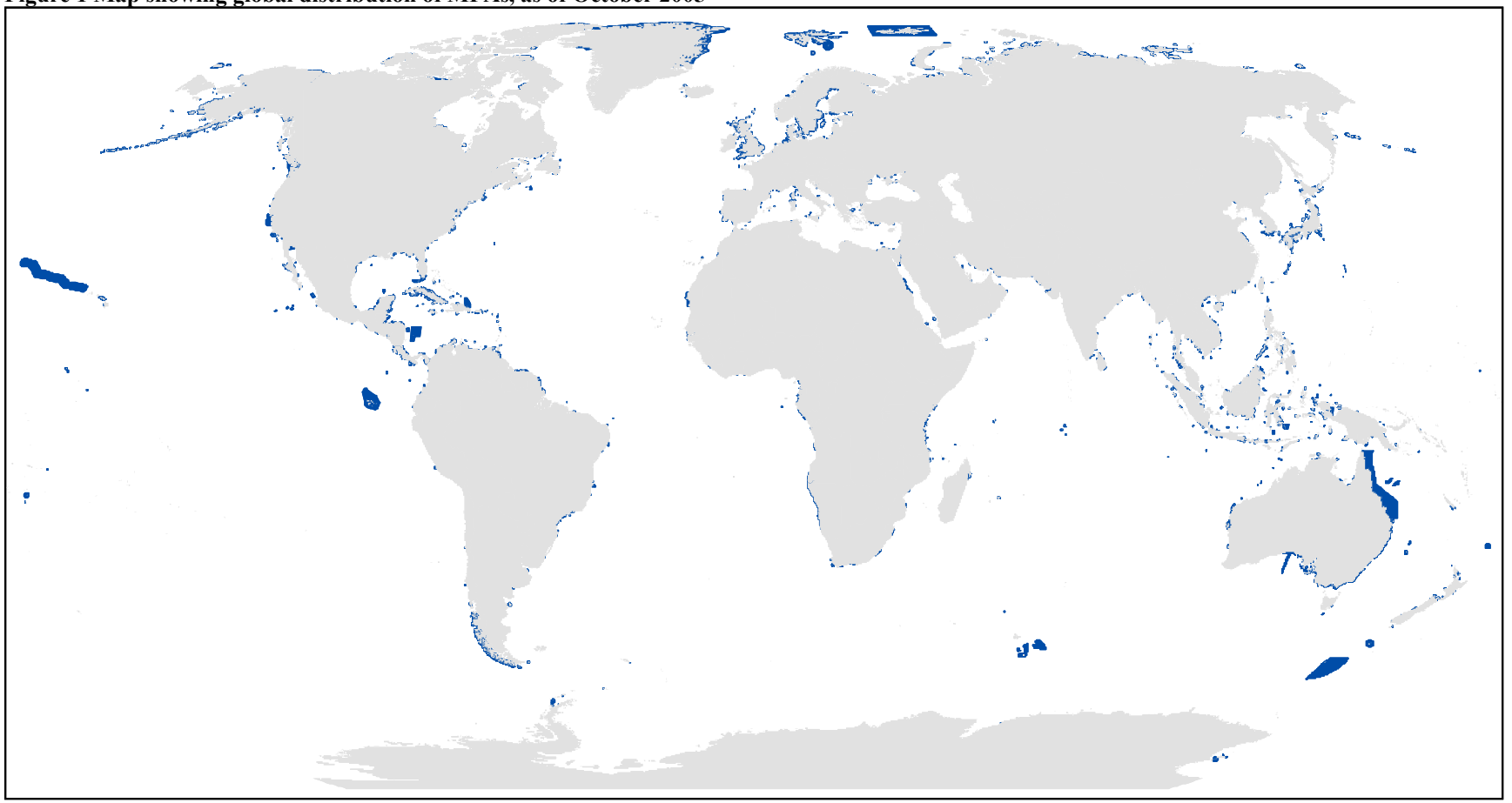
MPA Global currently stores information on over 6000 MPAs. Table 2 provides a summary of the number of MPAs currently listed in MPA Global. There is considerable (almost 100%) overlap between 'international' MPAs and 'national' MPAs. Therefore, only data for formally or informally designated sites at the national (or more local) level were included in subsequent global assessments, of which there are approximately 4600.

Table 2 Summary of number of MPAs listed in MPA Global as of October 2005. 'National' refers to sites created using mechanisms available at the national and more local scales e.g. state/provincial, municipal, individual site etc. 'International' refers to areas listed under international conventions or programmes, namely, UNESCO Man and the Biosphere Programme, UNESCO World Heritage Convention, Ramsar Convention, and the European Habitats Directive.

	Number of MPAs	
Designation Status	**National**	**International**
Formally (statutorily) designated	4546	955
Informally (non- statutorily) designated	49	
Formally (statutorily) proposed	418	9
Informally (non-statutorily) recommended	60	
Degazetted	26	1
Unknown	28	
TOTAL	**5127**	**965**

In total, these ~4600 MPAs cover approximately 2.2 million km^2, or 0.6% of the world's oceans. Figure 1 shows a global map of these MPAs: in order to be discernible at this scale, an MPA needs to measure at least 3,000 km^2.

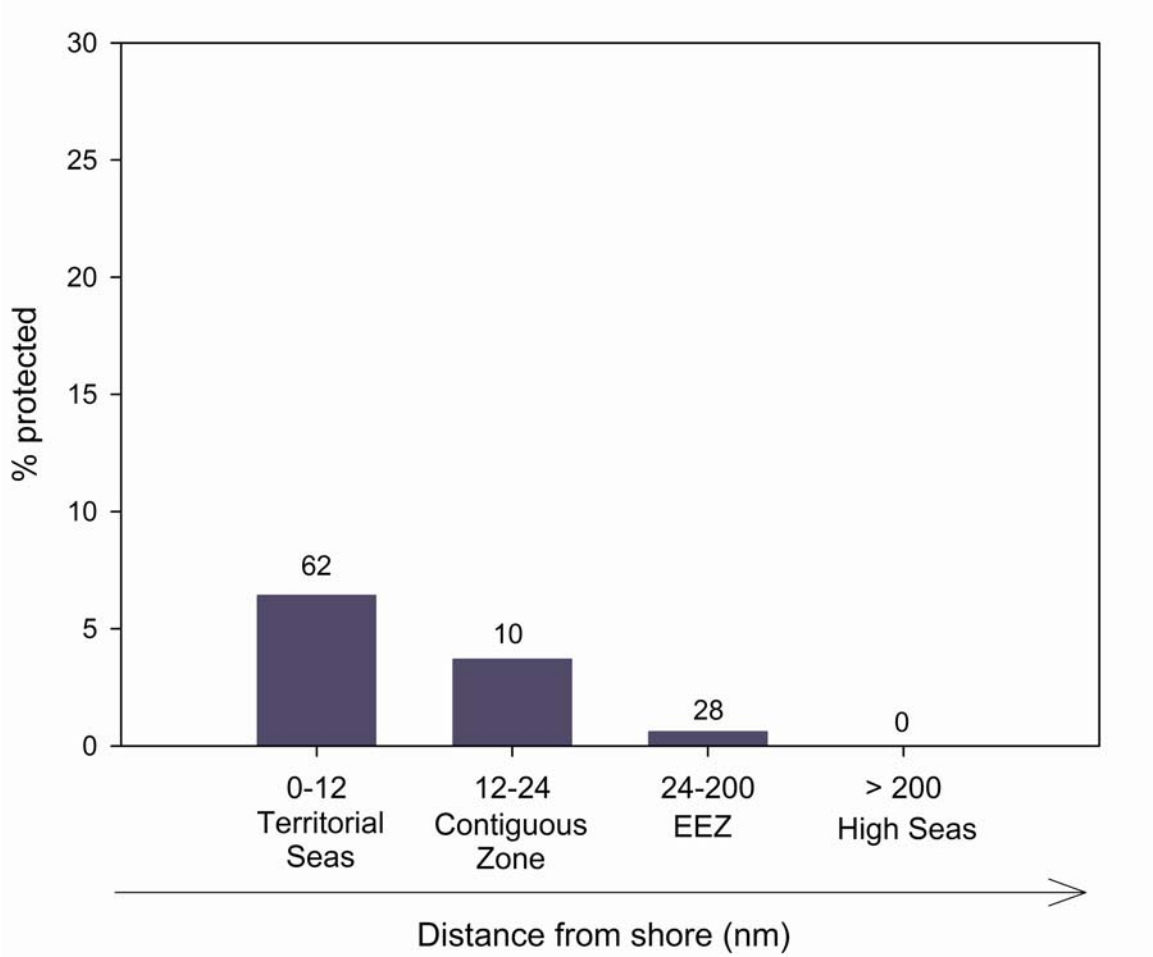
Figure 1 Map showing global distribution of MPAs, as of October 2005



Map created by: Louisa Wood, Sea Around Us Project, University of British Columbia, March 2006 Source: MPA Global, October 2005

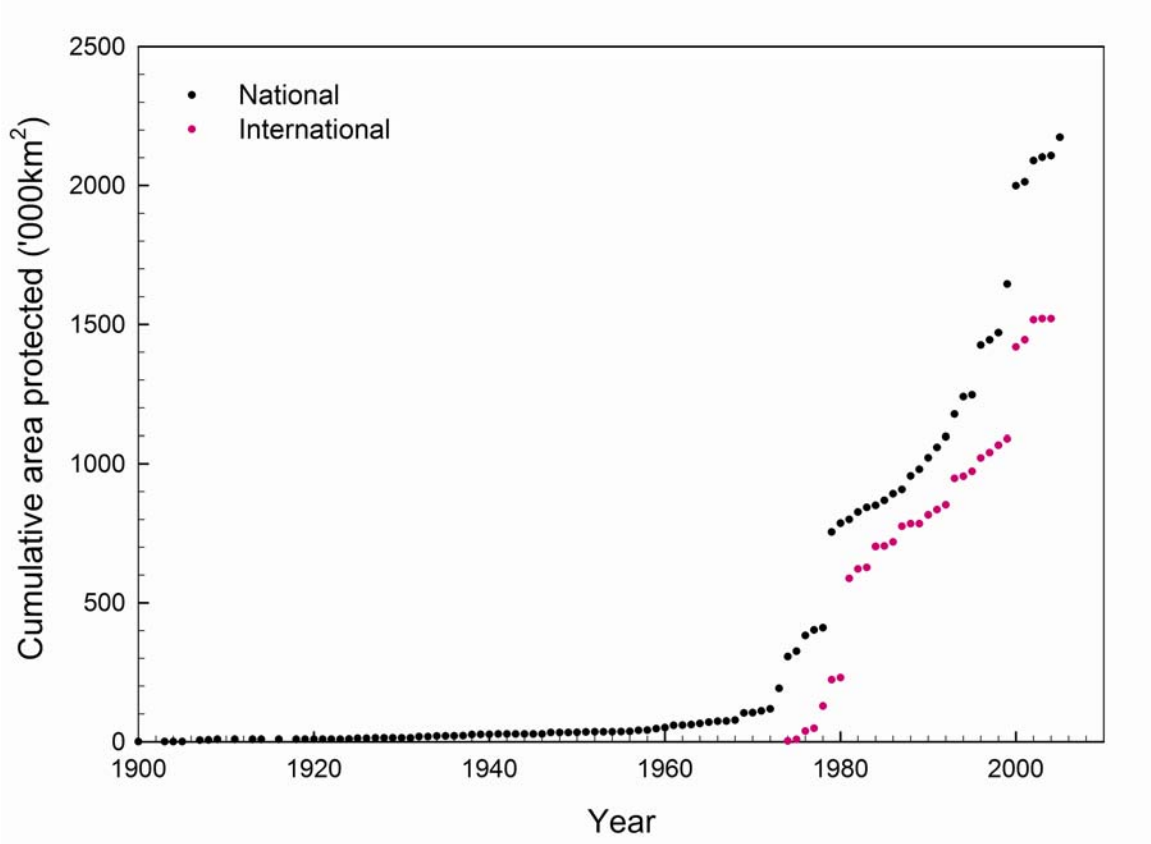
The map in Figure 1 illustrates that the global distribution of MPAs is heavily biased towards the continental coastlines, with a few (recent) exceptions. GIS calculations using non-overlapping layers from the Global Maritime Boundaries Database show that the rate of protection declines rapidly with distance offshore (see Figure 2).

Figure 2 Approximate percentage of various maritime claim areas that is protected, as of October 2005. Maritime boundary claim areas were taken from the Global Maritime Boundaries Database, and were used only as a measure of distance from shore. No statement about maritime claims is implied. The numbers above the bars represent the percentage of the total global marine area protected that occurs within each claim area.



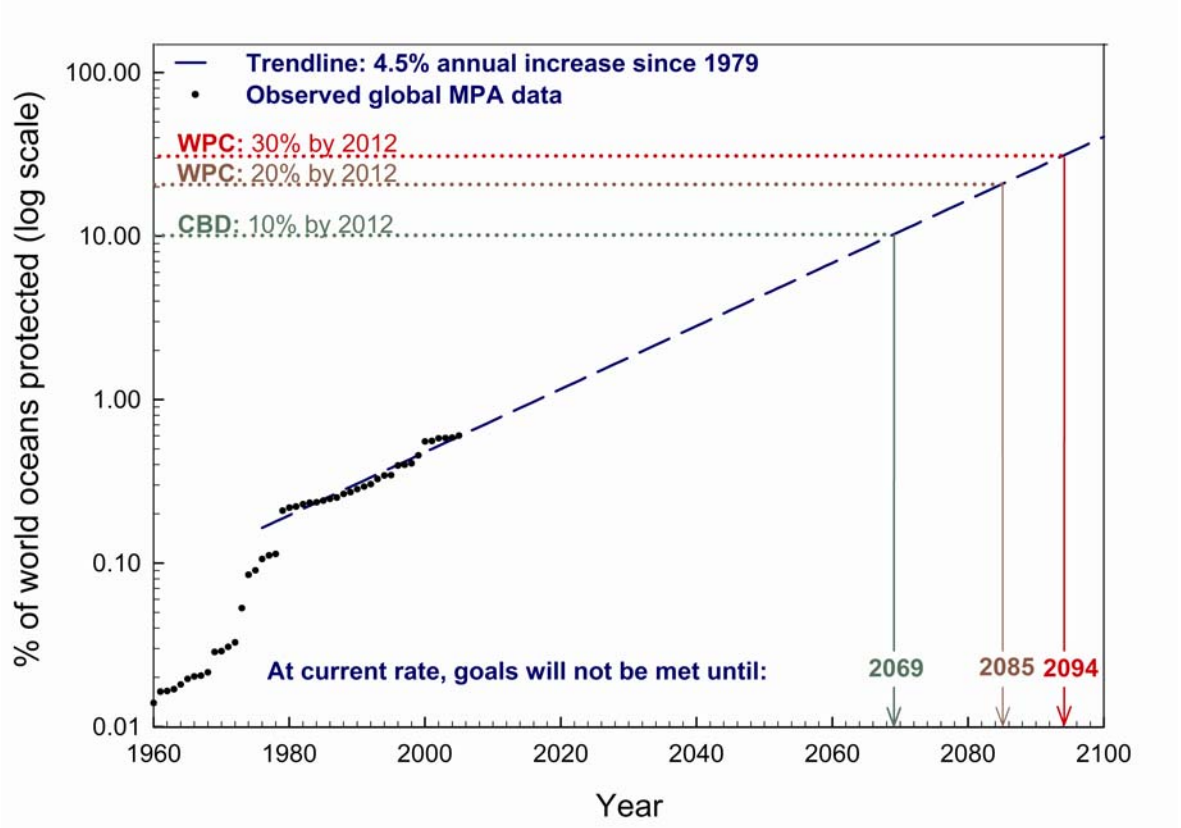
Globally, MPA area has grown very rapidly since the 1970s, coincident with the coming into force of various international conventions, in particular, the Ramsar Convention, the World Heritage Convention, and the UNESCO-Man and the Biosphere Programme (see Figure 3). This indicates that these international conventions may have a very valuable role to play in facilitating the protected area designation process at national and more local levels.

Figure 3 Cumulative growth of total global marine area protected, as of October 2005.



However, although the absolute growth appears to have been quite substantial, the annual rate of growth is steady but slow. Figure 4 shows the log of cumulative total area (note that the unit has changed to percentage of the world's oceans), and illustrates the largely very stable rate of growth of total area, with the exception of occasional, almost instantaneous increases attributable to the designation of very large MPAs. Linear regression of the data since the late 1970s indicates an annual rate of growth in the order of 4.5%. At this annual rate, the chances of meeting 2010 biodiversity target on time seem very slim. The projection is even more bleak for the targets recommended by the Vth World Parks Congress (WPC) in 2003[1]. Furthermore, they are likely overly optimistic, as this projection does not impose any of the additional requirements specified in the target (e.g. sites must be 'strictly protected' and effectively managed').

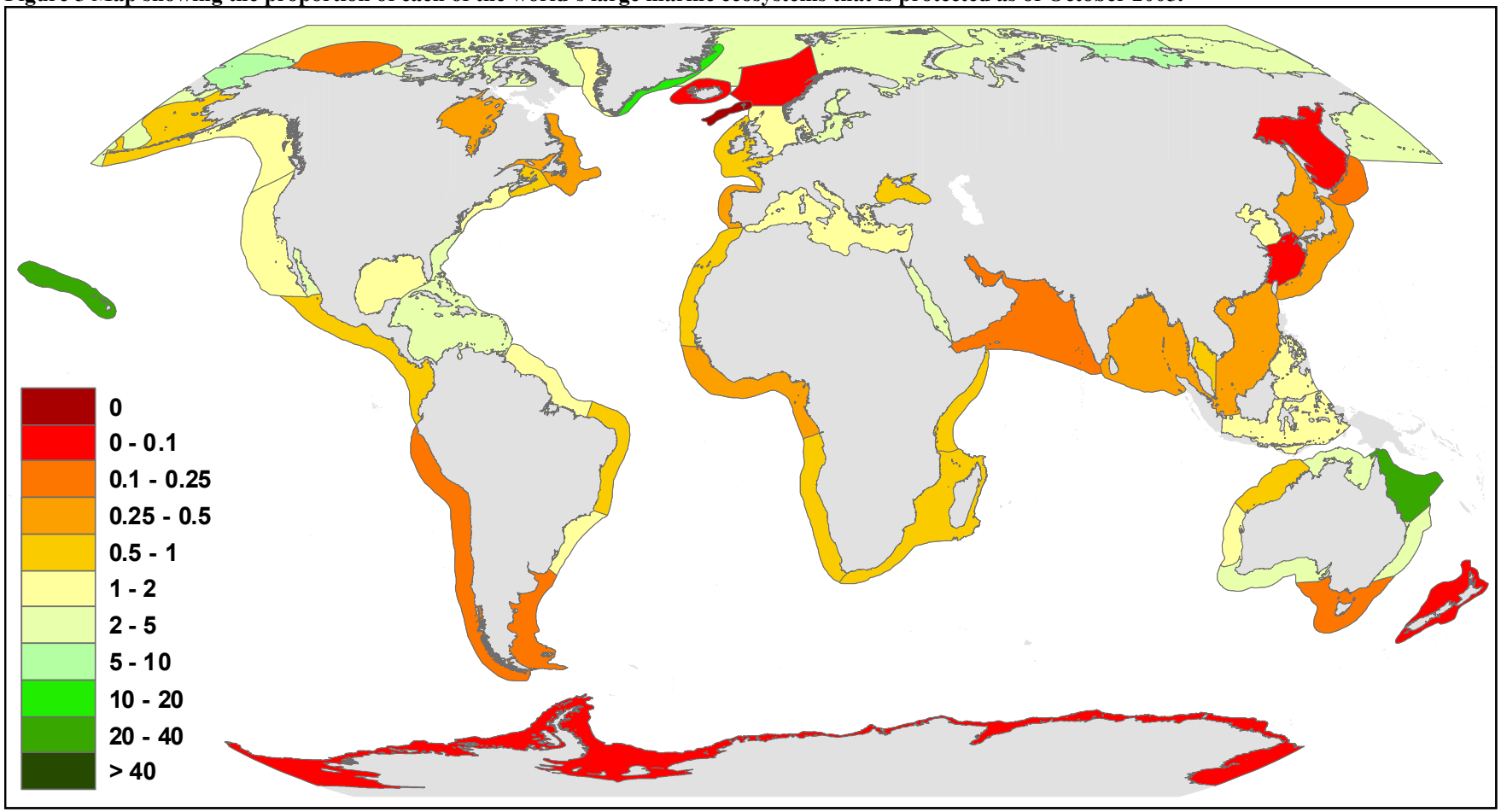
Figure 4 Linear regression of logged MPA cumulative growth data, and projection of predicted annual rate of growth to estimate attainment dates of global MPA coverage targets, as of October 2005. Note that more recent data (specifically, better representation of the chronological growth of the Great Barrier Reef Marine Park area) has caused this rate to increase slightly, to 5% per year.



The CBD target attainment date shown in Figure 4 applies to 10% of the world's oceans. If this target is limited spatially to areas under national jurisdiction, as recommended in the draft global outcome-oriented targets by SBSTTA 10[2], this attainment date will be reduced to around 2050. As for the WPC targets, there are a couple of additional considerations for the CBD projections. First, the draft outcome-oriented targets include area-based measures other than MPAs, such as fisheries management areas and integrated coastal management regimes. MPA Global (and indeed, the WDPA) is incomplete in this regard, and as such, the projected timeline of achievement of the target may be overly

pessimistic. However, to our knowledge, very few efforts have yet been made to collate data on 'non-MPA' area-based tools, almost certainly at the global level, and very few at the national level. Basing these projections on the MPA data available in MPA Global currently provides the best available estimate. On the other hand, the CBD target also requires that the areas are effectively managed. While management effectiveness information is not widely available, previous studies have indicated generally low levels[3]. This requirement can thus be expected to offset, at least to some extent, the impact on the target attainment projections of lack of data for 'non-MPA' area-based tools. Finally, the target also requires representation of all 'ecological regions', defined in the draft outcome-oriented targets to include large marine ecosystems (LME). Figure 5 shows that the current distribution of MPAs by LME is far from representative (only 3 out of 64 are already over 10%).

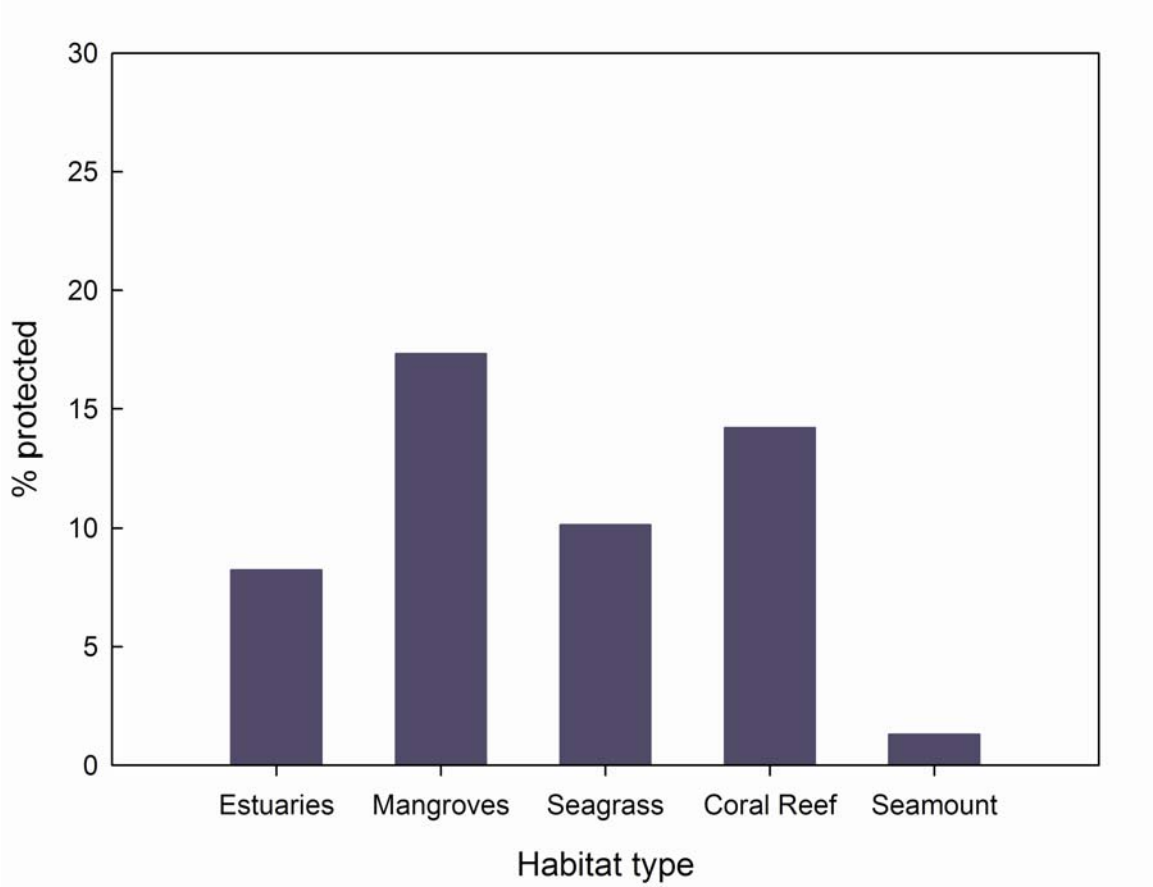
Figure 5 Map showing the proportion of each of the world's large marine ecosystems that is protected as of October 2005.



Map created by: Louisa Wood, Sea Around Us Project, University of British Columbia, March 2006 Source: MPA Global, October 2005

Habitat representation is a key component of both the CBD and WPC MPA targets; however, our ability to measure this at even a relatively broad habitat level such as 'coral reef' is severely constrained by a lack of data. Figure 6 shows the approximate proportions of the handful of habitat types for which global distributions are available. Note, though, that the actual proportions presented here should be interpreted with extreme caution as there is substantial, but unquantified, uncertainty surrounding the accuracy of the habitat distributions themselves. This analysis should therefore be viewed primarily as an indicator of the paucity of habitat data available globally.

Figure 6 Approximate percentage of various marine and coastal habitat types that are protected, as of October 2005. These data should be interpreted with caution due to uncertainties in the habitat data.



The analyses presented here are the first of their kind, and as such illustrate the utility of MPA Global for monitoring progress towards MPA targets. While at the moment the results of these analyses paint a bleak picture in terms of target attainment, they can also inform and facilitate processes to identify priority areas and formulate implementation strategies. The web interface of MPA Global in particular is a valuable tool for MPA managers and stakeholders to quickly access comprehensive information on MPAs in a given area. This can be expanded to incorporate additional information needs, either target-related e.g. management effectiveness data and country progress summaries, or not, e.g. references and online mapping tools.

References

1. IUCN. Recommendations of the Vth IUCN World Parks Congress (2003).
2. CBD. Draft global outcome-oriented targets for the programme of work on marine and coastal biological diversity. UNEP/CBD/SBSTTA/10/8/Add.1 (2005).
3. Kelleher, G., Bleakey, C. & Wells, S. in *A global representative system of marine protected areas.* (eds. Kelleher, G., Bleakey, C. & Wells, S.) (The Great Barrier Reef Marine Park Authority, The World Bank, The World Conservation Union, Washington DC, 1995).
