CBD Briefing

The 20 % Marine Protected Area Target

Convention on Biological Diversity's (CBD) New Strategic Plan 2011 – 2020 targeting 20 % Marine Protected Areas

The CBD's Strategic Plan must point the way for a significant step forward in marine conservation. Therefore WWF calls for an ambitious target on Marine Protected Areas (actual target 11).

By 2020, at least 20% of terrestrial and inland water, and 20% of coastal and marine areas, including the areas of particular importance for biodiversity and areas beyond national jurisdiction, have been protected through representative networks of effectively managed protected areas and other means, and integrated into the wider watershed, land- and seascape.

Lack of Marine Conservation and 2010 target failure

In 2010, **only 0.7 % of the surface of the global oceans is covered by marine protected areas (MPAs)** in variable conservation status, and subject to more or less ambitious management towards targeted or comprehensive conservation objectives[1]. Therefore, Contracting Parties to the Convention on Biodiversity are far from reaching the target set in 2002 (Decision VI/26), confirmed by the World Summit on Sustainable Development and the G8 summit in 2002 and 2003, respectively, and further substantiated by the Conference of Parties in 2004 (COP VII/28 and 30, endorsed COP VIII/15, Annex IV) to ***establish, by 2012, comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas, and that there should be effective conservation of at least 10% of each of the world's ecological regions by 2010.***

MPAs are commonly understood as sites where human activities are not excluded, but in the best case only regulated to ensure the achievement of specific conservation objectives.
Marine protected areas are an **essential element of an effective marine and coastal biodiversity conservation framework** comprising

- a representative network of highly protected areas,
- an ancillary network of marine and coastal protected areas to support the biodiversity objectives of the representative highly protected areas, and

[1] wdpa-marine.org, accessed on September 13, 2010

- a framework of sustainable management practices over the wider marine and coastal environment[2] .

To achieve the full benefits the network of highly protected areas needs to reflect the full range of typical species and habitats and contain a sufficient area of the coastal and marine environment to be effective and ecological viable.

Marine protected areas are thus an **important tool towards meeting the overarching global conservation target** to *achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth*[3]. Despite progress made, the global conservation efforts to date have been insufficient and fall short of meeting this target, in particular with respect to preventing the continuing serious decline in marine and coastal biodiversity and ecosystem services[4].

Many different governance responses are required to stop man-made biodiversity loss in the oceans[5], however, marine and coastal protected areas have been proven to provide one of the tools to successfully[6]:

- Protect biodiversity;
- Ensure sustainable use of resources; and
- Alleviate conflict, enhance economic well-being and improve the quality of life.

More diverse species assemblages at any functional, spatial and temporal level either **provide a higher productivity or greater resilience, or both**[7]. The key elements of resilience, namely recovery, resistance and reversibility are bolstered by natural levels of biodiversity, with low-diversity ecosystems being naturally prone to higher ecosystem fluctuations. Degraded ecosystems tend to be impoverished in their species inventory, the natural balance skewed towards higher abundances of a few short-lived opportunistic species which reduces the capacity of the ecosystem to reversibly adapt to human pressures and climate change. In particular structurally rich habitats and habitat-forming species are instrumental to enhancing species richness and the complexity of the food web - and therefore among the priorities to be conserved by means of marine protected areas and other spatial measures.

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[2] UNEP/CBD/SBSTTA/8/9/Add.1; Secretariat of the Convention on Biological Diversity, 2004. Technical advice on the establishment and management of a national sytem of marine and coastal protected areas. CBD Technical Series no. 13, pp. 1-40

[3] WSSD Recommendation 2002, CBD COP 6 Decision VI/26, 2004; UN Millenium Development Goal

[4] Secretariat of the Convention on Biological Diversity, 2010. Global Biodiversity Outlook 3. Montréal, pp. 1-94, WWF, 2008. Living Planet Report 2008. pp. 1-48 (The marine species index shows an average 14 per cent decline over 35 years in 1,175 populations of 341 marine species).

5 see e.g. Rands, M.R.W., et al., 2010. Biodiversity Conservation: Challenges Beyond 2010. Science 329, 1298-1303.

[6] see footnote 1

[7] Palumbi, S.R., et al. 2009. Managing for ocean biodiversity to sustain marine ecosystem services. Frontiers in Ecology and Environment 7 (4), 204-211.

Why improve marine conservation through marine protected areas ?

The **pressures on marine life continue to increase**[8] **and the human impact today extends to the most remote regions**[9] . The key pressures driving biodiversity loss are overexploitation of species, invasive alien species, pollution, climate change, and especially the degradation, fragmentation, and destruction of habitats in coastal waters, and increasingly in the deep sea and open ocean waters. The Global Biodiversity Outlook 3 impressively documents the increasing decline of, among others, the world's mangroves, seagrass beds, and coral reefs. Increasing ocean acidification, as a direct consequence of the rising carbon dioxide concentration in the atmosphere, will limit or inhibit the growth of calcifying organisms, often at the base of the food web, causing unprecedented ecosystem changes.

The above **calls for setting an ambitious and precautionary conservation agenda**, accommodating human activities while safeguarding the intrinsic natural values and capacities and oceans' goods and services required for human well-being. Ecosystem services such as the provision of natural resources, water purification and recreation depend on complex ecological interactions, stabilised by high diversity. For example, marine ecosystems with high diversity have been shown to have had slower fisheries collapse rates and higher rates of fisheries recovery than those with lower diversity[10].

The **characteristics of the oceans make it especially urgent, but also difficult to resolve the conflicts** between the legitimate uses of the sea and the imperative to better protect the marine ecosystems from human impacts[11]. The oceans are the last great living wilderness on earth, traditionally a common property with open access to resources and therefore particularly vulnerable to overexploitation, nutrient and pollutant release as well as excessive spatial use. The invisibility of the natural wildlife and any impact-related changes make it a challenge to communicate the urgency of conservation measures in the face of economic interests. The relative inaccessibility of the oceans to research has the effect that despite modern ways of 'seeing', more is known about the surface of the moon than about the ocean deep[12].

Establishing marine protected areas resolves some of these concerns by regulating access and human use, highlighting the values in the public and stimulating research and monitoring. As human activities today are not yet sustainable, the primary network of highly protected areas, the core of the CBD coastal and marine conservation framework, needs to represent a significant proportion of all characteristic ocean habitats. Only such a portfolio of highly protected habitats can be effective in providing an insurance against the risks of continuing mismanagement and overexploitation.

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[8] see footnote 3

[9] see e.g. Halpern, B.S., al., e., 2008. A Global Map of Human Impact on Marine Ecosystems. Science 319, 948-952.

[10] Worm, B., et al. 2006. Impacts of Biodiversity Loss on Ocean Ecosystem Services. Science 314 (5800), 787-790.

[11] Owens, S., 2008. Why conserve marine environments? Environmental Conservation 35 (1), 1-4.

[12] Royal Commission on Environmental Pollution, 2004. Turning the Tide - Addressing the impact of fisheries onthe marine environment. 25th report.

Therefore, despite the current failure to meet the 2010 10% MPA coverage target, it is **essential to set an ambitious target for the coming decade**. This provide a strong signal that governments will increase their efforts to address the loss of biodiversity and associated ecosystem services, in order to mediate the effects of a changing climate system, and taking account of the need for food security and poverty eradication in the southern world.

Why 20 % MPA coverage by 2020?

Clearly, due to the observable decline in local species and habitat richness, and spurred by the global targets set for 2010 and 2012, many countries and regions have set national and regional targets relating to MPA coverage and characteristics in their waters[13] . Island states seem to be most engaged in conserving ocean biodiversity by marine protected areas targets often aiming at including 20 % or more of their coastal and marine ecosystems, including as no-take areas. These are often successfully managed on a community basis, leading to increasing community wealth.

Scientific recommendations for the minimum area to be protected by marine protected areas or marine reserves (no extraction allowed) vary mostly between 20 and 40 %, with different reference units[14]. In order to minimise risks from overexploitation of harvested resources and consequent effects on the ecosystem, it is considered essential to set aside from human use at least 20 % of the overall marine area, including replicate examples of each subtype, or 20-40 % of any fishing grounds. The importance of no take areas for maintaining the natural resilience and the provisions of ecological services and goods is emphasized, and for UK waters, 30 % no take areas are recommended[15]. Pew fellows recommended no less than 10 % and as much as 50 % of each ecosystem in no-take zones. The Great Barrier Reef Scientific Advisory Committee also recommends 10-40 % coverage of protected areas for biodiversity conservation, with the Government of Australia giving 10-50 % as a guidance. Today, Australia celebrates the extraordinary benefits for biodiversity and economy accrued from 32 % of the Great Barrier Reef Marine Park being no take zones[16].

Many **authors emphasize that it is important to consider each habitat individually** according to its relative abundance – rarity in the respective ecological subregion. Each habitat should then be represented by 10 – 65 % of its overall occurrence, with rare or threatened habitats having a higher relative representation[17]. The 2003 IUCN World Parks Congress recommends to include 20 - 30 % of each habitat, US National Research Council recommends 20 % of each habitat and the European Commission expects Member States to designate 20 - 60 % of each of a list of selected habitat types as a protected area.

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[13] UNEP-WCMC, 2008. National and Regional Networks of Marine Protected Areas: A Review of Progress. UNEP-WCMC, Cambridge, pp. 1-146.

[14] see review in Gell, F.R., Roberts, C.M., 2003. The fishery effects of marine reserves and fishery closures. WWF-US, Washington, D.C., USA, pp. 1-90.

[15] see footnote 11

[16] http://www.sciencedaily.com/releases/2010/02/100222100815.htm

[17] See footnote 12

Overall, the protection of 20 % of the world oceans by MPAs, is in the lower range of what is scientifically considered to be required to secure a healthy ocean.

To be sure to conserve the biological capacity for ecosystem goods and services, these areas should preferably be no take zones and core areas of sustainably managed wider ocean areas, such as in the case of the Fiji locally managed marine areas which demonstrated the potential for success of such measures

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