

Towards achieving the 2012 MPA target: A guide to the Azores Workshop criteria for areas in need of protection in areas beyond national jurisdiction and guidance for development of representative networks of marine protected areas

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- Since the adoption of targets to establish MPA networks by 2012, little action has been taken towards achieving this goal.
- COP9 is the opportunity to adopt the scientific criteria to identify biologically and ecologically significant areas and scientific guidance for designing MPA networks that have been developed during the Expert Workshop on ecological criteria and biogeographic classification systems for marine areas in need of protection, held on 2-4 October 2007, in Azores Portugal (hereinafter, the Azores Workshop).
- The Azores Workshop was the culmination of several scientific reviews. It built on the results from two previous expert workshops as well as several national, regional and international experiences. However, the meeting covered only at scientific criteria and did not consider management issues.
- The Azores results reflect a rigorous consolidation of the most frequently used criteria that have been applied nationally, regionally and globally.
- The lack of scientific data on specific features or habitats in particular places should not be construed as grounds for delaying endorsement of the Azores scientific criteria and guidance or the implementation of needed protection.
- Parties and other States are called to collaborate in the application of these criteria and guidance by establishing pilot MPAs in areas beyond national jurisdiction. This would allow for opportunities to compile lessons learnt in respect of conservation of high seas biodiversity.
- A failure to adopt the criteria would signal a step backward from the commitments made at previous CBD COPs and a weakening of the role of the Convention in safeguarding marine biodiversity.

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Background

The world's oceans are seriously under-protected: just 0.65% of the global ocean is within protected area systems, and most of that is within the first miles of the territorial seas (CBD, 2006). Over the last few years, several States have urged to take action to enhance the conservation and sustainable management of marine biodiversity, including through the development of marine protected area (MPA) networks by 2012 and the protection of vulnerable marine ecosystems such as seamounts and deep water corals. However, IUCN estimates that unless progress is accelerated, the CBD and World Summit on Sustainable Development (WSSD) goals of establishing representative networks of MPAs will not be met until 2060, half a century after the 2012 agreed target (Wood *et al.*, 2007).

Marine and coastal protected areas have been a topic of discussion at the CBD since 1997 when they were recognized as a key element of the Jakarta Mandate programme of work. In addition, Parties to the CBD have acknowledged the low numbers of MPAs in areas beyond national jurisdiction (ABNJ) since SBSTTA 8 in 2003. To date, little action has been taken.

The following is a brief summary of the key steps taken so far towards achieving the target of establishing representative networks of MPAs by 2012:

- In 2004, Parties to the CBD meeting at COP7 adopted the 2012 target for MPAs and encouraged Parties to take action to address the under representation of marine ecosystem and to establish MPAs in ABNJ by 2008, in accordance with international law and based on scientific information.
- In addition, rising concerns about risks to biodiversity beyond national jurisdiction led the United Nations General Assembly in 2004 to establish the ad hoc open-ended informal working group to analyze issues relating to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction (UN Working Group).
- The Working Group met in February 2006, where it was noted that further cooperation was necessary to advance in the development of criteria for the identification of ecologically and biologically significant areas, the development of systems of MPAs and biogeographic classification systems (A/61/65, paras 59-60).
- At COP8 in May 2006, CBD Parties recognized that the Convention has a key role in supporting the work of the General Assembly with regard to MPAs beyond national jurisdiction, by providing scientific and technical information and advice relating to marine biological diversity. The CBD would also advice on the application of the ecosystem approach and the precautionary approach, and in delivering the 2010 target¹.
- The CBD has developed criteria for the establishment of areas in need of protection in Annex I of SBSTTA report XIII/3 and guidance for the establishment of representative networks of MPAs in Annex II, compiling and building on relevant international and national experiences.
- At COP8 Parties also agreed to consider, at COP9, progress on work identified in its decisions relating to conservation and sustainable use of marine biodiversity beyond national jurisdiction (Decision VIII/24, paragraphs 42-43).

Parties at COP9 have before them the criteria developed during inter-sessional meetings for adoption. These criteria and guidance are the scientific basis to achieve the 2010 and 2012 targets in ABNJ. Their adoption by COP9 will establish an important basis for States to fulfil their duty to cooperate, consistent with international law, directly and through competent international organizations, for the conservation and sustainable use of biodiversity in ABNJ, and to implement the commitments made at previous CBD COPs and other global fora.

¹ In April 2002, the Parties to the Convention committed themselves 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. This target was subsequently endorsed by the World Summit on Sustainable Development and the United Nations General Assembly and was incorporated as a new target under the Millennium Development Goals.

Scientific Criteria for selecting key areas in need of protection

To assist in meeting the need identified during the UN Working Group for further work on criteria for the identification of ecologically and biologically significant areas, the development of systems of MPAs and biogeographic classification systems, COP8 requested the Executive Secretary to engage in further work and welcomed Portugal's initiative to host a scientific expert workshop. The results of this workshop were to inform discussions at both COP9 and the UN Working Group (decision VIII/24, para. 46).

The key results of the Azores workshop are contained in the report's annexes. These draw on many years of experience within other conventions (e.g. OSPAR, the Barcelona Convention, CCAMLR) and national programmes, as well as from a thorough review of publications, reports and expert meetings. The Azores workshop also considered the materials from the preceding related workshops:

1. The report of the Canadian experts workshop in December of 2005 that reviewed and assessed existing ecological criteria and biogeographical classification systems and developed a recommended set of scientifically rigorous ecological criteria that could be used to identify potential sites for MPAs beyond the limits of national jurisdiction.
2. The Report and Documentation of the Expert Workshop on MPAs and Fisheries Management held on 12-14 June 2006 in Rome.
3. The work of the Scientific Experts' Workshop on Biogeographic Classification Systems in Open Ocean and Deep Seabed Areas Beyond National Jurisdiction, held from 22-24 January 2007, at the National University of Mexico, Mexico City, which studied a compilation of biogeographical and ecological classification systems for delineating ocean regions and ecosystems, developed criteria for a classification framework for the high seas, building on existing broad classification systems, developed preliminary maps, and made recommendations for further work to fill gaps.

Identification of Ecologically and Biologically Significant Areas

The Summary of existing ecological criteria for identifying potential marine areas for protection and biogeographical classification systems (UNEP/CBD/COP/8/1/INF/16) prepared by the CBD Executive Secretary compiled submissions from 19 different sources, including nine sets of national criteria, five sets of regional criteria, and five sets of criteria from conventions and organizations. Examples were submitted by New Zealand, India, Iran, Canada, Ecuador, Madagascar, Mauritius, Argentina, Trinidad and Tobago and Australia. The criteria from conventions and organizations include those from the International Maritime Organization, UNESCO World Heritage Convention, IUCN, the wider Caribbean region, the Baltic Sea, Northwest Atlantic, the Mediterranean and the European Union.

The scientific criteria selected at the Azores Workshop to identify biologically and ecologically significant areas are:

1. Uniqueness or Rarity
2. Special importance for life history stages of species
3. Importance for threatened, endangered or declining species and/or habitats
4. Vulnerability, Fragility, Sensitivity, or Slow recovery
5. Biological productivity
6. Biological Diversity
7. Naturalness

The above seven criteria in the Azores workshop report differ from those compiled in the Secretariat's synthesis report in just one significant way: they do not include the concept of representativeness under the criteria for identifying individual sites. Instead, the Azores report defines 'representativity' as one of the five key criteria/considerations of representative networks of MPAs, reflecting the expert opinion that representativity is best considered when looking at the network level, *i.e.* a collection of sites.

The results of the Azores scientific expert workshop also account for the particularities of the open ocean and deep seabed environments. For example, the five columns of the Scientific Criteria in Annex I provide not only criteria and definitions, but also the rationale, examples of open ocean and deep sea habitats to which the criteria would apply, and 'considerations in

application'. These examples and considerations are specifically intended to assist States in applying the criteria to remote and often information-poor areas. At the same time, the considerations indicate the many tools already in hand to increase knowledge and information.

Further comparison of the scientific criteria selected at the Azores scientific expert workshop to identify biologically and ecologically significant areas with the IUCN-WCPA criteria highlights a good deal of commonality. The Azores results reflect a rigorous consolidation of the most frequently used criteria that have been applied nationally, regionally and globally.

Guidance for designing MPA networks

Since 1975², IUCN has called for the establishment of a well-monitored system of MPAs representative of the world's marine ecosystems. Whereas most MPAs have historically been established on an *ad hoc* basis, both scientists and managers have increasingly recognized the need for a more systematic approach to enhance integration and exchange between species, communities and ecological processes through networks and systems of MPAs (Kelleher and Kenchington, 1991; Bennett, 2003; Laffoley, 2006; IUCN-WCPA, 2007; UNEP 2008). The scientific guidance in Annex II of the Azores Workshop report reflects best practice applied for over 15 years with respect to designing networks of MPAs at the national and regional level.

The marine biodiversity productivity and ecosystem services provided by the oceans cannot be protected by focusing solely in areas within national jurisdiction. In order to ensure that protected area networks beyond national jurisdiction are coherent and complementary to national and regional networks, it is necessary that the same or similar principles are applied consistently throughout the marine environment.

As noted at the Azores workshop, much progress has been made in developing criteria and guidance for MPA networks at the national and regional level. These have recently been compiled for global use by Laffoley (2006), IUCN WCPA (2007) and UNEP (2008). Some organizations/regions, such as in the Northeast Atlantic under OSPAR, in the Mediterranean under the Protocol concerning specially protected areas and biological diversity of the Barcelona Convention and in the Antarctic Treaty System, have already applied such criteria in ABNJ.

The Azores Workshop guidance for selecting areas to establish a representative network of MPAs, including in open ocean waters and deep-sea habitats, are consistent with best practice collected through years of experience as reflected in these recent reports.

As listed in Annex II of the Azores workshop report, these MPA network criteria are:

- Ecologically and biologically significant areas
- Representativity
- Connectivity
- Replicated ecological features
- Adequate & viable sites

These criteria build on the ones developed by IUCN WCPA and are based on many years of comparative experience and studies. They are also similar to the key aspects of network design principles and criteria identified in a UNEP report on 'Establishing national and regional networks of MPAs – a review of progress with lessons learned', currently being finalized (UNEP, 2008). The UNEP report contains more than four pages of explanation for four design principles based on the collective experience of many experts. It also includes case studies of their application in many regions and States at all levels of development. This report could serve as a useful reference document for those seeking a fuller description of the Azores guidance and lessons learned in their implementation.

Though the Azores network guidance do not directly include the concepts of precautionary design, permanence or resilience, they are clearly implicitly incorporated. The scientific guidance before COP9 is a useful starting point that may be further informed and elaborated as experience allows.

² In 1975, an IUCN conference in Tokyo called for the establishment of a well-monitored system of MPAs representative of the world's ecosystems (Kelleher, 1999).

Scientific guidance versus scientific information

The lack of scientific data on specific features or habitats in particular places should not be construed as grounds for delaying endorsement of the Azores scientific criteria and guidance or the implementation of needed protection.

The role of criteria and guidance is to provide an overview framework and ensure consistent and comparable standards when developing MPA networks. Such criteria allow for new scientific information to inform MPA site selection and network design as and when it becomes available. In the interim, currently available data should be applied consistent with the precautionary approach to protect ecologically significant as well as representative sites before the damage done to them increases to a point beyond possibility of recovery.

IUCN WCPA-Marine (2007) defines six areas of best practice for network planning and implementation, which should help planners better realize the maximum possible environmental, economic and social benefits:

- Clearly define network objectives
- Establish long-term political commitment and will
- Encourage stakeholder participation
- Make best use of available information
- Develop integrated management frameworks
- Employ adaptive management techniques

Alongside the ecological design criteria and areas of best practice, IUCN WCPA emphasizes the importance of planning and implementing MPA networks in the context of four areas of broader considerations related to wider ocean governance and environmental processes (IUCN WCPA, 2007):

- **Economic and social considerations:** these should (i) integrate the network into the economic and socio-cultural setting and promote activities that maximize positive benefits, and (ii) evaluate the economies of scale provided by networks, as well as the costs of inaction.
- **Spatial and temporal considerations:** these reflect the fact that ecosystems function at different scales and change over time, due to human activities or (over longer time frames) factors such as climate change. Planners should: (i) take actions to address ecological processes, resources and impacts that extend beyond network boundaries or influence MPA networks, and (ii) address the concept of 'shifting baselines' (Jackson *et al.*, 2001) in network design.
- **Scientific and information management considerations:** this builds upon the 'best practice' of using the best available information for both planning and management purposes. Network planners and managers should: (i) develop and employ appropriate scientific skills, tools, training and partnerships to design and systematically monitor MPA networks, and (ii) ensure standardization, synthesis, storage and access to information across and among MPA networks.
- **Institutional and governance considerations:** Planners and managers should: (i) develop and maintain effective coordination and linkages across sectors and jurisdictions, (ii) develop the legal authorities and institutional frameworks needed to develop MPA networks, (iii) clarify the legal framework for developing MPA networks, (iv) recognize that the diversity and capacity of the institutions and other groups involved in developing MPA networks can influence the network's efficacy, and (v) promote trans-boundary MPA networks as instruments for shared management, conservation and cooperation.

IUCN WCPA (2007) has also identified five key elements needed to make MPA networks happen and achieve their goals:

- Political will and leadership
- Public education, communication and awareness
- Monitoring and assessment
- Sustainable financing
- Compliance and enforcement

Building MPA networks is a complex process involving social, ecological and economic issues, and takes time. This summary is not exhaustive or set in stone. Additional guidance and criteria may and can be added.

The science of MPAs has evolved over decades largely due to learning from experience. Adaptive management has been a way forward for many MPA managers and policy makers to proceed responsibly in the face of uncertainty. The incorporation of lessons learned from practice has been vital in shaping new MPA concepts. Adaptive management may be particularly valuable for testing, refining and improving the Azores criteria and guidance.

We now urgently need to take the first steps towards developing MPAs in the high seas in order to build on past experience and introduce improvements in the future. It is important to establish pilot MPAs in the high seas that would allow for opportunities to test the criteria, learn from the outcomes and explore different management actions while accommodating change and improving management.

Parties at COP9 have the opportunity and obligation to advance towards achieving the 2012 target to establish representative networks of MPAs including in ABNJ and should thus adopt the necessary scientific criteria and guidance and urge Parties and other States to collaborate in their application.

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