

Marine Protected Areas in Europe and the United States



A REPORT FROM THE TRANSATLANTIC PLATFORM
FOR ACTION ON THE GLOBAL ENVIRONMENT
A JOINT PROJECT BY:



PUBLISHED JOINTLY BY

Institute for European Environmental Policy
Quai au Foin 55
1000 Brussels
Belgium
www.ieep.eu

Natural Resources Defense Council
1200 New York Ave., NW
Washington, DC 20005
USA
www.nrdc.org

September 2008

The *Transatlantic Platform for Action on the Global Environment* (T-PAGE) is a joint project of IEEP and NRDC. The opinions expressed in this report are those of the authors and are not necessarily shared by IEEP and NRDC.

This report is also available on the T-PAGE website:
<http://www.ieep.eu/projectminisites/t-page/>

ACKNOWLEDGEMENTS

We would like to thank the European Commission (Directorate General for External Relations) for co-funding this project through the European Community's 2006 budget line 19.050200 'Transatlantic Dialogue at Non-Governmental Level'.

Cover image © European Community, 2008

CONTENTS

1	INTRODUCTION.....	6
2	REVIEW OF EU LEGISLATION AND IMPLEMENTATION OF MARINE PROTECTED AREAS (MPAS)	8
2.1	Introduction	8
2.2	Legislative and other arrangements relating to MPAs	9
2.3	Implementation of MPAs	13
2.4	Stakeholder Perspectives.....	16
2.5	Discussion and Conclusions.....	18
2.6	References	20
2.7	Annex 1: Nominated sites to be considered as part of OSPAR network of MPAs.....	21
3	REVIEW OF US ACTIONS ON MARINE PROTECTED AREAS (MPAS).....	22
3.1	Introduction	22
3.2	Establishing MPAs in the US	22
3.3	Federal Marine Protected Areas	23
3.4	State Marine Protected Areas	26
3.5	Challenges in the US.....	27
4	CASE STUDY: ESTABLISHING LARGE-SCALE TRANSBOUNDARY MPA NETWORKS - THE OSPAR EXAMPLE IN NORTH-EAST ATLANTIC.....	28
4.1	Introduction	28
4.2	History and background of the OSPAR initiative.....	29
4.3	Process for establishing the OSPAR network.....	30
4.4	Assessment of the OSPAR MPA network.....	31
4.5	The challenges of transboundary MPA networks: The OSPAR example.....	33
4.6	Conclusion.....	33

4.7	References	34
4.8	Appendix 1: Ecological criteria/considerations	35
4.9	Appendix 2: Practical criteria/considerations	36
4.10	Appendix 3: Map of MPA nominations	37
5	CASE STUDY: THE DESIGNATION OF MARINE PROTECTED AREAS IN BELGIUM: FROM GOVERNMENT TO GOVERNANCE?.....	38
5.1	Introduction	38
5.2	Institutional context.....	38
5.3	Legal context.....	40
5.4	First attempts for the delimitation of marine protected areas: missed opportunities	41
5.5	Successful delimitation of marine protected areas	44
5.6	Challenges for the future.....	47
5.7	References	48
6	CASE STUDY: FLORIDA KEYS: ESTABLISHING MARINE PROTECTED AREAS.....	49
6.1	Introduction	49
6.2	Establishing Protection for the Florida Keys.....	49
6.3	Developing a Management Plan for the Sanctuary	50
6.4	Management of the Sanctuary: Regulations and Zoning.....	51
6.5	Benefits to Marine Protected Areas and Network MPAs.....	53
6.6	Conclusion.....	54
7	CASE STUDY: CALIFORNIA’S CHANNEL ISLANDS: ESTABLISHING MARINE PROTECTED AREA NETWORKS	55
7.1	Introduction	55
7.2	Political Jurisdictions.....	55
7.3	The Public Stakeholder Process	56
7.4	Scientific and Socioeconomic Technical Support	56

7.5	Project Goals & Objectives	57
7.6	Ecological Criteria & Network Design	58
7.7	A Final Decision.....	59
7.8	Resources	61
8	SUMMARY OF DEBATE AND CONCLUSIONS.....	62
8.1	List of Participants at T-PAGE Conference on Marine Protected Areas, 16 May 2008, Brussels	66

1 INTRODUCTION

Oceans governance and management are key priorities for both the European Union and the United States. In 2002, both transatlantic partners endorsed the Johannesburg Plan of Implementation of the World Summit on Sustainable Development (WSSD), which provides for "actions at all levels" to "promote the conservation and management of the oceans" through, inter alia, "the establishment of marine protected areas consistent with international law and based on scientific information".

The EU is also committed to the targets adopted two years later by the 7th Conference of the Parties (COP) to the Convention on Biological Diversity (CBD). The EU agreed to strive to meet the CBD targets through the full and timely implementation of the Natura 2000 network of protected areas, established by the Habitats Directive, in marine areas and the establishment and management of protected areas in the context of regional marine conventions. Key EU directives including the recent Marine Strategy Framework Directive (MSFD) and the Water Framework Directive further support the establishment of these sites. So does the Common Fisheries Policy (CFP), which *provides for* the establishment of 'zones and/or periods in which fishing activities are prohibited or restricted including for the protection of spawning and nursery areas' as well as specific measures to reduce environmental impacts of fishing.

Across the Atlantic, the Federal government as well as many States in the U.S., have been supportive of MPA site designation for a number of decades. According to the National Oceanic and Atmospheric Administration (NOAA), in 2006 there were at least 1,500 place-based conservation areas established by hundreds of federal and state authorities¹. Similar to the EU, MPAs in the US are diverse in terms of their objectives but they also differ with respect to jurisdiction, size, and level of protection. Jurisdiction and regulatory authority relating to MPAs is split between State and Federal government in the U.S. in the same way that they are split between the EU and the Member States for nature conservation versus fisheries MPAs, leading to a number of challenges in furthering their implementation.

In 2008, the 9th CBD Conference of the Parties (COP) in Bonn reaffirmed their commitment to 'Halting Biodiversity Loss by 2010'. The challenges to achieving this goal are massive. In relation to achieving this goal for marine biodiversity, MPAs have a key role to play but it is critical that the commitment translates to further action at sea and the EU and the U.S. take the lead towards furthering the implementation of MPAs. In the last two years, IEEP and NRDC have implemented a joint programme of activities to promote transatlantic dialogue on the role of MPAs in the conservation of marine biodiversity. Together they have analysed policies with respect to MPAs and have particularly focused on areas of convergence and divergence and key issues for political debate. Two teleconferences in 2007 and a major event in Brussels in

¹ National Marine Protected Areas Center (NMPAC), "Draft Framework for Developing the National System of Marine Protected Areas" at iv (2006), *available at* <http://mpa.gov/pdf/national-system/final-framework-draft.pdf>; *see also id.* at iii ("roughly 85% of the nation's existing place-based conservation areas are under the jurisdiction of non-federal governments.").

2008 brought together experts from environmental NGOs, academia and other interested civil society organisations in the EU and U.S., together with some experts from public authorities, to debate the challenges to furthering the political action on MPAs. In order to disseminate the main conclusions and contribute to informed public debate on MPAs, the main results of the project are made available in this report.

Indrani Lutchman
Senior Fellow
Head of the Sustainable Fisheries Programme
Institute for European Environmental Policy
London

S. Jacob Scherr
Senior Attorney
Director, International Program
Natural Resources Defense Council
Washington, DC

2 REVIEW OF EU LEGISLATION AND IMPLEMENTATION OF MARINE PROTECTED AREAS (MPAS)

March 2007

Authors:

Indrani Lutchman - Head of the Sustainable Fisheries Programme, IEEP

James Brown – Policy Analyst, IEEP

Marianne Kettunen – Policy Analyst, IEEP

2.1 Introduction

Marine protected areas (MPAs) are now being implemented by a wide number of institutions and governments worldwide to address a range of problems from fish stock depletion to habitat degradation. In 2003, it was estimated that worldwide there were 4,116 MPAs containing coastal and marine elements (WWF, 2004).

The implementation of MPAs in the European Union (EU) is driven by a number of international, EU and national obligations and initiatives to which the EU and its Member States are committed. These include:

1. the World Summit on Sustainable Development (WSSD) and the Convention on Biological Diversity (CBD) targets to establish representative networks of MPAs by 2012;
2. the OSPAR agreement to work with HELCOM and the European Community, to identify the first set of Marine Protected Areas (MPAs) by 2006 and complete by 2010 a joint network of well-managed marine protected areas that will be ecologically coherent with the NATURA 2000 network;
3. EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the habitats Directive) (1992) which requires the establishment of Special Areas of Conservation (SACs); and
4. EU Council Directive 79/409/EEC on the Conservation of Wild Birds (the birds Directive) (1979) that requires designation of Special Protection Areas (SPAs).

Despite several international and regional political commitments, a legal basis that is over twenty five years old and strong support of environmental NGOs, progress on implementation of MPAs in the EU remains slow. As they can play a role in *inter alia* fisheries management and conservation, the poor implementation record is particularly striking when the EU is faltering in meeting its broader targets in two key areas (e.g. restoring stocks to maximum sustainable yield (MSY) levels by 2015 and halting the loss of biodiversity by 2010).

This document presents a brief summary of stakeholder perspectives on MPAs and highlights the blockages in the current system to further progress on implementation in Europe. This document is intended to inform US partners about current developments in Europe on MPA designation, and stimulate debate on effective ways in which to overcome blockages towards further implementation.

2.2 Legislative and other arrangements relating to MPAs

This section begins by describing the legal arrangements that are relevant to the establishment of MPAs. The international level is first considered, before discussing the EU. Throughout, the legal weights of the various instruments are discussed together with how they relate to nature conservation and fisheries management. To close, a summary is drawn that includes a comparison of legal definitions, including the IUCN classification system.

2.2.1 *International/Regional*

Originally the MPA concept arose from the idea of protected areas for biodiversity on land. It has now evolved to also include areas protected for other values, such as fish stocks. Nonetheless, the international or regional agreements, conventions and treaties in relation to MPAs are still essentially concerned with nature conservation rather than fisheries. In theory, these international/regional instruments are legally binding on Contracting Parties however, in practice, their effectiveness is very dependent on the political will for national implementation. Unless mentioned specifically, the UK is a Party to all of the instruments discussed, and other EU Member States may also be Parties.

Convention on Biological Diversity

The seventh meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) adopted a Programme of Work on protected areas in 2004, including an objective of establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of a global network of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas.

The CBD's Ad Hoc Technical Expert Group used the term 'marine and coastal protected areas' rather than MPAs in order to make it clear that its work applied in the coastal zone as well as at sea. It adopted the following definition: 'any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings' (Secretariat of the Convention of Biological Diversity, 2004). The CBD's work on marine protected areas can be considered to be the leading work in this area in relation to nature conservation.

The Ramsar Convention

The Ramsar Convention requires Parties to take measures for the conservation and wise use of wetlands. According to the Ramsar definition, wetlands can include 'areas of marine water the depth of which at low tide does not exceed six meters'. Contracting Parties should promote the conservation and wise use of designated Wetlands of International Importance in their territory. Areas classified under Ramsar for protection do not necessarily receive any protection at national level; Parties must legislate separately for this to occur.

The Bern Convention

The Bern Convention aims to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the cooperation of several States, and to promote such cooperation. Parties to the Bern Convention are required to nominate protected sites, which make up the 'Emerald Network'. In EU Member States, those sites that are part of Natura 2000 (see section 2.2.2) are included in the Emerald Network.

OSPAR and Helcom

The 1992 Convention for the Protection of the Marine Environment in the Northeast Atlantic (OSPAR) is the instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. It combined and updated the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution.

In 1998, OSPAR Parties adopted a new Annex V to the Convention along with a Strategy to protect and conserve the biological diversity of the maritime area [...] and to restore, where practicable, marine areas which have been adversely affected (Sintra statement²). One of the tools proposed in the Strategy was a network of marine protected areas.

The Helsinki Convention³ also contains provisions for the establishing of Baltic Sea Protected Areas (BSPAs) for the protection of species and natural habitats and nature types of the marine and coastal ecosystems of the Baltic Sea Area to conserve biological and genetic diversity and to protect ecological processes. In the case of resource exploitation, the Convention specifies that this should be done in the context of sustainable utilisation.

In 2003, at the first joint session of the OSPAR and HELCOM Conventions, ministers pledged to create by 2010 an ecologically coherent network of well managed marine protected areas covering the North-East Atlantic and the Baltic Sea, in support of commitments made at the World Summit on Sustainable Development in 2002 (OSPAR, 2003). To this end, HELCOM and OSPAR adopted a joint work programme to ensure consistency in their approach.

2.2.2 EU Legislation and Strategies relating to MPAs

There are four primary groups of instruments at the EU level that relate to MPAs. At present only two of these are legally binding (habitats and birds Directives; and the Common Fisheries Policy), and their approach reflects the sectoral approach of EU policy development.

² See <http://www.ospar.org/eng/html/md/sintra.htm>

³ Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992. The Convention entered into force in 2000.

Habitats and Birds Directives

The EU habitat Directive (92/43/EEC) requires Member States to designate Special Areas of Conservation (SACs) to protect some of the most threatened habitats and species across Europe. SACs are an integral part of the Directive and required the first listing of proposed Sites of Community Importance (pSCIs) by June 1998. Member States were then given six years, until June 2004, to designate sites as SACs. Under the EU birds Directive (79/409/EEC), Member States are required to designate Special Protection Areas (SPAs) for the conservation of a specific list of bird species. The sites designated under both Directives will together form an EU-wide network of protected sites known as ‘Natura 2000’.

Natura 2000 is therefore the primary network of EU nature conservation protected areas, including in the marine environment. It is the basis on which the EU works to meet the international and regional obligations outlined above. The birds and habitat Directives are legally binding on EU Member States. As Directives however they differ from EU Regulations, for example, in that they set out what should be achieved by Member States rather than how to achieve it.

Common Fisheries Policy

The Common Fisheries Policy (CFP) is *the* framework for the management of EU and national fisheries. The basic Regulation (2371/2002) defines the general scope and objectives of the CFP as well as setting out in more detail specific objectives, management measures, access conditions and control and enforcement rules. The purpose of the CFP is to manage fisheries for both stock conservation and environmental purposes. Historically its focus has been on stock conservation and management however, as reflected by the significant body of Regulations focused specifically on this area.

The basic CFP Regulation *provides for* the establishment of ‘zones and/or periods in which fishing activities are prohibited or restricted including for the protection of spawning and nursery areas’ as well as specific measures to reduce environmental impacts of fishing. It does not require the EU or Member States to develop MPAs, but rather puts in place a legal framework through which they could be established. Indeed, as fisheries is a policy area of ‘exclusive competence’ of the EU, the management of fisheries beyond inshore waters, including spatial management, should be done through the CFP at an EU level.

Proposed Marine Strategy Directive

On 24 October 2005 the Commission proposed a Marine Strategy Directive (COM (2005)505). It has the aim of achieving ‘good environmental status’ in the marine environment by 2021, at the latest. It recognises the commitments made under the CBD to create a global network of MPAs by 2012⁴. Rather than creating new legal provisions or requirements for designating MPAs, the proposed Directive supports the implementation of existing legislation, notably the habitats Directive, and designation of Natura 2000 sites. Under the Directive Member States are not *required* to designate MPAs. Rather, Member States are required to ‘identify measures’ that need to be taken in order to achieve good environmental status, ‘taking into consideration’ the

⁴ http://ec.europa.eu/environment/cites/pdf/diff_between_eu-cites.pdf

types of measures listed in Annex V. Of the measures in Annex V, the most relevant to MPAs are ‘Spatial and temporal distribution controls: management measures which influence where and when an activity is allowed to occur.’ As it now reads therefore, nothing is added to the existing birds and habitats Directives obligations. While the proposed Directive is yet to go through the European Parliament and Council, if it is adopted in its current form it is not expected to add any impetus for MPA designation or management.

The proposed Directive is the central implementing instrument of the Thematic Strategy on the protection and Conservation of the Marine Environment (COM (2005)504). This was adopted by the Commission at the same time as the Directive proposal. The overall objective of the Thematic Strategy is ‘to protect and restore Europe’s oceans and seas and ensure that human activities are carried out in a sustainable manner so that current and future generations enjoy and benefit from biologically diverse and dynamic oceans and seas that are safe, clean, healthy and productive’. As a Commission Communication, the Strategy does not carry any legal weight, but sets out how the Commission suggests the EU works to meet the objective and an analysis of the issues.

Integrated Coastal Zone Management

MPAs, especially those in the coastal region, should arguably be implemented within the context of integrated coastal zone management (ICZM). That is, taking a holistic and long term perspective to managing the coastal environment. The only EU level policy relating to ICZM is a Recommendation (2002/413) of May 2002 adopted by the Council and the Parliament on the implementation of ICZM in Europe.

This recommends a strategic approach and principles that Member States should follow in undertaking national ICZM stocktaking and national ICZM strategies. It is important to note that such recommendations are non-binding, so it remains to be seen to what extent the Recommendation is implemented. One element of the strategic approach recommended is the ‘protection of the coastal environment, based on an ecosystem approach’ based on *inter alia* the ‘use of a combination of instruments’. Beyond this however there is no reference to MPAs. The Commission should review the Recommendation by 30 December 2006 and submit to the European Parliament and the Council an evaluation report.

2.2.3 MPA categories and terminology

The types of MPAs described above can be compared to the IUCN definition of MPA:

‘Any area of the intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment’
(IUCN 1998)

Beyond this broad definition, IUCN go on to classify six types of protected areas, depending on their objectives:

Category I –	Protected area managed mainly for science or wilderness protection (Strict Nature Reserve/Wilderness Area);
Category II –	Protected area managed mainly for ecosystem protection and recreation (National Park);
Category III –	Protected area managed mainly for conservation of specific natural features (Natural Monument);
Category IV –	Protected area managed mainly for conservation through management intervention (Habitat/Species Management Area);
Category V –	Protected area managed mainly for landscape/seascape conservation and recreation (Protected Landscape/Seascape);
Category VI –	Protected area managed mainly for the sustainable use of natural ecosystems (Managed Resource Protected Area). (IUCN, 1994)

All of the MPAs legally defined in relation to the EU fall under the broad IUCN MPA definition, most however relate to IUCN Categories III or IV. In the EU these two types of MPAs should contribute to developing a network of MPAs, so could be considered as Category II. At the EU level there is no provision however for Category I MPAs.

2.3 Implementation of MPAs

2.3.1 International

International Biodiversity Conventions

Parties to these Conventions are required to report periodically on their progress with implementation of commitments, including those to establish protected areas. Recent reports indicate that:

- In relation to the CBD, reports at the eighth Conference of the Parties to the Convention (2006) indicated that marine and coastal areas were underrepresented in protected area networks, and that there were particular issues with establishing marine protected areas outside the limits of national jurisdictions. Less than 0.5 per cent of the ocean is currently protected⁵.
- For Ramsar, some thought has been given to the contribution that Ramsar sites could make to the conservation and sustainable use of fish resources⁶. However, papers for the meeting of Ramsar Parties in Uganda in 2005 noted that: ‘since Criteria [...] for the designation of Ramsar sites for fish were adopted [...] 264 Ramsar sites have been designated using these Criteria (as of 21 April 2005), although these occur in only 77 of the current 145 Contracting Parties. It is clear that for fish the Ramsar site network is not yet the coherent and comprehensive national and international network envisaged by the 1999 Strategic Framework. Some systems lack representative sites to cover essential habitats for some important fish species.’

⁵ See UNEP/CBD/COP/8/8: Report of the First Meeting of the Ad Hoc Open Ended Working Group on Protected Areas: <http://www.biodiv.org/doc/meetings/cop/cop-08/official/cop-08-08-en.pdf>.

⁶ See: http://www.ramsar.org/sc/31/key_sc31_doc17.htm

- In relation to the Bern Convention, although the Pan-European Biodiversity Strategy considers the establishment of a European coastal and marine ecological network to be an integral part of the Pan-European Ecological Network, marine sites are still poorly represented in the network⁷. The 2006 target is now considered to be too ambitious.

Regional Agreements

Baltic

In 2006, a network of MPAs in the Baltic is still not fully implemented. In many cases the Contracting Parties have not yet managed to demarcate Baltic Sea Protected Areas (BSPAs) or prepare management plans, and very few concrete steps have been taken to include the 24 proposed offshore BSPAs into a coherent network (OSPAR, 2005)

North East Atlantic

The Inter-sessional Correspondence Group on Marine Protected Areas (ICG-MPA) met 24-26 January 2006, in Gothenburg Sweden, to review MPA nominations by countries towards the OSPAR network of MPAs. Six Contracting Parties reported progress with nomination of sites to be considered as components of the OSPAR network (Annex 2). This means that only six of the twelve coastal Parties have nominated sites and although, the ICG-MPA has not completed its work of evaluating the sites, it is not expected that the current nominated sites will constitute an ecologically coherent or well managed network of MPAs (OSPAR, 2006).

2.3.2 European Union

Nature conservation MPAs - Natura 2000

Data on site designation contains so many limitations that drawing meaningful conclusions on extent of area designation becomes impossible⁸. Nonetheless, designation of marine sites is evidently slow and lags behind the proposed timeframe (as outlined in 2.2.2). This is further illustrated by the pushing back of the implementation deadline. The Action Plan issued with the Commission's recent 'Biodiversity Communication' (COM(2006)216) includes an action in reference to marine implementation of Natura 2000, aiming at having designations complete by 2008 and any necessary management measures in place by 2012 (action 1.1.1). This is eight years later than the deadline set in the CFP environmental integration Action Plan (COM (2002)186). Without excusing its poor performance, the EU is not alone in being behind schedule in implementing MPAs for nature conservation. It is estimated that the CBD 2012 target will not be met until 2069 (MPA News 2005).

⁷ See STRA-CO (2006)12, Report on Protected areas and ecological networks. Available at http://www.strategyguide.org/200602/Documents/STRA-CO%202006%2012%20_protected%20areas_E_final.pdf

⁸ Numerous sites have been designated according to both the Birds and the Habitats Directives, either in their totality or partially. The data on numbers of sites and area coverage may therefore not necessarily add up. http://europa.eu.int/comm/environment/nature/nature_conservation/useful_info/barometer/index_en.htm

In May 2004 Germany nominated ten Natura 2000 areas in the offshore areas of its EEZ in the North Sea and Baltic Sea, making it the first Member State to complete its marine nominations. Indeed, it is one of the few Member States to have designated offshore sites. The nominated MPAs within the German EEZ account for 31.5 per cent of the total offshore German marine area⁹ and will be supported by a three year ICES project entitled ‘Environmentally Sound Fishery Management in Protected Areas’ developing fisheries management plans for each of the ten German NATURA 2000 areas.

Fisheries MPAs – the CFP

There are a number of cases of fishing activities being managed on a spatial basis under the CFP. Indeed, it is estimated that, in UK territorial waters around England and Wales, spatial management measures under the CFP cover 33 per cent of those waters (Rogers *et al*, 2005). Such measures are introduced for a number of different reasons, including fish stock management, nature conservation and resource access. It is often unclear what the objective behind area restrictions are. Examples include access restrictions in the Shetland and Orkney regions known as the ‘Shetland box’ for species which are ‘biologically sensitive because of their exploitation characteristics’ (Regulation 2371/2002, Article 18) and access restrictions in the ‘Irish box’, a ‘biologically sensitive area’ of high concentration of juvenile hake. (Regulation 1954/2003). While stock protection is their stated objectives, protection of local fishing fleets against the presence of vessels from other Member States also lay behind their establishment.

Other examples include the Norway pout, mackerel and plaice boxes, and boxes that protect spawning herring. The plaice box was set up in 1989 to protect juvenile plaice by restricting beam trawling. The Norway pout box was introduced in 1986, covering 95,000 km², to protect juvenile stocks of haddock and whiting from industrial fishing for Norway pout. The Mackerel Box was established in 1981 off southern England and Ireland in order to protect relatively high concentrations of juvenile mackerel. Seasonal area closures are also an increasing feature of the EU stock recovery plans.

The establishment of areas protected from fishing for nature conservation, such as the protection of sensitive habitats, is much more limited under the CFP however. Indeed, the European Commission only considers there to be seven such examples, most of which were adopted in the last two years:

- bottom trawling prohibition above the Posidonia meadows or other marine phanerogams in the Mediterranean since 1994;
- bottom trawling prohibition in the Mediterranean within three nautical miles from the coast or at depths less than 50 m where that depth is reached at a shorter distance;
- Prohibition on using bottom trawls or similar towed nets in contact with the bottom of the sea in the area known as “Darwin Mounds” north-west of Scotland adopted in 2004;
- similar prohibitions adopted in areas surrounding the Azores, Madeira and Canary islands adopted in 2005;

⁹ For more information, see <http://www.ices.dk/marineworld/protectedAreas.asp>.

- restriction of trawling activities to only 14 geographically identified trawlable areas within the 25 nautical miles zone of Malta adopted in 2004;
- ‘transitional’ prohibitions on bottom set-nets at depths beyond 200 meters in ICES Divisions VIab, VIIbcjk and Subarea XII adopted in 2005; and
- bottom trawling and static gears ban for the protection of vulnerable deep-sea habitats on: the Hecate Seamounts, the Faraday Seamounts, Reykjanes Ridge (partem), the Altair Seamounts, and the Antialtair Seamounts adopted in 2005 (European Community, 2006).

In none of these cases is fishing completely prohibited for fisheries or nature conservation purposes.

2.4 Stakeholder Perspectives

While working towards meeting is political and legal MPA commitments, the EU and Member States are not immune to the pressures from stakeholders, including industry and environmental NGOs. Indeed, it is important that stakeholders are involved in as managing fisheries and the broader marine environment. In considering the reasons behind the mixed level of implementation it is therefore important to consider the various perspectives of the various interest groups and government. Through another project funded by the Esmee Fairbairn Foundation, IEEP held a consultation with UK stakeholders to discuss perspectives, issues and the reasons for slow progress on MPAs.

Some key points from that consultation were the following:

- Most stakeholders are well-informed about the general purpose and intent of MPAs and supportive of their use.
- A large number of stakeholders have position papers on MPAs, although NGO positions were more developed than the fishing industry, for example.
- In Europe, MPAs designated for nature conservation purposes were not considered an issue, in that everyone agrees on the benefits that they could potentially offer.
- But there was general agreement that there was greater room for progress on MPAs for fisheries management purposes.
- There is scepticism (mainly fishing industry and governmental) over the benefits of fisheries MPAs and it was suggested that MPAs for fisheries purposes should be considered in its broadest context in order to ensure that the negative impacts of isolated MPAs, through the displacement of fishing effort, is not transferred to adjacent areas.
- In the case of MPAs under the habitats Directive, there are specific nature conservation objectives, but it the site specific objectives in relation to fisheries MPAs are particularly lacking and ambiguous.

Generally there is agreement that the MPAs debate in Europe has matured over the last few years but the two hot topics remain – the development of multipurpose MPAs and no take zones (NTZs). Stakeholders felt that the confusion over MPAs was

further confounded by the concept of multipurpose MPAs and the lack of clarity in the use of specific MPA terminology.

2.4.1 EU perspectives

An EU level conference was held in 2005 on the role of MPAs in fisheries management and the protection of marine biodiversity. Participants included Member States representatives, the European Commission, members of the European Parliament, FAO representatives, and the fishing industry and NGOs. The discussions reflect the approaches and views/positions of most the key EU players (EBCD, 2005).

The European Commission is perhaps the most significant institution as it develops and proposes policy. Its approach largely reflects the legal framework, with DG Environment overseeing the implementation of Natura 2000 and DG Fish concerned with the CFP. As discussed in section 2.3.2, MPAs under the CFP are largely fisheries MPAs, with nature conservation being secondary in practice. DG Fish cites the lack of knowledge on the role of MPAs in fisheries and nature conservation, and questions the benefits of nature conservation MPAs for fisheries (EBCD, 2005). Its current approach to the issue is to promote research on MPAs.

2.4.2 Environmental NGO positions

There was generally a high level of coherence between the NGO positions in terms of their approach to MPAs and their implementation. The approach advocated by the environmental interests is a tiered approach to MPAs, building upon and going beyond the Natura 2000 network. Notably, Greenpeace appears to have higher demands than the other NGOs with their specific call for MPA coverage of 40 per cent of the oceans as part of their marine environment vision.

2.4.3 European industry perspectives

A good summary of the European fisheries sector's view on MPAs can be found in the EBCD Conference report (2005). The key points emerging from that meeting were the following:

- Fishers have a poor understanding of the MPA concept as a whole
- Fishers feel that they have not been sufficiently involved in the debate on MPAs so far
- They agree that sensitive areas should also be protected from human activities but this should not only be fishing activities but transport, pollution etc.
- They believe that a timetable for a network of MPAs is absurd
- They also believe that there needs to be a clear definition of what needs protection and
- The benefits of MPAs for fisheries still need to be assessed.

2.5 Discussion and Conclusions

2.5.1 Legal framework

There is a legal framework for MPAs for nature conservation and fisheries purposes at the international, regional, European and national levels. This means that the political and legal scene is now set for further implementation of MPAs and networks of MPAs. The EU is party to many international and regional instruments (discussed in section 2.2) and is now committed to specific timelines, for example the CBD 2012 target. A significant weakness of many international legal instruments as opposed to those at EU or national level is that they often lack an enforcement mechanism, so that even if Parties do not fulfill their obligations there is no consequence of such failure (Miller, 2005).

The types of MPAs required under the international commitments are loosely defined, leaving the level of protection to interpretation by contracting parties. This also applies to the EU Natura 2000 network, with Member States having significant flexibility in defining, developing and implementing MPAs. In terms of fisheries MPAs, there are no legal requirements to establish fisheries MPAs, but rather they are an available tool. The CFP and EU environmental policies (habitats and birds Directives) however do provide a reasonable legal basis on which to further implementation of MPAs at a national and European level.

In the EU, Member States have a legal obligation to designate Natura 2000 sites, including in offshore marine areas. This obligation was confirmed by the European Court of Justice in Case C-6/04, and appears to apply to all Member States that exercise sovereignty in offshore areas (eg in relation to oil and gas exploration). As the obligation to nominate Natura 2000 sites is binding and can be enforced with financial penalties, it is likely that Member States will give priority to nomination of these sites, as opposed to nomination of sites under other international Conventions¹⁰.

However, a number of questions remain to be answered in relation to Natura 2000 sites in marine areas. Once sites have been nominated and included on the Commission's site lists, Member States are obliged to prevent deterioration of sites, and to restore them to, or maintain, favourable conservation status. In theory, this could include a need to restrict fishing effort, though this would need to be done through the mechanisms of the CFP. Due to a lack of baseline information in marine sites, and overall a general paucity of information on the functioning of many marine ecosystems, it remains to be seen how the Commission will assess whether Member States are fulfilling their obligations under the Directive.

2.5.2 Implementation

Progress in implementing MPAs at the EU is mixed. A large area of EU waters can be considered as fisheries MPAs, whereby fishing is restricted spatially and/or seasonally for fisheries management purposes. Such spatial and seasonal controls are more

¹⁰ However, it is likely that Natura 2000 sites will also fulfil Member States obligations under international Conventions such as the Convention on Biological Diversity.

common place in inshore waters where management is better developed and there is more control of local vessels. These fisheries MPAs are broad and shallow however. They are developed primarily for fisheries purposes (often single stock), apply only to certain gear/vessel categories and are often temporary. The restriction of fisheries on a spatial basis for environmental purposes is not common, although it may be increasing. Even these however lack permanency, in some cases, and rarely applies to all forms of fishing.

Progress on nature conservation MPAs is driven by the obligatory nature of EU legislation for the development of the Natura 2000 network. To date, most progress on the implementation of MPAs for nature conservation is being made inshore and very little offshore. MPAs for nature conservation are more permanent than fisheries MPAs. The Natura 2000 network tends not to be highly restrictive however, being concerned essentially with sustainable use rather than non-use. The consequence is that HPMRs are lacking.

2.5.3 Key barriers to implementation

The reasons for the variable progress in implementation of MPAs at the EU level can be attributed to several factors:

1. **Lack of common terminology.** The MPA debate is complex and existing MPA definitions are very broad. Whilst this creates flexibility which can be positive as MPAs can be then tailored to fit specific circumstances, this can also lead to ambiguity. Consequently, the arguments presented for and against their use are more diffuse than effective in moving the debate forward. This has been a factor in stalling the MPA debate, both in fisheries management and nature conservation.
2. **Lack of detailed objectives for nature conservation and, in particular, fisheries at the European and national.** Nature conservation policies, including the habitats and birds Directives, and fisheries management both lack detailed objectives. This leads to conflicts amongst stakeholders about the types of MPAs needed, either generally or specific cases.
3. **Mismatch of competences.** While Member States have obligations under the habitats and birds Directives, they have no powers to manage fisheries beyond 12 miles to meet those obligations. Beyond 12 miles, any measures for nature conservation purposes, whether for national or foreign vessels, must be adopted at the EU level.
4. **Arguments that there is little empirical evidence** to support MPAs. While this may be true in cases, and more data should further our understanding of MPAs, this argument is supported in light of the above two problems.

2.6 References

EBCD, 2005, 'Fisheries, biodiversity and marine protected areas: Challenges and solutions', a report of the conference hosted by the European Parliament and co-funded by IUCN

European Community Report, (April 2006), 'Actions taken by States and Regional fisheries management organizations and arrangements to give effect to paragraphs 66 to 69 of resolution 59/25 of the General Assembly on Sustainable Fisheries, including through the 1995 UN Fish Stocks Agreement, regarding the impacts of fishing on vulnerable marine ecosystems', http://ec.europa.eu/fisheries/publications/factsheets/legal_texts/ec_report59-25paras66to69final.pdf#search=%22actions%20taken%20by%20states%20and%20regional%20fisheries%20management%20EC%22

IUCN, (1998), '1997 United Nations List of Protected Areas', IUCN, Cambridge, UK and Gland, Switzerland

Miller, C., (2005), 'Issues with marine wildlife enforcement', Report to CCW, <http://www.ieep.org.uk/publications/pdfs/2005/Issues%20with%20marine%20wildlife%20enforcement%20IEEP%20report.pdf>.

MPA News, (2005), 'Global targets for MPA designations will not be met; experts respond', MPA News 7(5): 1-2.

OSPAR, (2003), 'Bremen Statement - Ministerial Meeting of the OSPAR Commission', Bremen, 25 June 2003

OSPAR, (2005), 'Annex VII: Guidance on developing ecologically coherent network of OSPAR marine protected areas', Meeting of the Working Group on Marine Protected Areas Species and Habitats (MASH), Bristol, UK: 3-7 October, 2005

OSPAR, (2006), 'Annex V: Report on the status of OSPAR network of MPAs', Meeting of the OSPAR Commission, Stockholm: 26 – 30 June 2006

Rogers, S. I., Eastwood, P.D., Houghton, C.A., and Mills, C., (2005), 'Developing the ecosystem approach: Key tasks and practical progress towards integrated planning in the UK', ICES CM 2005/L:09, Annual Science Conference, 20-23 September 2005, Aberdeen, UK

Secretariat of the Convention on Biological Diversity, (2004), 'Technical advice on the establishment and management of a national system of marine and coastal protected areas', SCBD, 40 pages (CBD Technical Series no. 13) <http://www.biodiv.org/doc/publications/cbd-ts-13.pdf>

WWF, (2004), 'Marine Protected Areas in the context of marine spatial planning – discussing the links', A report to WWF UK by Dr. Susan Gubbay

2.7 Annex 1: Nominated sites to be considered as part of OSPAR network of MPAs

Country	Nominated sites	Comments
Portugal	One site, Formigas/Dollabarat bank, within the waters of the Azores, was reported to MASH ¹¹ 05. It was the first OSPAR MPA nomination. It is a nature reserve with a delimited area of 52 527 hectares, extending to below 1500 meters in depth. Of that, 3 628 ha is also a Natura 2000 site, down to the 200 meter isobath.	Electronic nomination and Annex 1 of Rec. 2003/03 was submitted in January 2006.
Norway	Six sites were reported in December 2005. The six sites are: Selligrunnen (nature reserve), Røstrevet, Sularevet, Iverryggen, Tisler, and Fjellknausene, the latter five of which have fisheries closures to bottom-tending gear. The six in total are 190 539 hectares	Norway completed all the reporting requirements, including the electronic nomination database, on time.
Germany	Two very large sites were reported in January 2006, and two more in April 2006. The sites are: Helgoland Seabird Protected Area (a Natura 2000 SPA), Schleswig-Holstein Wadden Sea (national park and Natura 2000 SCI), SPA-Eastern German Bight (Natura 2000 SPA), and Lower Saxony Wadden Sea National Park (Natura 2000 SPA and SAC). The sites comprise a total of 1 192 278 hectares	
Sweden	Six sites were reported in January 06: Koster-Väderö archipelago (some enhanced protections including fisheries restrictions), Gullmarn fjord (also with enhanced protections), Nordre älv estuary (fisheries closures), Kungsbacka fjord (nature reserve), Fladen, and Lilla Middelgrund. The six sites overlap Natura 2000 sites, and are a total of 63 900 hectares	
UK	Fifty-six sites were reported in January 06. Full reporting requirements are not yet completed. Total area of sites reported by UK to the OSPAR network in Apr. 2006 is estimated to exceed one million hectares.	Accurate area data for the sites were not yet reported within the timescale, and will be reported in subsequent years.
France	Eight sites were reported in March 2006: Réserve Naturelle Nationale de la Baie de Somme, Réserve Naturelle de l'Estuaire de la Seine, Réserve Naturelle Nationale du Domaine de Beauguillot, Réserve Naturelle de la Baie de l'Aiguillon, Réserve Naturelle de la baie de Saint Brieuç, Archipel des Sept îles, Réserve Naturelle de Moëze-Oléron, Réserve Naturelle du Banc d'Arguin. They total 24 252 hectares, and are also Natura 2000 sites.	

Source : OSPAR, 2006

¹¹ MASH – Marine Protected Areas, Species and Habitats

3 REVIEW OF US ACTIONS ON MARINE PROTECTED AREAS (MPAS)

June 2007

Authors:

Melanie Nakagawa - Attorney, International Program, NRDC

Kate Wing - Senior Policy Analyst, Ocean Program, NRDC

Brett Baumann - Law Clerk, Summer Program, NRDC

3.1 Introduction

NRDC has prepared this brief overview of the diverse legal mechanisms that are used to create and administer marine protected areas (MPAs) and the ongoing effort to develop a national system of MPAs to provide background for a transatlantic dialogue that we are co-organizing with the Institute for European Environmental Policy. The paper is not an NRDC policy document; and the views expressed or implied herein do not necessarily conform to the position taken by NRDC on any particular issue. This document, along with a companion review of EU policies prepared by IEEP, is being provided to participants in our initial teleconference on June 13, 2007. The goal for the dialogue is to enable environmental leaders in the US and Europe to identify, discuss, and analyze the perceived priorities in the US and EU on marine protected areas, how they compare and contrast, and where there is potential for collaboration on both sides of the Atlantic on advancing this issue.

3.2 Establishing MPAs in the US

To further ecological and economic goals, local, state, and federal governments in the US have created place-based conservation tools called marine protected areas (MPAs). An MPA is commonly defined as “any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.”¹² According to the National Oceanic and Atmospheric Administration (NOAA), in 2006 there were at least 1,500 place-based conservation areas established by hundreds of federal and state authorities¹³.

MPAs in the US are diverse; they differ with respect to jurisdiction, purpose, size, and level of protection. The US asserts jurisdiction over two hundred nautical miles of ocean extending from its shores. However, jurisdiction and regulatory authority for this area is split. The outermost 197 nautical miles exclusively federal and the first

¹² Exec. Order No. 13,158 § 2(a), 65 Fed. Reg. 34,909 § 2 (a) (May 26, 2000)

¹³ National Marine Protected Areas Center (NMPAC), “Draft Framework for Developing the National System of Marine Protected Areas” at iv (2006), *available at* <http://mpa.gov/pdf/national-system/final-framework-draft.pdf>; *see also id.* at iii (“roughly 85% of the nation’s existing place-based conservation areas are under the jurisdiction of non-federal governments.”).

three nautical miles of ocean from the coastline are within the state's authority.¹⁴ Under the Submerged Lands Act of 1953¹⁵, coastal states have title to – and may regulate water above¹⁶ – submerged lands of the first three nautical miles of ocean extending from their shores¹⁷.

Most MPAs allow multiple uses and less than one percent of the total area under management is part of no-take reserves.¹⁸ The conservation benefits provided by MPAs are supplemented by other regulatory measures such as pollution controls and fishery regulations. As one commentator has noted, the ocean areas under the jurisdiction of the United States are governed by an “uncoordinated patchwork of laws and regulatory programs”¹⁹.

3.3 Federal Marine Protected Areas

Federal MPAs have been established in many forms, including national marine sanctuaries, national parks, national wildlife refuge areas, national monuments, national estuarine research reserves, fishery management zones, and critical habitat. Each of these programs is described below.

3.3.1 Federal Programs

There are currently thirteen **national marine sanctuaries**,²⁰ each of which is managed according to a site-specific management plan prepared by NOAA pursuant to the Marine Protection, Research, and Sanctuaries Act (MPRSA)²¹. The primary

¹⁴ Craig, Robin Kundis, (2006), 'Are Marine National Monuments Better than National Marine Sanctuaries? US Ocean Policy, Marine Protected Areas, and the Northwest Hawaiian Islands', Sustainable Development Law & Policy, Vol. 81, pp. 27, 29

¹⁵ Submerged Lands Act of 1953, 43 USC §§ 1301-1303, 1311-1315 (2000)

¹⁶ State regulation is subject to the federal government's authority to regulate “commerce, navigation, national defense, and international affairs”, *Id.* at § 1314(a)

¹⁷ *Id.* at §§ 1301(a) (2), 1311

¹⁸ NMPAC, Draft Framework for Developing the National System of Marine Protected Areas” at iv (2006) at iv. “While 4.6 percent of the land area of the United States is preserved as wilderness, the area of ocean under US jurisdiction that is protected in marine reserves is a small fraction of one percent.” Pew Oceans Commission, (2003), ‘America’s Living Oceans: Charting a Course for Sea Change, Summary Report’, pp. 15

¹⁹ Craig, Robin Kundis, (2006), 'Are Marine National Monuments Better than National Marine Sanctuaries? US Ocean Policy, Marine Protected Areas, and the Northwest Hawaiian Islands', Sustainable Development Law & Policy, Vol. 81, pp. 28

²⁰ National Marine Sanctuaries Program webpage, <http://sanctuaries.noaa.gov/visit/welcome.html> Combined, the sanctuaries cover more than 18,000 square miles of ocean - Craig, Robin Kundis, (2006), 'Are Marine National Monuments Better than National Marine Sanctuaries? US Ocean Policy, Marine Protected Areas, and the Northwest Hawaiian Islands', Sustainable Development Law & Policy, Vol. 81, pp. 30

²¹ 16 USC. §§ 1431-1434 (1972)

purposes of the MPRSA are “to identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance” and “to provide authority for comprehensive and coordinated conservation and management of these marine areas, and activities affecting them, in a manner which complements existing regulatory authorities”²². Under the MPRSA, it is illegal to “destroy, cause the loss of, or injure any sanctuary resource managed under law or regulations for that sanctuary” or to possess or trade in illegally-obtained sanctuary resources²³. However, public and private uses of sanctuaries that are compatible with the primary objective of resource protection are facilitated by NOAA²⁴. Despite the “sanctuary” nomenclature, very few National Marine Sanctuaries include marine reserves²⁵.

The Coastal Zone Management Act of 1972²⁶ established the **National Estuarine Research Reserve** system, a federal-state partnership program which is currently made up of 27 reserves²⁷. The mission of the system is “to promote stewardship of the nation’s estuaries through science and education using a system of protected areas”²⁸. Each reserve in the system receives funding, national guidance, and technical assistance from NOAA. Day-to-day management is provided by a lead state agency or university.

Fishery Management Zones are areas where NOAA restricts fishing for some or all species to protect critical habitats, rebuild fish stocks, or enhance fishery yield.²⁹

The mission of the **National Park System** is “to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment for the

²² *Id.* §§ 1431(b)(1), (2)

²³ *Id.* at §§ 1436(1), (2). A “sanctuary resource” is “any living or nonliving resource of a national marine sanctuary that contributes to the conservation, recreational, ecological, historical, educational, cultural, archeological, scientific, or aesthetic value of the sanctuary.” *Id.* § 1432(8)

²⁴ 16 USC. § 1431(b)(6) (2000) (the Secretary of Commerce should “facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities”). *See also* Craig, Robin Kundis, “Taking Steps Toward Marine Wilderness Protection? Fishing and Coral Reef Marine Reserves in Florida and Hawaii,” 34 *McGeorge L. Rev.* 155, 204 (2003) (“Most, but not all, sanctuaries prohibit oil development. Beyond that prohibition almost anything goes. Sanctuaries are dredged, trawled, mowed for kelp, crisscrossed with oil pipelines and fiber-optic cables, and swept through with fishing nets.”)

²⁵ Craig, Robin Kundis, (2006), ‘Are Marine National Monuments Better than National Marine Sanctuaries? US Ocean Policy, Marine Protected Areas, and the Northwest Hawaiian Islands’, *Sustainable Development Law & Policy*, Vol. 81, pp. 30

²⁶ 16 USC. §§ 1451-1456

²⁷ National Estuarine Research Reserve System webpage, <http://www.nerrs.noaa.gov/Reserves.html>

²⁸ NMPAC, Draft Framework for Developing the National System of Marine Protected Areas” at iv (2006) at 8

²⁹ Marine Protected Areas of the United States Glossary, <http://mpa.gov/glossary.html>

same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations”³⁰. The National Park System is managed by the Department of Interior. In 2006, the National Park System contained 72 ocean and Great Lakes parks³¹.

The **National Wildlife Refuge System** includes coastal wetlands, marshes, coastal beaches, rocky shorelines, estuaries, mangroves, seagrass beds, and coral reefs³². Under authority provided by the National Wildlife Refuge System Administration Act (NWRSA) of 1966³³, the Department of Interior manages the refuge system. NWRSA provides that all human uses in each wildlife refuge must be compatible and cannot interfere with the System’s mission – wildlife conservation – and the individual refuge’s specific purposes³⁴.

National Monuments, including “objects of scientific interest” like MPAs, may be designated by the President pursuant to authority provided by the Antiquities Act of 1906³⁵. The level of protection provided by a national monument varies, depending on the language of the President’s proclamation establishing the monument. In 2006, President Bush created the Northwest Hawaiian Islands Marine National Monument, which covers 140,000 square nautical miles of ocean, making it the largest MPA in the world³⁶.

Under authority provided by the Endangered Species Act³⁷, the Department of Commerce may designate **Critical Habitats** for species listed as endangered or threatened. Areas of the ocean designated as critical habitat are subject to restricted uses under the ESA.

³⁰ 16 USC. § 1

³¹ NMPAC, Draft Framework for Developing the National System of Marine Protected Areas” at iv (2006) at 7

³² Connections: Newsletter of the National Marine Protected Areas Center, April 2003, http://mpa.gov/pdf/helpful-resources/connections/connections_apr03.pdf

³³ 16 USC. §§ 668dd-668ee

³⁴ *Id.* § 668dd(a)

³⁵ 16 USC. §§ 431-433. Challenges to national monument designations on the basis that the President’s authority is restricted to discrete man-made objects have been unsuccessful. *See, e.g., Mountain States Legal Found v. Bush*, 306 F.3d 1132 (D.C. Cir. 2002)

³⁶ Craig, *supra* note 3, at 28. The monument provides habitat for more than seven thousand marine species, twenty-five percent of which are found nowhere else, *id.*, and “effectively will become a marine reserve,” *id.* at 31

³⁷ 16 USC. §§ 1531-1544

3.3.2 *Executive Order 13158 and the Draft Framework for Developing the National System of MPAs*

In May, 2000, President Clinton issued Executive Order (E.O.) 13158 to “(a) strengthen the management, protection, and conservation of existing marine protected areas and establish new or expanded MPAs; (b) develop a scientifically based, comprehensive national system of MPAs representing diverse US marine ecosystems, and the Nation’s natural and cultural resources; and (c) avoid causing harm to MPAs through federally conducted, approved, or funded activities”³⁸. The Bush administration retained that executive order and in July 2006, in response to E.O. 13158, NOAA issued its Draft Framework for Developing the National System of Marine Protected Areas (Draft Framework). The Draft Framework “provides overarching guidance for collaborative efforts among federal, state, tribal, and local governments and MPA stakeholders to develop an effective National System of Marine Protected Areas . . . from existing sites, enhance [MPA] coordination and stewardship, and identify ecosystem-based gaps in the protection of important natural and cultural resources for possible future action by governmental MPA programs.”³⁹ The National System, as now envisioned, will “achieve conservation and management objectives that could not be accomplished by individual MPAs or MPA systems working independently”⁴⁰.

3.4 State Marine Protected Areas

Many coastal states have exercised their authority to regulate the first three nautical miles from their shores, including California and Florida. The California legislature has enacted the Marine Life Protection Act (MLPA), which provides policy guidance for identification and design of MPAs in the state⁴¹. The Act provides for a team of experts to develop a comprehensive, coordinated state MPA program⁴². The MLPA also authorizes the state agency to establish “wilderness waters” in which all extractive activities, including the taking of marine species, are prohibited⁴³.

In 1975, the Florida legislature passed the Aquatic Preserve Act⁴⁴ which provides protection for submerged aquatic marine areas holding “exceptional biological, aesthetic, and scientific value”⁴⁵. The 41 preserves currently in the system are

³⁸ 65 Fed. Reg. 34,909 § 1 (May 26, 2000)

³⁹ NMPAC, *supra* note 2, at iii

⁴⁰ NMPA, *supra* note 2, at 2

⁴¹ NRDC, “California’s Marine Life Protection Act,” <http://www.nrdc.org/wildlife/fish/acaleg.asp>

⁴² *Id.*

⁴³ *Id.*

⁴⁴ F.S. § 258.35-258.46

⁴⁵ *Id.* § 258.36

managed in a way that prohibits development, leases, and sale of submerged lands in the system unless a proposal is clearly in the public interest⁴⁶.

3.5 Challenges in the US

According to an article, in Science magazine by several experts on US MPAs, there are several challenges to ocean governance in the US and this section highlights a few of them to provide a starting point for further discussion⁴⁷.

One such challenge is the fragmentation of management between state and Federal authorities. This separation of the first three nautical miles and the subsequent 197 makes certain types of management, such as an ecosystem approach, more complex. And in cases where conflicts arise between these areas, determining the authority to resolve them can also be difficult⁴⁸.

Similarly, the variety of competing interests among stakeholders within the first three nautical miles presents additional governance problems because at times these stakeholders operate under different legal mandates. This opens the door to additional gaps and overlaps in management authority⁴⁹.

Lastly, the lack of a truly integrated approach to ocean and fisheries management in the US presents a challenge to the implementation and effective use of MPAs. This is particularly true in light of the gap in the Magnuson-Stevens Act, the law which governs fisheries, to adequately address biodiversity issues⁵⁰. However, the US is continuing to work towards more collaborative approaches, a summary of this progress can be found in the Joint Ocean Commission Initiative's 2006 Report Card⁵¹.

⁴⁶ Marine Protected Areas of the US 'Florida', http://mpa.gov/helpful_resources/states/florida.html

⁴⁷ Crowder, L. B., G. Osherenko, et al., (2006), 'Resolving mismatches in US ocean governance', Science 313: 617-618

⁴⁸ *Id.* at 617

⁴⁹ *Id.* at 617

⁵⁰ *Id.*

⁵¹ For a summary of the progress in ocean management, *see* the Joint Ocean Commission Initiative's 2006 Report Card, <http://www.jointoceancommission.org/images/report-card-06.pdf>.

4 CASE STUDY: ESTABLISHING LARGE-SCALE TRANSBOUNDARY MPA NETWORKS - THE OSPAR EXAMPLE IN NORTH-EAST ATLANTIC

December 2007

Authors:

Thomas Binet – Policy Analyst, IEEP

Indrani Lutchman - Head of the Sustainable Fisheries Programme, IEEP

4.1 Introduction

An international pledge to establish a representative network of marine and coastal protected areas by 2012 was made at the World Summit on Sustainable Development in 2002 (Report of the World Summit on Sustainable Development, 2002). In 2004, the Convention on Biological Diversity agreed upon a firm commitment to establish a network of MPA by 2012⁵². More recently the World Conservation Union (IUCN) has supported these previous commitments to implement MPA networks by producing a guide aimed at developing national and regional capacity for building MPA networks (IUCN, 2007). IUCN recognises transboundary MPAs represent a key opportunity for cooperative management including a number of high-level political initiatives.

At a European level, EU Member States have adopted legislation to protect both natural habitats and wild flora and fauna (EU habitats and birds Directives) through the establishment of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) which together contribute to a network of protected sites, the Natura 2000 network.

At the regional level, in the North-east Atlantic, the Oslo and Paris Commission ((OSPAR) are also aiming to establish a coherent network of MPAs by 2010. This commitment by the OSPAR Contracting Parties has not been easy to achieve due to the ecological, political, legal, social and economical issues relating to this geographical area (shown in Appendix 3).

This case study provides an update of current progress towards the establishment of the OSPAR MPA network. Since this network is still in the early stage of development, the case study focuses on the preliminary steps taken in establishing the MPA network in relation to the identification and selection of MPAs. The priority

⁵² “An MPA network can be defined as a collection of individual marine protected areas operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfill ecological aims more effectively and comprehensively than individual sites could alone.” (IUCN, 2007)

objectives of the network are listed and the main challenges associated with the implementation of a coherent large-scale transboundary network of MPAs are also discussed. Section 1 provides an introduction to OSPAR initiative and the basis of the network. The process of selecting sites including the criteria is further detailed in Section 2. Finally a preliminary assessment of progress towards achieving the OSPAR network is provided and some strategic questions are posed to stimulate the debate on the importance of the network.

4.2 History and background of the OSPAR initiative

The 1992 OSPAR Convention⁵³ is the current instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. The Convention represents the combination of the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution. The work programme under the Convention is adopted by the OSPAR Commission, which is made up of representatives of the Governments of 15 Contracting Parties⁵⁴ and the European Commission, representing the European Community. The activities under the Convention are guided by the Ministerial Declarations and Statements made at the adoption of the Convention and at the Ministerial Meetings of the OSPAR Commission and are largely focused on the application of the ecosystem approach to the management of human activities.

In 1998, the OSPAR Commission made a decision to “implement a network of marine protected areas” to “protect and conserve the biological diversity of the maritime area and its ecosystems which are, or could be, affected as a result of human activities, and to restore, where practicable, marine areas which have been adversely affected” .

However, the specifications relating to the MPA network came later in the 2003 Bremen Statement which was adopted by the second Ministerial meeting of OSPAR Commission. The Statement confirmed the commitment, “through working with HELCOM (Helsinki Convention) and the European Community, to identify the first set of Marine Protected Areas (MPAs) by 2006 and establish remaining gaps”. It also specified that a joint network of well-managed MPAs that, together with the European Natura 2000 network which is ecologically coherent⁵⁵ should be completed by 2010. In addition, the OSPAR Commission adopted a document detailing the guidelines for selecting and managing the OSPAR Network of marine protected areas (OSPAR, 2003) and its priority objectives⁵⁶. These objectives are largely ecological and do not

⁵³ Details about the OSPAR convention are given in <http://www.ospar.org/eng/html/welcome.html>

⁵⁴ Contracting parties to the Convention are: Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

⁵⁵ A definition of ecological coherence of MPA network has been agreed by the meeting of the working group on MPA, Species and Habitats (MASH) in Norway, 5-8 October 2004. The network should therefore be based on 14 recommendations including key criteria (e.g. connectivity of MPAs, representativity of critical habitats and species, etc.)

⁵⁶ Aims are to:

include social or economical considerations. Every year the OSPAR Commission updates the status of the OSPAR MPA network. Additionally the MPA, Species and Habitats (MASH) Working Group provides guidance on a yearly basis for the implementation of the network, with regard to its ecological coherence for instance.

4.3 Process for establishing the OSPAR network

4.3.1 Identification and selection of MPAs

This stage in the process entails three steps: identification of possible sites; prioritisation of sites for designation; and use of the criteria to meet the aims of the OSPAR network. Each of these activities is reliant on the scientific expertise and data provided by Contracting Parties.

Firstly, the identification of possible sites should be based on the ecological criteria/considerations (see Appendix 1) first defined in the guidelines provided by the OSPAR Commission for the identification and selection of MPAs (OSPAR, 2003) which were recently updated in 2007 (OSPAR, 2007b). These guidelines state that an area will qualify for selection if it meets several of the criteria defined in this document, in particular, threatened or declining species and habitats/biotopes; important species and habitats/biotopes; ecological significance; high natural biological diversity; MPAs that include representativity; sensitivity; and naturalness. In 2006, the main criteria identified were representativity, connectivity, replication and adequacy/viability and these new criteria were also adopted by the HELCOM for the selection of their network sites to allow for coherence of the networks.

Secondly, the prioritisation of sites for designation is also based on the ecological criteria but a list of practical criteria/considerations is also taken into account. These encompass markers criteria like size, potential for restoration, etc. details about these criteria are given in appendix 2. The main objective for this step is the identification of most suitable sites for the network implementation.

The third step is to ensure that there is a correlation between the criteria defined and the objectives of the OSPAR network which should lead to the identification of the final sites to be part of the network.

-
- protect, conserve and restore species, habitats and ecological processes which have been adversely affected by human activities;
 - prevent degradation of, and damage to, species, habitats and ecological processes, following the precautionary principle
 - protect and conserve areas that best represent the range of species, habitats and ecological processes in the maritime area”

4.3.2 Further steps in MPA network's development

Once the MPAs have been identified and selected the OSPAR Commission has defined a number of further steps to be undertaken. These are described in a guidance document (OSPAR, 2007b). It states that the OSPAR Commission will assess the representativity of the network in relation to the following:

- Spatial distribution;
- Relevant Dinter biogeographic provinces⁵⁷; and
- Threatened or declined habitats or species.

The Commission would consider a network established once there are a number of well- distributed sites. The next step would be the development of a management plan by Contracting Parties. Again the management plan needs to be in line with the objectives for the OSPAR network which are outlined above (refer back to the objectives of the OSPAR network).

4.4 Assessment of the OSPAR MPA network

The OSPAR Commission produces an annual report on the status of the OSPAR network of MPAs. The most recent status report was presented in 2007 (OSPAR, 2007a).

This report highlights that by the end 2006, the OSPAR network consisted of 87 sites covering an area of about 26 000 km², nominated by Contracting Parties and some have already adopted by the OSPAR Commission (see Appendix 3). The vast majority of sites nominated fall within territorial waters⁵⁸. Only 9 sites fall within an Exclusive Economic Zone (EEZ). One site is on an extended continental shelf. No sites are in areas beyond national jurisdiction.

Table 1 lists the number of sites and sizes designated by Contracting Parties.

⁵⁷ Dinter (2001) has identified a number of biogeographically-determined regions within the OSPAR Maritime area using primarily the factors of temperature, depth and currents and has validated these with biological data. The biogeographic regions proposed by Dinter should form the initial framework for incorporating biogeographic variation within the network.

⁵⁸ Territorial waters, or a territorial sea, as defined by the 1982 United Nations Convention on the Law of the Sea, are a belt of coastal waters extending at most twelve nautical miles from the baseline (usually the mean low-water mark) of a coastal state.

Table 1: Main features of the reported OSPAR MPAs by Contracting Parties (2006)

Country	Number of reported OSPAR MPAs	Total surface covered by reported OSPAR MPAs (hectares)	Average size of reported OSPAR MPAs (hectares)
France	8	27 453	3 432
Germany	4	1 192 278	298 069
Norway	6	190 539	31 756
Portugal	7	168 572	24 081
Sweden	6	97 177	16 196
United Kingdom	56	985 841	17 604

Source: Data from (OSPAR, 2007a)

It should be noted that sites selected by individual countries range in sizes with the sites selected by Germany covering a larger area whilst other countries such as France selecting a larger number of sites covering a smaller area. In addition, the sites selected vary in terms of levels of protection. For example, MPAs selected in the UK are largely Special Areas of Conservation (SAC) designated under the EC Habitats Directive, whereas fifty per cent of the areas selected in Germany are national parks, which may have different characteristic and purposes.

With regard to high seas MPAs, there has been little progress through the OSPAR system. The 2007 meeting of the MASH Working Group considered high seas MPAs, and there are plans to propose sites by April 2008. In some respects, the selection of high seas MPAs may be easier since they are areas beyond national jurisdiction and therefore involve fewer political objections to the selection of sites. In addition, there are already growing international commitments to protect and conserve vulnerable marine ecosystems in these areas that include corals and long lived, highly migratory species.

In summary, the key issues raised by the status report (OSPAR, 2007a) supplemented with information gathered from interviews with OSPAR secretariat includes:

- Currently there is a relatively small area of coverage by the MPA network with regard to the overall surface covered;
- There are no reported MPAs for Belgium, Iceland, Ireland, The Netherlands and Spain, whereas they present key countries for MPA network implementation;
- There is an uneven distribution of sites, mostly located on the coast and only one high seas MPA site has been proposed to date;
- There is some overlap between the OSPAR sites with Natura 2000 sites in the EU countries (78 of the 81 EU sites are Natura 2000 sites). This will need to be considered further since the OSPAR perspective and objectives are broader; and
- Currently there is still lack of coordination between the OSPAR and HELCOM on the development of their individual networks (i.e. different databases and different MPA selection criteria) although the OSPAR criteria were redefined in 2006 in order to be coherent with HELCOM's.

4.5 The challenges of transboundary MPA networks: The OSPAR example

Marine ecosystems, habitats and species are rarely confined to political or jurisdictional boundaries. Therefore effective management relies on cooperation between national governments and their respective institutions. In order to manage some ecosystems, species and habitats in the Northeast Atlantic, jurisdiction is shared between several authorities: the EU and its Member States, but also national authorities on the northern shore (Norway, Denmark and Iceland). The implementation of a trans-national network like the OSPAR network therefore poses a challenge to national jurisdictions. Therefore OSPAR has a key role in building political cooperation towards a network of MPAs. The OSPAR Commission has to continuously consider strategies to engage Contracting Parties whilst recognising their national powers and approaches to marine management and conservation. The approach adopted by OSPAR allows Contracting Parties a high degree of freedom in proposing sites but this is important to ensure that the Contracting Parties remain committed to the establishment of the OSPAR network.

4.6 Conclusion

This paper provides an overview of the current OSPAR MPA network and highlights some of the challenges associated with the further development of the network. It is too early to draw conclusions on the success or failure of the OSPAR network as the network is only at the first stages of implementation.

The OSPAR network can be used as a model for other regional seas such as the Mediterranean Sea where habitat protection and species conservation are important and reliant on the cooperation of a number of management and scientific bodies.

Finally this case study raises some strategic questions relating to the establishment of transboundary MPA networks:

- What is required to establish transboundary networks of MPA where there are **complex and conflicting** ecological, legislative, political, and social issues to consider?
- What strategies can be employed to **encourage** Contracting Parties to establish these types of networks?
- Which **practical approach** (legal, political and managerial) is necessary in order to achieve a coherent transboundary network of MPAs?
- Is there reliable **data** in order to implement an effective and sustainable network and monitor its effectiveness?
- What further actions are required to ensure better coordination and coherence with **adjacent transboundary networks** (e.g. HELCOM and OSPAR networks)?

4.7 References

Dinter WP, 2001, Biogeography of the OSPAR Maritime Area. Bundesamt for Naturschutz, Bonn, Germany. 167 pp.

IUCN/WCPA, 2007, Establishing Networks of Marine Protected Areas: A Guide for Developing National and Regional Capacity Building MPA Networks. Non-technical summary report.

OSPAR, 2003b, Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area (Reference number: 2003-17)

OSPAR, 2007a, 2006 Report on the Status of the OSPAR Network of Marine Protected Areas

OSPAR, 2007b, Three Initial Spatial Tests Looking at the Ecological Coherence of the OSPAR MPA Network, meeting of MASH working group, Brest (France), 5-8 November 2007

Further details have been given on the OSPAR MPA network with two members of the OSPAR:

- Jeff Ardron, Scientific Advisor on Marine Protected Areas, German Federal Agency for Nature Conservation Marine and Coastal Nature Conservation Unit; and
- Sebastian Unger, policy analyst in the OSPAR secretariat.

For further information, visit the OSPAR website: www.OSPAR.org

4.8 Appendix 1: Ecological criteria/considerations

Source: OSPAR, 2003

An area qualifies for selection as an MPA if it meets several but not necessarily all of the following criteria. The consideration and assessment of these criteria should be based on best available scientific expertise and knowledge.

1. Threatened or declining species and habitats/biotores

The area is important for species, habitats/biotores and ecological processes that appear to be under immediate threat or subject to rapid decline as identified by the ongoing OSPAR (Texel-Faial) selection process.

2. Important species and habitats/biotores

The area is important for other species and habitats/biotores as identified by the ongoing OSPAR (Texel-Faial) selection process.

3. Ecological significance

The area has:

- a high proportion of a habitat/biotope type or a biogeographic population of a species at any stage in its life cycle;
- important feeding, breeding, moulting, wintering or resting areas;
- important nursery, juvenile or spawning areas; or
- a high natural biological productivity of the species or features being represented.

4. High natural biological diversity

The area has a naturally high variety of species (in comparison to similar habitat/biotope features elsewhere) or includes a wide variety of habitats/biotores (in comparison to similar habitat/biotope complexes elsewhere).

5. Representativity

The area contains a number of habitat/biotope types, habitat/biotope complexes, species, ecological processes or other natural characteristics that are representative for the OSPAR maritime area as a whole or for its different biogeographic regions and sub-regions.

6. Sensitivity

The area contains a high proportion of very sensitive or sensitive habitats/biotores or species.

7. Naturalness

The area has a high degree of naturalness, with species and habitats/biotope types still in a very natural state as a result of the lack of human-induced disturbance or degradation.

4.9 Appendix 2: Practical criteria/considerations

Source: OSPAR, 2003.

1. Size

The size of the area should be suitable for the particular aim of designating the area, including maintaining its integrity, and should enable the effective management of that area.

2. Potential for restoration

The area has a high potential to return to a more natural state under appropriate management.

3. Degree of acceptance

The establishment of the MPA has a comparatively high potential level of support from stakeholders and political acceptability.

4. Potential for success of management measures

There is a high probability that management measures and the ability to implement them (such as legislation, relevant authorities, funding, and scientific knowledge) will meet the aims for designation.

5. Potential damage to the area by human activities

It is an area where significant damage by human activity may happen in the short term.

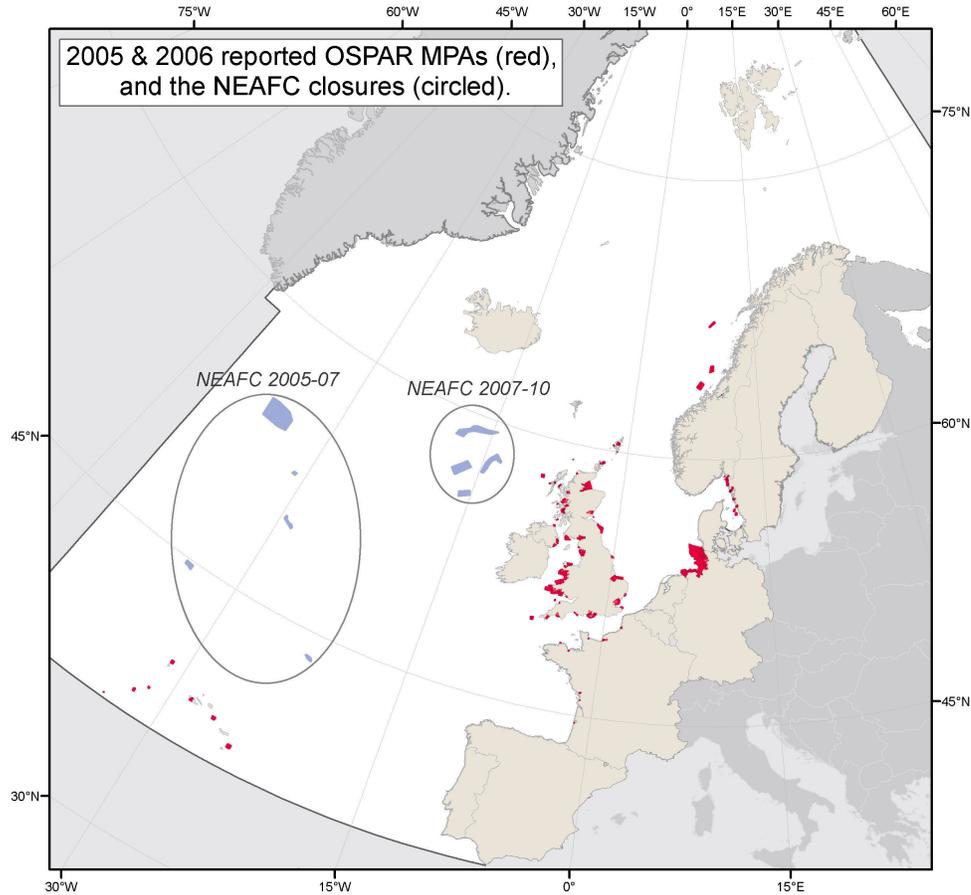
6. Scientific value

The area has a high value for scientific research and monitoring.

4.10 Appendix 3: Map of MPA nominations

Source: OSPAR, 2007a

NB: To increase visibility, the outlines of the reported OSPAR MPAs (in red) and NEAFC fisheries closures (blue)⁵⁹ are outlined slightly larger than to scale. French data are © MNHN.



⁵⁹ It is however noted that NEAFC fishery closures are not OSPAR MPAs.

5 CASE STUDY: THE DESIGNATION OF MARINE PROTECTED AREAS IN BELGIUM: FROM GOVERNMENT TO GOVERNANCE?

July 2007

Authors:

An Cliquet, Dirk Bogaert, Dino De Waen, Frank Maes
Maritime Institute, Ghent University

5.1 Introduction

In a lot of countries the process of designating marine protected areas is still ongoing. Compared to terrestrial protected areas, marine protected areas are for most countries a new subject of policy. In Belgium a new law was enacted in 1999⁶⁰ which enabled the Belgian federal government to designate marine protected areas in the Belgian marine environment (Cliquet and Maes, 1998). In this law, no formal procedures for participation or consultation were included. Between 1999 and 2006 several attempts were undertaken by the Belgian government to implement this law and designate marine protected areas. In 2005 the first Belgian marine protected areas were legally designated. The Maritime Institute of the Ghent University conducted a process analysis of these different attempts. The analysis focuses on the level of participation, or lack thereof during this process⁶¹. This contribution will try to answer the question whether there has been a shift from government to governance. A question which remains, is whether the final outcome - six designated marine protected areas - is also an ecological success.

Before we can actually describe and analyze the process, we have to give a short introduction on both the institutional and legal context in Belgium in which this process took place.

5.2 Institutional context

Belgium has a marine area of about 3,600 km² and a coastline of about 67 kilometres in length. Even in such a small area, different government levels exercise competences. There are probably only a handful of countries in which, relatively speaking, such a large number of ministers, administrations and institutions are involved on such a small maritime surface. As such, the Belgian North Sea policy can

⁶⁰ Law of 20 January 1999 on the protection of the marine environment (Wet ter bescherming van het mariene milieu in de zeegebieden onder de rechtsbevoegdheid van België), published in the Belgian Official Journal 12 March 1999. Amended by Law of 17 September 2005, Belgian Official Journal 13 October 2005

⁶¹ For a description of the process evaluation and the methodology that has been used, see Bogaert, D. *et al*, *Designation of Marine Protected Areas in Belgium: legal and ecological success?*. Marine Policy (in preparation)

be called a school example of what recently has been described in scientific literature as ‘multi-level government’.

The North Sea policy of Belgium is scattered over several institutional levels, and includes, next to international institutions, the federal government, the Flemish Region, one province (the Province of West-Flanders) and ten coastal municipalities. The federal government has competences over, among others, environmental policy and protection of the marine environment, wind farms at sea, shipping, military activities, aggregate extraction, cables and pipelines. The Flemish Region is competent for policy areas such as nature policy on the beach and the hinterland, recreation, ports, fishing, dredging, piloting and coastal defence. The North Sea policy is likewise scattered over the respective ministries, administrations and institutions.

As an example of how this fragmentation can lead to complex situations on relatively small surfaces, we take the case of the port of Zeebrugge. A nature reserve next to the port of Zeebrugge, situated on the beach up to the baseline, is a Flemish nature reserve and thus under Flemish competence. The nature reserve on the seaward side of the baseline is a federal marine reserve (based on the federal law on the marine environment) and thus a federal competence, whereas certain activities within the marine area are a Flemish competence. It is easy to understand that this complex institutional context can cause substantial problems (overlap, conflicts, gaps) (see Cliquet, 2001; Cliquet, Maes and Schrijvers, 2004).

Next to the Belgian institutional context, the international context plays an important role for the demarcation of marine protected areas. Belgium, just as other European countries, is subject to a number of international expectations and obligations. Some of the most important obligations concerning the conservation of marine biodiversity in Belgium are to be found in the Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar 1971)⁶², the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR 1992)⁶³, the Convention on Biological Diversity of Rio the Janeiro (1992)⁶⁴, and at the EU- level the Birds Directive 79/409/CEE (1979)⁶⁵ and the Habitats Directive 92/43/CEE (1992)⁶⁶. Belgium has to comply with international commitments on the designation and management of marine protected areas, such as those agreed at the World Summit on Sustainable Development, to establish a representative system of marine protected areas by 2012⁶⁷ and the decision from the 7th conference of state parties to the

⁶² Convention on Wetlands of International Importance, Ramsar, 2 February 1971

⁶³ Convention for the protection of the marine environment of the North-East Atlantic, Paris, 22 September 1992

⁶⁴ Convention on Biological Diversity, Rio de Janeiro, 5 June 1992

⁶⁵ Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, Official Journal L 103 , 25/04/1979

⁶⁶ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, Official Journal L 206 , 22/07/1992

⁶⁷ United Nations, Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August- 4 September 2002. A/Conf.199/20

Biodiversity Convention to establish and maintain (by 2012) marine and coastal protected areas that are effectively managed, ecologically based and contribute to a global network of marine and coastal protected areas⁶⁸. Also at the EU level commitments have been made regarding the conservation of marine biodiversity: the EU Biodiversity Action Plan has as objective to complete a network of Special Protection Areas by 2008 for marine areas, adopt lists of Sites of Community Importance for marine areas by 2008, designate Special Areas of Conservation and establish management priorities and necessary conservation measures for Special Areas of Conservation by 2012, and establish similar management and conservation measures for Special Protection Areas for marine areas by 2012⁶⁹.

5.3 Legal context

In order to meet the international obligations concerning the protection of its marine environment, Belgium drafted a marine protection law in 1999. After the necessary parliamentary preparations the ‘Law on the protection of the marine environment in marine areas under Belgian jurisdiction on the marine environment’⁷⁰ was approved on 20 January 1999. In the preamble of this law the importance of international legislation in general and some international principles in particular are underlined. The law clearly states that: ‘the users of marine spaces and the public authority must hold count of the prevention principle, the precautionary principle, the principle of sustainable development, the polluter-pays principle and the restoration principle’⁷¹.

Furthermore the law foresees the possibility to delimitate five types of marine protected areas. The marine protected areas can include: integral marine reserves, specific marine reserves, Special Protection Areas or Special Areas of Conservation intended to safeguard certain marine habitats or specific species, closed zones for certain activities all the year round or for a part of the year and buffer zones in which restrictions on the activities are less strict than in the marine reserves.

The marine reserves are marine protected areas with the most stringent rules. In the integral and specific marine reserves all activity is prohibited, with the exception of surveillance and control, scientific research and monitoring, shipping, professional fishing and military activities in the integral and specific reserves, and measures of

⁶⁸ CBD-COP7 Decision VII/5 Marine and coastal biological diversity

⁶⁹ Communication from the Commission, Halting the Loss of Biodiversity by 2010 - and beyond Sustaining ecosystem services for human well-being, COM (2006)216 final

⁷⁰ Law of 20 January 1999 on the protection of the marine environment (Wet ter bescherming van het mariene milieu in de zeegebieden onder de rechtsbevoegdheid van België), published in the Belgian Official Journal 12 March 1999. Amended by Law of 17 September 2005, Belgian Official Journal 13 October 2005

⁷¹ Art. 4. § 1: ‘De gebruikers van de zeegebieden en de overheid zullen bij het uitvoeren van hun activiteiten in de zeegebieden rekening houden met het beginsel van het preventief handelen, het voorzorgsbeginsel, het beginsel van het duurzaam beheer, het beginsel dat de vervuiler betaalt en het herstelbeginsel’.

management, conservation, restoration or nature development in the specific marine reserves. The reason for not automatically restricting fishing and shipping activities is the international regulatory character of these activities. However, the law of 1999 provided the possibility to restrict or prohibit professional fishing and shipping activities in the reserves, in accordance with international regulations and the specific conditions laid down in the law on the marine environment.

5.4 First attempts for the delimitation of marine protected areas: missed opportunities

5.4.1 Lack of information and participation

Almost immediately after the law was approved, a first proposal was made by the federal environmental secretary of state for the delimitation of several marine reserves (several underwater shallow sand banks and six shipwrecks).

The fact that certain activities could be prohibited or diminished in these areas quickly led to the eruption of protest against the demarcation of these marine reserves. Only three weeks after the law on the marine environment was passed, but before the publication in the Belgian Official Journal, the protest was swelling. One of the protesters was the 'Flemish association for Water Sport Nieuwpoort', which, among other things, organizes large international sail races. Their protest was sparked by the fact that the government in its draft decree prohibited offshore races between the French border and Nieuwpoort and that they were not involved in the development of the demarcation proposals.

The protesters rapidly got support from individual local politicians and municipal authorities. In a short period a coalition of fishermen, ship-owners, water sports enthusiasts and local politicians raised against the provided delimitation of marine reserves. The protest had a first peak on 20 March 1999 when 150 professional fishermen, recreational fishermen and water sports enthusiasts held a protest march in Ostend. The protesters used harsh language ('nature reserves at sea are not open to discussion') and threatened port blockades. The whole situation threatened to escalate when the protesters made reference to the 'green lobby' of the Walloon scientists of the MUMM (The Management Unit of the North Sea Mathematical Models and the Scheldt estuary), which is the institution that was responsible for drafting the designation proposals.

The discourse of the antagonists illustrated the well-known NIMBY-syndrome. The protest did not start by accident in the coastal municipalities adjacent to the proposed marine reserves. Arguments used by the antagonists were among others: problems with imposed restrictions and prohibitions on offshore activities; the expected damage to tourism, recreation and water sports; the expected damage for the economy (port, shipping, fisheries); perception of inequality between sectors (military activities were further allowed); perception of inequality between countries (in France and the Netherlands similar restrictions and prohibitions did not apply); the lack to involvement in the policy process; the problem of subsidiarity.

As was mentioned above, the law on the marine environment did not provide for a formal participation procedure, or even an information supply during the process of delimitation. Neither the responsible secretary of state, nor the administration organized an information or participation moment. The lack of participation and even information formed a substitute for disinformation. Opponents of the marine reserves could profit from this lack of information by spreading their 'truth' and opinion about the reserves. The law on the marine environment was depicted by the antagonists in the media as the law that would prohibit everything for everyone. Some of the statements were: 'even swimming will be prohibited', 'they foresee the complete prohibition of fisheries in the three most important fishing grounds', et cetera. Above all the law was considered to be a typical example of government, where all kinds of restrictions are imposed from 'Brussels' (the federal government) without consultation of local (Flemish) actors and municipalities.

5.4.2 A post-process consultation round

In response to the growing protest and the disinformation the environmental secretary of state decided to organize a consultation round with local politicians (the coastal mayors and the governor of West-Flanders) and certain administrations. The consultation round was thus initiated in a late phase of the policy process (after the approval of the law on the marine environment and after the first draft proposals were made for the designation of certain marine reserves). This was a testimony of the scant ambition level concerning participation (information supply). The coastal mayors still felt left out of the policy process or ill informed and insisted on delaying the demarcation of the marine reserves. The policy process was eventually adjusted by a consultation with all of the actors concerned, organized by the governor of the Province of West-Flanders.

On the initiative of the governor a workshop was organized in June 1999 with the objective of developing an overview of the activities which overlapped with the ecologically valuable areas and to assess the conflicts with the actors in these areas. In several working groups the government wanted to identify, among others, the possible conflicts in these areas and to document the proposals the actors made for a sustainable conservation of the marine areas. The following working groups were formed: energy distribution and communication, port activities and shipping, water sport enthusiasts, professional fisheries and recreational fisheries. During the group discussions, procedural and substantive objections were formulated. The scientific (ecological) knowledge on which the draft delimitation was based, was questioned. Moreover, the draft delimitation assumed a unilateral (ecological) approach without taking into account other sectors. Procedurally, the lack of consultation and participation in the earlier phases of the policy process was denounced.

After this first round of consultation at the workshop, it became evident that there was a need for a thorough consultation with all interested parties and not in the least with local governments. It was also clear for the federal government that there were objections from sectors and some public governing boards (mainly the Ministry of agriculture competent for fisheries) related to the content of proposals for the delimitation of the marine protected areas.

5.4.3 *Discontinuity in the North Sea policy*

After the composition of a new federal government in the summer of 1999, a new (and for the first time 'green') minister became competent for the federal department for the environment and, hence, for the development of the North Sea policy. The lack of consensus concerning the delimitation of marine protected areas and a lack of political interest and political courage of the new minister, however, led to a stop in the policy process. In 2002 the minister was forced to resign due to a controversial Belgian weapon supply to Nepal, and she was succeeded by a party member. This was the third minister competent for the marine environment in three years time.

In December 2002, the new environmental minister announced the demarcation of three Special Protection Areas for the Belgian coast in the light of the European obligations for the Birds and Habitats Directives. A slightly different approach would be followed: consultations would be held in advance with the sectors (fisheries, water sports, et cetera) concerning possible restrictions rather than the demarcation itself. As an argument the minister referred to the European directives and case law which state that for the demarcation only scientific arguments can be used. The socio-economic concerns would come up for discussion at a later stage when deciding on the management measures (and possible restrictions for users) within the reserves.

In response to this new attempt, the coastal mayors organized a press conference in which they denounced the lack of participation and the obscurity concerning the possible impact of the demarcation. They referred to the draft royal decree as the 'box of Pandora' and threatened with legal action. In other words, they wanted a coupling of the discussions concerning the delimitation and the resulting impacts.

Remarkably enough, it seems that no lessons were taken from the previous attempt to delimitate the marine reserves. The demarcation is once again perceived as a product of a top-down policy where higher governing bodies (the federal government and Europe) do not take into account lower governing bodies (coastal municipalities). The reference to the European directives on the one hand, and the exclusive importance of scientific arguments on the other hand reinforced this feeling. Essentially we can state that history repeated itself during this second attempt.

5.4.4 *A lack of (ecological) results*

Eventually this second initiative stranded, among other reasons, after a recommendation by the Belgian Council of State. Moreover, in the spring of 2003 the green political party (Agalev) was brushed aside during the federal elections and thus the green minister of environment competent for the North Sea disappeared. Four years after the approval of the law on the marine environment the delimitation of marine protected areas was still not realized. The period 1999-2003 teaches us certain matters regarding the demarcation of the marine reserves. Four years after the law on the marine environment Belgium still lacked marine protected areas. Both the first and second attempts are characterized by a lack of participation opportunities for sectors and local governments. At the same time, these groups did not show any goodwill towards the process. Both the first and second attempts are characterized by a poor (missing, late, unclear) communication. During the second attempt the federal

Government obviously neglected to learn from the past. In both attempts scientific (ecological) knowledge was paramount. Both attempts started with the demarcation to address the measures and restrictions during a later stage. Both attempts damaged the confidence in the federal (and regional) North Sea policy and in particular the concept of marine protected areas and led to a polarization. The whole period was characterized by a lack of continuity in the North Sea policy.

5.5 Successful delimitation of marine protected areas

With the new government, formed in 2003, Belgium got, for the first time in history, a Minister with a specific competence for the North Sea. This minister was not only the minister for the North Sea, he was also the vice-premier and the minister of finance within the federal government. This important position within the government proved to be a decisive element in the success of the delimitation of the marine protected areas. It was, however, the fourth minister competent for marine issues in four years time. It is clear that since 1999 the Belgian North Sea policy clearly lacked continuity.

The new minister of the North Sea promised to tackle the North Sea policy in a more incorporated manner and presented the North Sea Master Plan to accomplish this. This Master Plan is a first step towards marine spatial planning in the Belgian marine environment. The first component of the sustainable management of the North Sea included a revision of the demarcation of the sand and gravel extraction and exploration areas. It contained also a demarcation of the area for the marine wind farms. The existing environmental permit for an offshore windmill park, situated close to shore, was withdrawn. This will later on lead to a legal procedure of the energy sector against the designation of a marine protected area (see below). The demarcation of both the sand- and gravel extraction sites and the offshore windmill farms was now based on consultation rounds with stakeholders and on the basis of socioeconomic and ecological studies.

In the second phase the Master Plan foresaw concrete measures for the demarcation of the marine protected areas, after consultation with all actors concerned. During the consultation phase the minister chose to divide the actors according to type of user (fishermen, coastal mayors, et cetera). Confidential consultations were organized in the period January - March 2004 with civil servants of several departments (mobility and transport, sea fisheries, environment), with scientists and with the civil society (the environmental movement). For this, draft maps had been prepared by the staff of the minister, delimitating the spawning grounds and fishing areas together with the first proposals for the delimitation of the marine protected areas. At the same time, a list of 21 possible protective measures for these areas were proposed and were based on the knowledge of the interactions and conflicts. Next to these consultations, the staff of the minister conversed directly (bilaterally) with remaining actors. As a result, it was decided to visit the fishermen of Nieuwpoort and Zeebrugge. By doing this, the minister hoped to get to know the fleet, and hence, to gain the trust of the fishermen. The aim was to create a basis of support among the fishermen (protecting nursery grounds is an added value for the fishermen) and to regain legitimacy. Similar to the consultation rounds organized with the coastal mayors, there were consultation rounds organized with the water sport enthusiasts (jet skiers, surfers, sailors and divers).

It is clear that the approach of the minister of the North Sea strongly differs from the approaches of his predecessors. The delimitation of the marine protected areas was still based on scientific knowledge and criteria but by means of several forms of consultation this demarcation was accepted by the stakeholders. Moreover, and perhaps most importantly, the discussions concerning the measurements were held parallel to the delimitation procedure. The measures to be taken were also tackled according to a certain step-by-step plan. For each bird type/species type they stated clearly where they resided, why they are vulnerable and what does not impede them. In a second step, a list was compiled, containing positive measures which can stimulate the presence of these bird type/species and do not impede stakeholders. In the next stage, possible conflict measures were identified, that is measures that actively stimulate the presence of the bird types or other species but are in conflict with other activities. Based on this list, consultations were organized with the different stakeholder groups.

In 2005, three Special Protection Areas were delimited for birds (SBZ-V1 Nieuwpoort, SBZ-V2 Oostende and SBZ-V3 Zeebrugge) and two Special Areas of Conservation (SBZ-H1 Trapegeer Stroombank and SBZ-H2 Vlakte van de Raan)⁷². In March 2006, a sixth area was delimited: the first specific marine reserve Bay of Heist⁷³.

The final demarcation took place after the concrete protection measures were communicated to all sectors and interested parties. Users and lower governing boards were involved in the preparation by means of consultation. The draft texts for the demarcation were discussed by the minister at a meeting with the governor and the coastal mayors one week before the minister presented it to the parliament. The consultation of the stakeholders in the preparatory phase of the policy process marks an important shift in policy style. Another important modification was the fact that the government no longer focused solely on legal prohibitions and commandments. Instead, they opted for a mix of formal and informal rules, including the so called 'voluntary user agreements'.

With these agreements the government departed from a voluntary approach to the conservation of the areas. Several users, such as the water sports enthusiasts, can enter into such an agreement, in which the minister can add conditions after consultation with the users of the protected areas. In practice, the user agreements contain engagements to make a maximum effort to respecting the legislation in relation to the maintenance of the natural habitat and the protection of species. Additionally, the users commit themselves to actively inform their members and customers. If the stakeholders repeatedly, intentionally or unintentionally, violate the agreements the minister can unilaterally cancel the agreement.

⁷² Royal Decree of 14 October 2005 for the establishment of special protected areas and special areas of conservation in the marine areas under Belgian jurisdiction, Belgian Official Journal 31 October 2005. Amended by Royal Decree of 5 March 2006, Belgian Official Journal 27 March 2006.

⁷³ Royal Decree of 5 March 2006 for the establishment of a specific marine reserve in the marine areas under Belgian jurisdiction and for the amendment of Royal Decree of 14 October 2005, Belgian Official Journal 27 March 2006

The law on the marine environment was altered in order to provide for a legal basis for these user agreements. A Royal Decree of 14 October 2005⁷⁴ further works out the conditions and procedure for the user agreements. At the same time the law also includes a legal basis for making policy plans for the marine protected areas.

For each designated marine protected area a policy plan must be drawn up. The policy plans must contain information on the protection measures, the user agreements and the results of the monitoring. Based on this information the user agreements will be evaluated. The procedure for making the policy plans provides for a public inquiry, consultation meetings with users and a public consultation meeting. This shows that the policy makers had a rather high ambition level concerning participation aimed at increasing stakeholder accountability.

Notwithstanding all the efforts that were made for prior consultation and information, a legal procedure has been started against the designation of one of the marine protected areas. The opponent is Electrabel (an energy firm), which lost its environmental permit for the construction of an offshore windmill park on the Vlakte van de Raan. This area is one of the Special Areas of Conservation, in which offshore windmill parks are now prohibited.

The increase in participation is certainly a positive evolution. However, there is also a possible downside to the alterations made in the legislation. While adding a legal basis for user agreements and policy plans, also some changes were made in the rules that apply to the marine protected areas. These changes reduce the possibilities for the federal government to restrict human activities within the marine protected areas. For instance, fishing can now no longer be restricted within the marine protected areas by the federal government. If such restrictions would be necessary, it is up to the Flemish government to take the appropriate measures. The federal government motivated this legal change on constitutional grounds (change of competences). However, this is certainly questionable. It would lead us too far in this article to discuss this issue which is mostly a matter of legal discussion.

Regardless of the legal correctness, the situation today is that the federal government is limited in taking appropriate conservation measures within the marine protected areas. The question is whether the marine protected areas will not become 'empty shells'. Also, the legal regime on the user agreements contains some weaknesses. If the users do not respect the user agreements, the only sanction the government can take is to cancel the agreement. If more stringent measures are required in order to reach conservation goals, there is no legal basis for binding measures. Also user agreements are made up for a limited period of time, whereas a sustainable management of the marine environment requires a long term perspective. As no policy plans have been made yet, we cannot assess the value of these plans at this stage.

⁷⁴ Royal Decree of 14 October 2005 on the conditions, conclusion, implementation and termination of user agreements and the drawing up of policy plans for the marine protected areas in marine areas under Belgian jurisdiction, Belgian Official Journal 31 October 2005

5.6 Challenges for the future

An important step in marine nature conservation in Belgium has been taken by designating the first marine protected areas in the Belgian part of the North Sea. The restrictions to existing activities are very limited. According to the minister of the North Sea the main aim was to restrict future activities such as the construction of windmill farms in these areas. From a conservation perspective it remains to be seen whether the actual measures will be sufficient. Especially the lack of restrictions to certain types of fisheries might prove to be inadequate to acquire a favourable conservation status⁷⁵. The policy plans and the monitoring of the marine protected areas will have to analyse the ecological impact of the management of the marine protected areas. If the measures prove to be inadequate, additional measures will be required. However, the institutional complexity will not render this process easy.

Another important step in the recent North Sea policy was the inclusion of informal and formal participation mechanisms (informal consultation and information rounds, the legal possibility for user agreements, and participation in policy plans). The time and effort that was given to this participation in the last successful attempt of the designation of marine protected areas certainly helped in gaining trust and legitimacy among the users of the marine environment. The spreading of information in advance has had a positive effect on understanding the need and importance of marine protected areas. However, one might wonder whether the acceptance level is inversely proportional to the limited restrictions to existing activities. Also, not all users accepted the marine protected areas (see the above mentioned legal process by the energy firm against the designation of one of the marine protected areas). If in the future more stringent measures might seem necessary or additional marine protected areas need to be designated, the question is whether the support for the marine protected areas will remain.

The shift that was made in the Belgian North Sea policy from government towards more interactive ways of policy making (governance?) proves to be partly successful. In order to continue on the same path, continuity in the North Sea policy will be required. In June of this year (2007) federal elections were held in Belgium. The political party to which the North Sea minister belonged, will no longer be part of the federal government. At this moment it is uncertain whether the North Sea policy from the past four years will be continued and even if there will still be a minister for the North Sea.

⁷⁵ See Rabaut, M., A. Cliquet, *Marine protected areas in temperate continental shelf areas: application of a concept in the Belgian part of the North Sea*, (in preparation)

5.7 References

Bogaert, D. *et al.* 2006 La delimitation des aires marines protégées en Belgique: un exemple de bonne pratique en GIZC?. *Congrès Scientifique sur les Environnements Côtiers, Vannes, Golfe du Morbihan, 6-7 septembre 2006.*

Cliquet, A, F. Maes 1998 The new Belgian law on the protection of the marine environment, *Journal of International Wildlife Law and Policy*, 3: 395-402.

Cliquet, A. 2001 Coastal Zone Management in Belgium. *Revue juridique de l'environnement, numero spécial, Aménagement et gestion intégrée des zones côtières*: 85-106

Cliquet, A., F. Maes, J. Schrijvers, 2004 Towards Integration and Participation in Coastal Zone Decision Making for Belgium. In: D. Green (Ed.), *Delivering Sustainable Coasts: Connecting Science and Policy, Littoral 2004, Aberdeen, September 2004, Proceedings Volume 1.* Cambridge Publications. Pp.205-210.

Cliquet, A., D. Bogaert, 2006 Mariene beschermde gebieden in het Belgisch deel van de Noordzee: een eerste stap in de richting van het behoud van de mariene biodiversiteit? *Tijdschrift voor Milieurech*:165-171 [in Dutch].

6 CASE STUDY: FLORIDA KEYS: ESTABLISHING MARINE PROTECTED AREAS

February 2008

Author:

Kate Wing - Senior Policy Analyst, Ocean Program, NRDC

6.1 Introduction

The creation of marine reserves provides one of the most important and effective ways to protect the ocean. Like national parks and wilderness areas, marine reserves are areas where nothing can be taken out and only recreational and research activities are permitted. Marine reserves prohibit destructive activities like dredging and oil exploration, and they safeguard marine wildlife by excluding fishing. The result is a more diverse underwater realm, relative to exploited areas, with more large fish and pristine habitat. Hundreds of scientific articles have shown the benefits of marine reserves and other protected areas around the world.

– from the Executive Summary to NRDC’s “Keeping Oceans Wild: How Marine Reserves Protect Our Living Seas”⁷⁶.

This case study summarizes the history of and process for creating and monitoring the Florida Keys National Marine Sanctuary. This sanctuary is located within the Florida Keys, an island chain located on the southern tip of Florida that are 202 miles (356 km) to the south and west and ending 90 miles north of Cuba⁷⁷. This area also contains North America’s only living coral barrier reef which is the third largest in the world⁷⁸. In addition to the reef, this area is considered one of the “most biologically diverse assemblages of marine life in North America”⁷⁹. Given the vast diversity of environments within the Florida Keys National Marine Sanctuary, this case study also highlights the additional benefits that marine protected areas (MPAs) and networks of MPAs provide in the United States. This case study concludes with a few discussion questions to provoke debate on the key lessons learned from Florida Keys MPA experience.

6.2 Establishing Protection for the Florida Keys

Starting in 1957, when a group of conservationists and scientists began discussing the status of coral reefs and marine resources in the Florida Keys, this region spent the

⁷⁶ Weblink to full report: <http://www.nrdc.org/water/oceans/kow/kowinx.asp>

⁷⁷ National Marine Protected Areas Centre, “Case Studies- Florida Keys National Marine Sanctuary”, http://mpa.gov/helpful_resources/florida_keys.htm

⁷⁸ Ibid

⁷⁹ Ibid

next few decades fraught with management problems amid various attempts to establish effective sanctuaries. By 1981, when the Looe Key National Marine Sanctuary was established, following the Key Largo National Marine Sanctuary in 1975, these two sanctuaries signified an important step in protection for the region even though they only accounted for a small portion of the area's marine environment⁸⁰.

However, the problems in the region continued and the area saw significant deterioration throughout the 1980s due to causes that included, coral bleaching, seagrass die-offs, declines in reef fish populations, spread of coral diseases, and the running aground of three large ships⁸¹. This led to the introduction of Congressional bills in November 1989 for greater protection in this area.

Within one year from the introduction of bills calling for more protection in the Florida Keys, Congress passed a bi-partisan bill and President George Bush signed the Florida Keys National Marine Sanctuary and Protection Act into law on November 16, 1990. The act resulted in approximately 2,800 square nautical miles of state and federal waters designated as the Florida Keys National Marine Sanctuary and recognized the need to provide comprehensive protection and management of the Florida Keys' biologically diverse marine environment. This effort also recognized previous attempts to manage the resource by focusing on small sections of the coral barrier reef in a "checkerboard fashion"⁸² which only led to further decline in the coral reef resources. It was further determined that allowing the continued decline of this resource by taking a status quo management approach would result in an economic collapse given the close relationship between economic benefits and healthy marine ecosystems.

Therefore, the Sanctuary and Protection Act directed NOAA to develop a comprehensive management plan and implementing regulations for the Sanctuary in consultation with appropriate Federal, State and local governments with the Sanctuary Advisory Council⁸³.

6.3 Developing a Management Plan for the Sanctuary

Developing the management plan for the sanctuary took six years to complete. The key issues addressed in the plan came from a variety of sources, including technical workshops, public meetings and surveys, and Sanctuary Advisory Council members which consisted of members of the public, and federal, state, and local agency officials. As noted by the National Marine Protected Areas Centre,

⁸⁰ National Marine Protected Areas Centre, "Case Studies- Florida Keys National Marine Sanctuary", http://mpa.gov/helpful_resources/florida_keys.html

⁸¹ Ibid

⁸² NOAA, Florida Keys National Marine Sanctuary, "Marine Resource Protection," http://floridakeys.noaa.gov/resource_protection/welcome.html

⁸³ Ibid

One innovative component of the sanctuary management plan is the combination of sanctuary-wide regulations with a system of marine zoning. Approximately 6 percent of the sanctuary is set aside as fully protected zones known as ecological reserves, sanctuary preservation areas and special use areas. Stringent restrictions on harvesting marine life and harming natural resources govern these zones to ensure their long-term survival. Twenty-four fully protected zones exist within the sanctuary. They protect critical habitat, preserve species diversity and relieve pressure from some coral reef areas.

In 2001, the sanctuary zoning scheme outlined in the management plan was completed with the establishment of the Tortugas Ecological Reserve. This no-take reserve is located in a remote area, about 70 miles west of Key West and over 140 miles from mainland Florida and is an incredibly biologically diverse marine environment⁸⁴.

The process to create this reserve is considered a model of collaborative reserve design. This is because it was the result of a close collaboration among the National Park Service, NOAA and the Florida Keys National Marine Sanctuary to designate a type of no-take area called a Research Natural Area located within Dry Tortugas National Park that is compatible with the Tortugas Ecological Reserve⁸⁵. Furthermore, the Tortugas Ecological Reserve plan was based on a proposal drafted by the Tortugas 2000 working group and adopted by the Sanctuary Advisory Council. The 25-member working group included commercial and recreational fishermen, divers, scientists, conservationists, citizens-at-large and resource managers.

6.4 Management of the Sanctuary: Regulations and Zoning

The sanctuary is subject to a variety of regulations aimed at protecting and preserving “ecological, recreational, research, educational, historical, and aesthetic resources” while minimizing conflicts among users⁸⁶. In addition to specific regulations, marine zoning is also implemented in the sanctuary. This section will discuss how both these methods are employed.

The sanctuary employs specific regulations and techniques to ensure that these regulations are followed. For example, in the Tortugas Ecological Reserve, regulation in the reserve prohibits the taking of marine life and restricts vessel discharges. In one section of the reserve designated “Tortugas North,” regulations allow diving and snorkelling but require visitors to have a permit which helps ensure that all vessels have access to mooring buoys, eases enforcement and helps monitor human-caused impacts⁸⁷. In another section, “Tortugas South,” the regulation prohibits diving and

⁸⁴ Florida Keys National Marine Sanctuary, “What’s Special,” <http://floridakeys.noaa.gov/tortugas/whatspecial/welcome.html>

⁸⁵ Ibid.

⁸⁶ National Marine Protected Areas Centre, “Case Studies- Florida Keys National Marine Sanctuary”, http://mpa.gov/helpful_resources/florida_keys.html

⁸⁷ Ibid.

requires vessels to be continually in transit through the area and to have the fishing equipment stowed.

Techniques used in the sanctuary to ensure that regulations are followed included:

- Marking with highly visible buoys areas that are designated no-wake or that have shallow reefs to warn boaters of these critical areas and help them avoid groundings, propeller damage, or other damage to coral reefs and other habitat;
- Using mooring buoys in areas of high recreational use so boaters do not need to drop anchors that can also do similar damage;
- Educational outreach to tourists, residents, students, and recreational users of the sanctuary is also a key part of management; and
- Research and monitoring the area to track resource use and changes in the status of the marine ecosystem.

In addition to the regulations and Existing Management Areas in the Florida Keys (such as national parks, state parks, national wildlife refuges, and aquatic preserves), the sanctuary includes Wildlife Management Areas, Ecological Reserves, Sanctuary Preservation Areas, and Special-use Areas. Each of these “zone types is designed to reduce damage to resources and threats to environmental quality while allowing uses that are compatible with resource protection⁸⁸”. And in the un-zoned sections of the sanctuary, management efforts are focused on improving water quality and protecting habitat⁸⁹.

*Types of Zones in the Sanctuary*⁹⁰

- Wildlife Management Areas - established to minimize disturbance to especially sensitive wildlife populations and their habitats to ensure protection and preservation consistent with the Sanctuary designation and other applicable laws. Such areas include bird nesting, resting, or feeding areas and turtle nesting beaches. 20 of the 27 areas are under management of the US Fish and Wildlife Service and are contained in this plan as an integrated ecosystem management approach to resource protection.
- Ecological Reserves - designed to encompass large, diverse habitats. They are intended to provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life and to protect and preserve all habitats and species particularly those not protected by fishery management regulations.

⁸⁸ Florida Keys National Marine Sanctuary, “Marine Resource Protection,” http://floridakeys.noaa.gov/resource_protection/welcome.html

⁸⁹ National Marine Protected Areas Centre, “Case Studies- Florida Keys National Marine Sanctuary”, http://mpa.gov/helpful_resources/florida_keys.html

⁹⁰ This summary is from the section “Zone Types” found at: Florida Keys National Marine Sanctuary, “Marine Resource Protection,” http://floridakeys.noaa.gov/resource_protection/welcome.html

- Sanctuary Preservation Areas - focus on the protection of shallow, heavily used reefs where conflicts occur between user groups, and where concentrated visitor activity leads to resource degradation. They are designed to enhance the reproductive capabilities of renewable resources, protect areas critical for sustaining and protecting important marine species, and reduce user conflicts in high-use areas. Management of this area includes prohibition of consumptive activities and are chosen based on the status of important habitat, the ability of a particular area to sustain and protect the habitat, the level of visitor use, and the degree of conflict between consumptive and non-consumptive users.
- Existing Management Areas - identifies areas that are managed by other agencies where restrictions already exist. These zones delineate the existing jurisdictional authority of other agencies (i.e., State parks, aquatic preserves, sanctuaries, and other restricted areas). Management of these areas within the Sanctuary may require additional regulations or restrictions to adequately protect resources. Any additional management measures will be developed and implemented in coordination with the agency having jurisdictional authority. Their function is not to establish another layer of bureaucracy, but to recognize established management areas and, at a minimum, to complement the existing management programs, ensuring cooperation and coordination with other agencies.
- Special-use Areas - are zones used to set aside areas for scientific research and educational purposes, restoration, monitoring, or to establish areas that confine or restrict activities such as commercial personal watercraft operations and establish live-aboard mooring fields. These areas will minimize impacts on sensitive habitats and reduce user conflicts. Special management programs (e.g., monitoring, research, special-use permits and restoration) can be conducted without impediment in these areas. They can be used to set aside areas for specific uses such as long-term research and monitoring and/or minimizing the adverse environmental effects of high-impact activities. These zones will be limited in their length of duration.

6.5 Benefits to Marine Protected Areas and Network MPAs⁹¹

Marine protected areas and network MPAs provide a variety of benefits from natural resource protection to social and economic benefits. This section briefly highlights such benefits and encourages further discussion on how to scale up and strengthen these benefits.

- **Natural Resource Protection:** MPAs can address the continually deteriorating state of the marine environment, including fish stocks and wetland losses, by managing human activities in specific areas and by providing a more focused, ecosystem-based approach to resource

⁹¹ National Marine Protected Areas Centre, “Archives-What MPAs Provide the Nation”, http://mpa.gov/helpful_resources/archives/benefits.html

management. They provide a mechanism to prohibit activities permitted or regulated outside the MPA, such as oil exploration and fishing.

- **Historic and Cultural Resource Protection:** MPAs protect and preserve important cultural and historic resources of US marine heritage such as shipwrecks. These MPAs reduce the potential for artifacts to be removed or damaged from today's marine technology.
- **Social and Economic Benefits:** There are several social and economic benefits to MPAs and network MPAs. These include: (1) enhancing non-consumptive uses; (2) savings to tax payers because agencies are sharing resources; (3) maintaining fisheries; and (4) providing opportunities for research and education.
- **Benefits of Network MPAs:** According to the National Marine Protected Areas Centre, a network of MPAs can address the problem of how to protect important and/or representative areas without limiting human uses of vast areas of coast and ocean. They share and enhance many of the benefits of individual MPAs, such as the ones mentioned above. However, networks allow scientists to use MPAs more effectively for research and opportunities for replication. Networks can also be used to protect the entire range of habitat types within a region when all habitat types are not concentrated in a single MPA. Further, networks can serve as a link to land areas and their protected area networks.

6.6 Conclusion

As discussed in this case study, previous management efforts in the Florida Keys National Marine Sanctuary left a patchwork of piecemeal protections that were generally not effective. Today, the Florida Keys has integrated its planning efforts with the Federal, State, and local agencies. With multiple agencies involved in management and better coordination among them, the Florida Keys MPA experience is a lesson in understanding the need for integrated management as an important tool for marine ecosystem improvement.

7 CASE STUDY: CALIFORNIA'S CHANNEL ISLANDS: ESTABLISHING MARINE PROTECTED AREA NETWORKS

February 2008

Authors:

Melanie Nakagawa - Attorney, International Program, NRDC

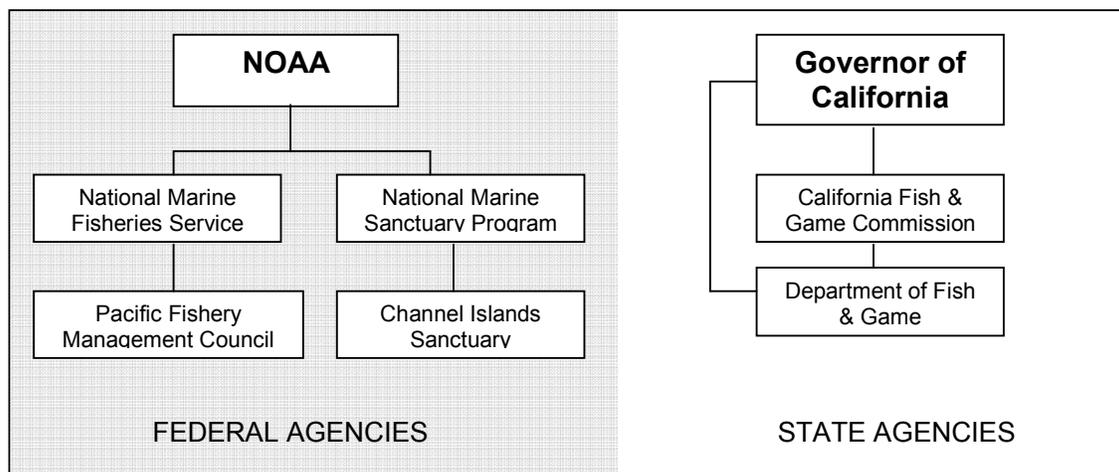
Kate Wing - Senior Policy Analyst, Ocean Program, NRDC

7.1 Introduction

San Miguel, Santa Rosa, Santa Barbara, Santa Cruz and Anacapa Islands are the northern Channel Islands, located off the coast of southern California⁹². The Channel Islands are home to one of the largest marine protected area networks in US waters, covering 320 square miles. The creation of this network was the result of an eight-year public process and a coordinated effort between the federal National Oceanic and Atmospheric Administration (NOAA) and the state of California.

7.2 Political Jurisdictions

The Channel Islands are an area with overlapping oceanographic regimes and political jurisdictions, as outlined in the figure below. In the US, a state generally has authority over the submerged lands and waters out to three nautical miles from shore. The area from three to 200 nautical miles out falls in the jurisdiction of the federal government. There are some exceptions to the three mile rule, for example, fish that swim across state lines may be managed by a federal fishery management council in both state and federal waters. The Channel Islands were also designated a National Marine Sanctuary in 1980, which applies to the waters out to six miles from shore around the islands. Although the Sanctuary Program and the Fisheries Service both reside in NOAA, the two offices have very different mandates.



⁹² A map of the islands, including the MPA boundaries, is included at the end of this case study.

7.3 The Public Stakeholder Process

In 1998, the California Fish and Game Commission received a petition to establish no-take marine reserves in 10% of the shore waters around the Channel Islands. The petition was submitted by the Channel Islands Marine Resources Restoration Committee, a non-profit sport fishing group led by Jim Donlon, a local, legendary sport fisherman. At this time the Channel Islands National Marine Sanctuary (“the Sanctuary”) was about to begin a process to revise their management plan with the participation of their Sanctuary Advisory Council, a constituent group that advises the sanctuary manager. The sanctuary manager urged the Commission to consider a joint effort between the federal sanctuary and the state Fish and Game Commission.

In 1999, the Commission approved a joint state-federal process to consider the designation of marine reserves in the Channel Islands National Marine Sanctuary. The Sanctuary Advisory Council developed a list of public stakeholder categories and invited nominations. They selected 17 members for the panel, called the Marine Reserve Working Group (MRWG), co-chaired by the federal Sanctuary manager and the director of the state Department of Fish and Game’s marine region. The MRWG members included representatives from sport and commercial fishing, diving, tourism, environmental groups, education, and science. The Sanctuary Advisory Council sought to have relative parity between members representing consumptive and non-consumptive interests on the MRWG. The MRWG was charged with providing a consensus recommendation to the Sanctuary Advisory Council. Members of the MRWG also agreed to consider only no-take marine reserves and not other types of MPAs, in part because fishermen did not want to favor one fishery over another.

While the stakeholder process was initially projected to last one year, the MRWG ultimately held 24 meetings over a two-year period as well as four major public forums, each attended by 2-300 members of the public. A federal facilitator was hired, and at the request of fishing representatives, an additional “local” facilitator was added. If any MRWG member strongly opposed a particular action, they were required to propose an alternative action that they honestly believed could be supported by a majority of the stakeholder group. While this was not always successful, it did result in a number of creative proposals; over forty different potential marine reserve networks were considered by the group.

7.4 Scientific and Socioeconomic Technical Support

The Sanctuary Advisory Council also convened a 16 member Scientific Advisory Panel to assist the MRWG by evaluating ecological and physical data and providing advice on marine reserve design. The Scientific Advisory Panel members were selected to provide local knowledge, a breadth of disciplines, and geographic and institutional balance. Because of fishermen’s concerns about ‘bias’, the Sanctuary Advisory Council excluded any scientists who had published papers on marine reserves.

A five member Socioeconomic Panel evaluated existing studies, records of catch from commercial and recreational industries in the region and gathered new economic data on non-consumptive uses. The Panel created a confidential process that allowed

commercial fishermen to identify their individual favorite fishing areas and then aggregated that data into a generalized map for each major fishery. The Socioeconomic Panel also interviewed long time fishermen and other local mariners. Finally, the Panel conducted an impact analysis study to estimate the impact of various reserve options.

7.5 Project Goals & Objectives

A consensus problem statement was the first major product of the MRWG. The problem statement said:

The urbanization of southern California has significantly increased the number of people visiting the coastal zone and using its resources. This has increased human demands on the ocean, including commercial and recreational fishing, as well as wildlife viewing and other activities. A burgeoning coastal population has also greatly increased the use of our coastal waters as receiving areas for human, industrial, and agricultural wastes. In addition, new technologies have increased the efficiency, effectiveness, and yield of sport and commercial fisheries. Concurrently there have been wide scale natural phenomena such as El Nino weather patterns, oceanographic regime shifts, and dramatic fluctuations in pinniped populations.

In recognizing the scarcity of many marine organisms relative to past abundance, any of the above factors could play a role. Everyone concerned desires to better understand the effects of the individual factors and their interactions, to reverse or stop trends of resource decline, and to restore the integrity and resilience of impaired ecosystems.

To protect, maintain, restore and enhance living marine resources, it is necessary to develop new management strategies that encompass an ecosystem perspective and promote collaboration between competing interests. One strategy is to develop reserves where all harvest is prohibited. Reserves provide a precautionary measure against the possible impacts of an expanding human population and management uncertainties, offer education and research opportunities, and provide reference areas to measure non-harvesting impacts.

The five major marine goals and objectives adopted by the MRWG were:

- Ecosystem Biodiversity: To protect representative and unique marine habitats, ecological processes, and populations of interest.
- Socioeconomics: To maintain long-term socioeconomic viability while minimizing short term socioeconomic losses to all users.
- Sustainable Fisheries: To achieve sustainable fisheries by integrating marine reserves into fisheries management.
- Natural and Cultural Heritage: To maintain areas for visitor, spiritual, and recreational opportunities that include cultural and ecological features.
- Education: To foster stewardship of the marine environment by providing educational opportunities to increase awareness and encourage responsible use of resources.

Each of the above goals included a set of 4-6 objectives that further clarified each goal.

7.6 Ecological Criteria & Network Design

During the first year of the MRWG, the scientific team collected all the available information on the ecology and natural processes in the region, resulting in a document called the “Species of Interest” report. The report detailed the status of 119 major species within the Channel Islands, including seaweeds, invertebrates, fishes, birds and seals. The Science Panel also provided the MRWG with a recommended set of ecological criteria that should be used for the establishment of marine reserves.

The criteria included:

- Biogeographical representation – Including at least one reserve in each of the three biogeographical regions of the islands.
- Connectivity – Achieve interconnected networks through replication at several sites including those with high potential for larval export or retention.
- Habitat representation – Inclusion of representative and unique habitats, classified by depth, exposure, substrate type, and plant assemblages.
- Human Threats and Natural Catastrophes – Setting aside additional areas to compensate for the destructive human activities or natural catastrophes.
- Species of Special Concern – Protecting sensitive habitats such as seabird rookeries and pinniped haul-outs.
- Vulnerable Habitats – Including giant kelp, eelgrass and surfgrass.

The MRWG asked the Science Panel to create a set of maps to illustrate various marine reserve options that would meet the MRWG goals and objectives and incorporate the ecological criteria recommended by the Science Panel. To produce these maps, the Science Panel used a Geographic Information System and a computer model that divided the Channel Islands into a grid of 1500 planning units at a scale of 1 mile by 1 mile. The size of the planning units was selected to match the scale used by the socioeconomic advisory team to collect economic data on commercial and recreational fishing activity.

The Science Panel evaluated the status of fishery resources in the Channel Islands and the MRWG goals for conservation and fisheries management. They also evaluated the existing literature on marine reserve design. Based on this evaluation the Science Panel recommended that 30-50% of Sanctuary waters—at least 30% of each major habitat type—should be included in marine reserves to achieve the conservation and fishery goals of the MRWG. This recommendation was a surprise to many of the stakeholders, particularly those who had thought choosing scientists without a ‘bias’ on marine reserves would guarantee a small network. Several highly contentious meetings followed between the MRWG and representatives of the Science Panel where actively challenged by commercial and sport fishermen actively challenged the recommendation. Ultimately, the MRWG moved on to designing proposals using a computer decision-making tool, which analyzed alternatives as to:

- 1) How well it protected adequate portions of each representative habitat,
- 2) The estimated maximum potential economic impact on various commercial and sport fishing activities.

In their assessment of alternative reserve designs, the MRWG sought to balance the goals of maximizing the ecological benefits and habitat representation while minimizing the short term economic impact to the fishing industry. During the process, the MRWG became familiar with the competing uses along every major portion of each island. The MRWG members conducted several design sessions where different combinations of 3-5 MRWG members would sit at a computer and design reserve network options. These options were then presented to the full group and critiqued by all. This process enabled all participants to better understand the various stakeholder priorities and conflicts at different sites.

There was significant debate over how much economic impact was acceptable. Fishing industry leaders argued that network of reserves should not create an adverse economic impact exceeding 10% while other MRWG members suggested that a 15-20% short term impact was acceptable. Recreational fishing leaders opposed reserves at the two islands closest to shore, which accounted for the largest percentage of recreational fishing at the islands. The estimated maximum potential loss from the final network ranged from 11-16%, depending on the fishery.

7.7 A Final Decision

In May of 2001, the MRWG was unable to reach consensus on the size and location of reserves. The environmental representatives argued for a minimum of 30% of island waters in a network of reserves. Commercial and recreational fishing interests argued for a much smaller percentage of coverage. The entire MRWG was able to agree on a core area of reserves that covered about 10% of the island waters, but this agreement failed to cover all habitat types and even omitted some islands. Since a final consensus recommendation could not be provided, the MRWG submitted a final map to the Sanctuary Advisory Council that illustrated both the core area of consensus as well as additional areas proposed by members who sought a larger network. The MRWG also submitted the consensus problem statement, marine reserve goals, objectives and implementation recommendations as well as the complete package of scientific and socioeconomic information.

The Sanctuary Advisory Council then conducted three public meetings to evaluate the work of the MRWG. They concluded that the “process was open, inclusive and community based”. On a vote of 17-1-1 the Council recommended that the federal and state co-chairs of the MRWG craft a final recommendation for delivery to the state Fish and Game Commission. Three months later, the state and federal staff produced a joint “Proposed Project” that placed 25% (approximately 400 square miles) of the Sanctuary in MPAs, including 10 no-take reserves and two partial-take conservation areas. This network is essentially the network in place today, though the size is slightly smaller due to regulatory changes and improved GIS estimates of area.

Over the next year, the Fish and Game Commission conducted four public hearings on the Channel Islands and expanded the range of networks under consideration with new options. The “Proposed Project” remained the frontrunner, due in no small part to the extensive public process that developed it. The California Fish and Game Commission voted in October 2002 to adopt the Proposed Project, and regulations

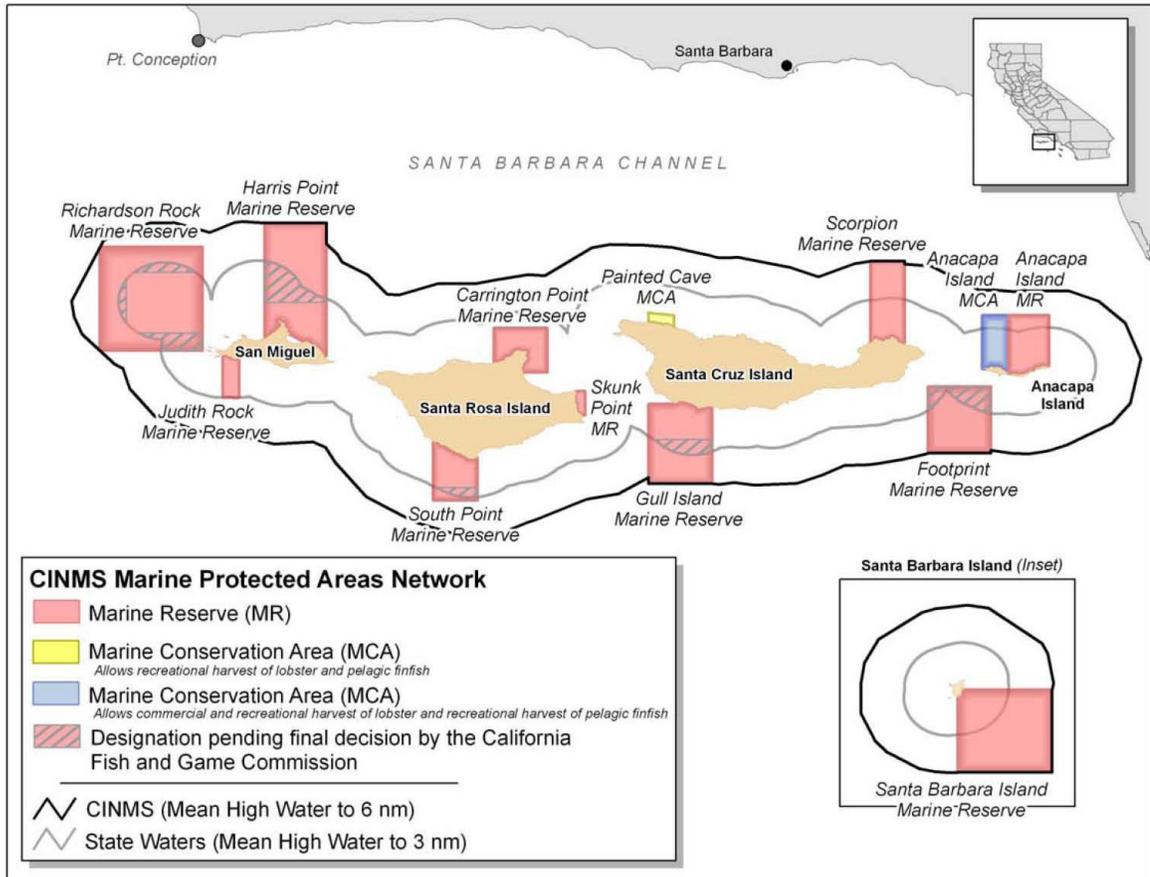
implementing the MPAs in California waters took effect in April of 2003. However, because the state only had jurisdiction over half of the Sanctuary (from 0-3 nautical miles from shore) this action adopted only half of the network.

It took four more years to complete the network in federal waters (3-6 nautical miles from shore), primarily because of debates about proper agency jurisdiction. In 2006, the Fisheries Service designated the federal water portions of the Channel Islands MPAs as “habitat areas of particular concern”, which prohibited bottom fishing in the areas. However, this did not include all types of fishing and thus the no-take marine reserves could only take effect once the agency passed regulations under the Sanctuary Act, which they did a year later in July, 2007.

7.8 Resources

Many of the documents discussed in this report are available at the Channel Islands Marine Sanctuary's marine reserve document library:

<http://channelislands.noaa.gov/marineres/supplemental.html>



8 SUMMARY OF DEBATE AND CONCLUSIONS

Transatlantic Civil Society Conference on Marine Protected Areas

15 - 16 May 2008

Brussels

Representatives of civil society organisations from the EU and US gathered in Brussels on 15 - 16 May 2008 to exchange views and experiences relating to the establishment, management and monitoring of marine protected areas (MPAs).

The T-PAGE experts meeting and final conference marked the culmination of a program of activities undertaken by NRDC and IEEP since 2006 and built on the outcomes of two teleconferences which focused on progress towards meeting international and regional targets for the establishment of MPAs in the EU and the US. The final conference provided a key opportunity for a broader group of stakeholders to discuss outstanding issues and common strategies to build support for further implementation of MPAs.

Participants at the conference represented a range of environmental non-governmental organisations (NGOs), environmental advisory councils, academic and other research institutions, as well as the fishing industry and independent experts working on different aspects of MPAs implementation. Some representatives of public authorities at the Federal and State level in the US and at the local, national and EU level in Europe also attended the conference and contributed to the debate as keynote speakers and experts.

The following is a summary of the key points based on two days of discussion and debate:

- **Legal and political aspects relating to the establishment of MPAs**

In Europe, there are three levels of law, international (global or regional, for example, OSPAR), European Community (habitats and birds Directives) and domestic law at the Member State level. In the US, there is a similar categorization of legal arrangements where the federal and state laws are equivalent to the EU and domestic system. These laws have specific deadlines and targets for the implementation of networks of MPAs.

Despite the legal obligations for action, participants agreed that meeting legal obligations to establish networks of MPAs was an ongoing challenge. Participants at the Conference discussed the role and effectiveness of different types of law in meeting MPA targets. Some key presentations highlighted progress towards implementation relating to various legal arrangements. Participants agreed that where there is a legal requirement to implement MPAs, both in the US and EU, there have been greater efforts to establish MPAs. However, while it is easy to get political commitment to take action through soft law (policies), the level of implementation in these cases is usually much lower.

- **Building support for the establishment of networks of MPAs**

Participants agreed that there is a need to build support at a number of levels to ensure establishment of networks of MPAs.

Experiences on both sides of the Atlantic have shown that it is difficult to prescribe a single best approach to ensure the establishment of MPAs or a network of MPAs. In the US, the top down and the bottom up approach have been used and have both proven to be successful. For example, in 2007, US President George Bush took a unilateral decision to declare the Hawaiian Islands MPA within 24 hours; this decision has been welcomed by stakeholders and is already in place. In other cases in the US, the bottom-up approach to establishing MPAs has been used with mixed results. In one particular case, on the east coast of the US (from North Carolina to Florida), it has taken over 15 years for stakeholders, spearheaded by the South East Council to declare this network of MPAs. Participants agreed that trust is an essential basis for co-management of MPAs where top down initiation in response to international obligations requires bottom up support to work.

In countries without strong institutional/political willingness to designate MPAs, the role of public pressure on the relevant institutions was discussed. In the US, establishing MPAs to protect species and habitats is now pitched as a political legacy; MPAs are also promoted on the basis that they are good for tourism and other businesses not linked to tourism or fisheries. In Europe, there is still a need to build support for MPAs for fisheries conservation purposes. Whilst there is greater support for MPAs for broader conservation purposes, there is skepticism about the benefits versus the costs of MPAs for fisheries purposes.

- **The role of science in the establishment of MPAs**

Participants discussed the use of science in political decision-making on MPAs and agreed that it was important that decisions should be taken on the basis of the best available science. However, uncertainty should not be used as a mask for lack of political will or used to delay decisions based on the evidence-based approach. Instead the precautionary approach should be openly used in decisions on MPA designation and implementation. Examples from both sides of the Atlantic were used to highlight instances where science has been used to delay political decisions on MPAs. Participants discussed the idea of looking beyond science and towards socio-economic issues, particularly in relation to MPAs for fisheries conservation purposes as compared to those for nature conservation. This discussion led to another interesting point on how to win stakeholder support for MPAs.

- **The role of monitoring and evaluation**

Participants agreed that monitoring MPAs is important in order to highlight the suite of benefits that MPAs provide. This is particularly important for MPAs which contain non-target and vulnerable species and habitats that are not routinely monitored as part of traditional stock assessment or other monitoring programs.

Participants also agreed that:

- Good monitoring should include a wide range of stakeholders and not just researchers;
- There is need to incorporate spillover effects in monitoring since spillovers can demonstrate value;
- The timescale for monitoring the impacts of MPAs is important. In some cases, this could be 2-3 years; in other cases there may be need for longer term monitoring programs to evaluate effectiveness of specific MPAs;
- It is important to monitor stocks and fishing activities inside and outside the MPAs in order to fully evaluate the impacts of the closed areas; and
- More funding should be allocated to monitoring programs. However, managers need to provide guidance on the types of data which should be collected and which would be useful for decision-making.

Participants agreed that monitoring is critical in the adaptive management process and that managers should be consulted on their data requirements to ensure the effectiveness of monitoring programs. Furthermore as part of the discussion on management, participants discussed ‘bioregionalisation’ as a management tool. This tool is being used in Baja California and could be useful in the EU context. However, it was highlighted that ‘bioregionalisation’ requires good data and monitoring which is currently lacking in most EU regions.

- **Monitoring and enforcement of MPAs**

Finally monitoring was discussed in the context of enforcement and the costs associated with the management of MPAs. Participants agreed that understanding the nexus of enforcement and monitoring includes understanding fishermen’s behavior, in particular, how they distribute themselves after an MPA is created. It is important to know if they have been displaced to the areas adjacent to the MPA as their activity may contribute to the effectiveness of the MPA. Recent examples in the US and EU (in the EU, the cod closure and the impact of fleet displacement outside the closure) were used to highlight the impacts of poor monitoring and enforcement programs.

- **High seas MPAs**

The establishment of high seas MPAs is currently on the international political agenda. Participants agreed that there is a need for a more comprehensive management of areas beyond national jurisdiction to protect high seas resources, vulnerable species and habitats, for example deep water corals. The need to enforce international laws and regulations adopted by regional fisheries management organisations regarding the activity of fishing vessels on the high seas was highlighted as a priority. There was support for recent development at the FAO which will require fishing vessels to notify (through transponders) their movements in and out of specific regions and zones as the lack of reporting systems is seen as a loophole in international law which needs to be addressed. There was no agreement on the type of MPA which would be most effective for high seas areas, although there was agreement that there should be larger buffer zones. There was also support for further collaborative efforts between US and EU civil society in the designation of high seas MPAs.

- **Conclusions**

The T-PAGE conference provided yet another platform for dialogue on MPAs. During the meetings, participants discussed a number of issues which have been the focus of several international, European and national conferences in recent times. Whilst the conference and its conclusions are not unique, the opportunity to share experiences of best practice in the establishment and management of MPAs between US and EU experts was timely. In both instances, whilst there is a recognition that the drivers, challenges, approaches and arrangements for implementing MPAs are different in the US and EU there is an ongoing commitment to achieve targets relating to marine biodiversity and fisheries conservation.

The CBD and WSSD targets for the establishment of MPAs by 2010 are approaching. The US and EU are key players in the international context and their achievements will be judged on their success in establishing networks of MPAs in their waters. As the case studies leading up to this conference showed, both players have the capacity and political will to further the implementation of MPAs. The challenge remains as to how to encourage stakeholders, civil society and all interested parties to work together in addressing the issues outlined during this conference.

8.1 List of Participants at T-PAGE Conference on Marine Protected Areas, 16 May 2008, Brussels

Name	Organisation
Phil Alcock	Scottish Government
Kathrine Angell-Hansen	Maritime Policy Task Force, European Commission
Søren Anker Pedersen	International Council for the Exploration of the Sea (ICES), Denmark
Armando Astudillo	DG MARE, European Commission
Thomas Binet	Independent
Richard Blackman	EUROPARC Federation
Mette Blæsbjerg	DTU Aqua
Ellen Bruno	DG MARE, Conservation unit for the Baltic and the North Sea, European Commission
Alessandro Buzzi	CIRSPE s.c.a r.l. (Italy)
Dr Marc Carr	UCSC
Maria Candela-Castillo	DG MARE
Bill Causey	Florida Keys National Marine Sanctuary
Prof. Dr. An Cliquet	Ghent University
Mat Cork	Royal Haskoning
Colleen M. Corrig	UNEP World Conservation Monitoring Centre (UNEP-WCMC), Cambridge
Anna Dmitrijewa	Assistant to Struan Stevenson MEP, Vice-President of the EPP-ED Group and Conservative Member for Scotland
Perrine Ducloy	Comité national des pêches maritimes - CNPMEM (French national committee of fisheries)
Antonio Flórez	Subdirección General de Asuntos Comunitarios, Dirección General de Recursos Pesqueros y Acuicultura (Spain)
Sonja Gantioler	IEEP
Kristina Gjerde	IUCN
Marina Gomei	IUCN
Jan Haelters	Management Unit of the North Sea Mathematical Models (MUMM)
Mrs Jorid Hammersland	Swedish Environment Protection Agency, Marine Environment Unit
Christina Heilmann Rasmussen	European Anglers Alliance (EAA)
Dennis Heinneman	Oceans Conservancy
James Hind	Gardline Group.UK
Nicolas Hoepffner	European Commission - Joint Research Centre, Institute for Environment & Sustainability, Global Environment Monitoring Unit,
Sarah Horsfall	Sea Fish Industry Authority, Edinburgh
Emilie Hugenholtz	WWF Netherlands
Iлона Jepsena	DG for Maritime Affairs and Fisheries, European Commission
Dr Peter Jones	Dept of Geography, UCL
Minsuk Jun	PhD, Dept of Geography, UCL
Konstantinos Kalamantis	European Bureau for Conservation and Development
Jan Kappel	European Anglers Alliance (EAA)

Guðríður Margrét Kristjánsdóttir	Icelandic Mission to the European Union, Embassy of Iceland
Olivier Laroussinie	AAMP
Hugh Laxton	UK Nature & Landscape Office
Mary Lewis	Countryside Council for Wales
Indrani Lutchman	IEEP
Stephen Mangi	Plymouth Marine Lab
Cora Markensteijn	Productschap Vis / Dutch Fish Product Board
Dr Christos Maravelias	DG Research, Unit E4 - Agriculture, Forestry, Fisheries, Aquaculture, European Commission
Carole Martinez	UICN Comité français
Eric Mink	Interel Cabinet Stewart/ European Dredging Association
Melanie Nakagawa	NRDC
Daniel Owen	Independent
Marc Pallemmaerts	IEEP
Guus Pastoor	Dutch federation for fish processors and importers
Tak Paulus	Directoraat Generaal Leefmilieu, Sectie Marien Milieu
Christiana Polizou	Border region Delta-Rhodopi
Geert Raeymaekers	Belgian Government - DG Environment, Marine Environment
Saskia Richardz	Greenpeace
Anastasia Roussi	The Hellenic Fishermen Confederation
Nicole Schaefer	DG MARE, E-1 Maritime Policy in Baltic and North Sea
Peter Shelley	Conservation Law Foundation
Thomas Sorenson	DTU Aqua
Despina Symons	European Bureau for Conservation and Development
Kate Tanner	RSPB
Isabelle Terrier	DG Research - Unit E4 - Agriculture, Forestry, Fisheries, Aquaculture, European Commission
Dr Graham Tucker	IEEP
Monique van de Water	North Sea Foundation, the Netherlands
Guy Vernaev	Europêche
Robert Warner	UCSB
Premachandra Wattage	Centre for the Economics and Management of Aquatic Resources (CEMARE) University of Portsmouth
Kate Wing	NRDC
Lisa Woonick	Monterey Bay National Marine Sanctuary