



Marine  
Conservation  
Society



a million  
voices for  
nature

January 2010

# Mobilising THE MARINE ACT

Implementing  
Marine Spatial  
Planning in the UK:  
lessons learned from  
international  
case studies



January 2010

# Mobilising **THE MARINE ACT**

**Implementing  
Marine Spatial  
Planning in the UK:  
lessons learned from  
international  
case studies**

This report was made possible by the kind funding from Esmee Fairburn Foundation and Tubney Foundation.

# Acknowledgements

Prepared by:

Dawn Sellers, WWF-UK, in conjunction with the Marine Conservation Society, RSPB and The Wildlife Trusts.

January 2010

The author would like to thank the following for their assistance and expertise in the compilation of this report:

Alison Champion, WWF-UK

Daniel Beaver from WWF-Australia

Gilly Llewellyn from WWF-Australia

Harvey Tyler Walters and Matt Frost from the Marine Biological Association

Jennifer Smith from WWF Canada

Joan Edwards from The Wildlife Trusts

Marijn Rabaut from Ghent University, Biology Department

Melissa Moore from Marine Conservation Society

Sabine Christiansen, marine consultant

Sharon Thompson from the RSPB

Sian Prior, marine science and policy consultant

Stephan Lutter from WWF-Germany

# Contents

Executive summary	1
Recommendations for the delivery of marine management and planning in the UK	3
Recommendations for an ecologically coherent network of MPAs in the UK	4
Recommendations for the UK working in the EU	5
1 Introduction and background	6
1.1 Review of A Marine Act for the United Kingdom?	6
1.2 Background to Marine Spatial planning and networks of Marine Protected Areas	7
1.2.1 Context	7
1.3 Introduction to the case studies	9
• Australia	9
• Canada	9
• New Zealand	9
• California	10
• Belgium	10
2 Global context	10
2.1 Key legal and policy structures	10
2.1.1 MSP and MPAs in a global context	11
2.2 Australia	11
2.2.1 Governance framework	11
2.2.2 South-east region case study	18
2.2.3 Evaluation for Australia	21
2.2.4 Conclusions for Australia	22
2.2.5 Lessons learned from Australia	23
2.3 Canada	24
2.3.1 Governance framework	24
2.3.2 Eastern Scotian Shelf case study	29
2.3.3 Evaluation for Canada	32
2.3.4 Conclusions for Canada	34
2.3.5 Lessons learned from Canada	34
2.4 New Zealand	35
2.4.1 Governance framework	35
2.4.2 Other relevant legislation/policy	39
2.4.3 Implementing bodies	40
2.4.4 New Zealand evaluation	40
2.4.5 Conclusions for New Zealand	41
2.4.6 Lessons learned from New Zealand	41
2.5 United states of america	42
2.5.1 Governance framework	42
2.5.2 California case study	44
2.5.3 California evaluation	48
2.5.4 Conclusions for California	48
2.5.5 Lessons learned from California	49

3	European and regional context	50
3.1	EU Marine Strategy Directive	50
3.1.1	MSP roadmap	50
3.2	EU Birds and Habitats Directives	52
3.3	Common Fisheries Policy	52
3.4	Strategic Environmental Assessment Directive	52
3.5	OSPAR	52
3.6	Belgium case study	53
3.6.1	Jurisdictional boundaries	53
3.6.2	Governance framework	53
3.6.3	BPNS master plan	56
3.6.4	Belgium evaluation	60
3.6.5	Conclusions for Belgium	61
3.6.6	Lessons learned from Belgium	62
4	United Kingdom	63
4.1	Governance framework	63
4.1.1	Jurisdictional boundaries	63
4.1.2	Strategic and policy context	63
4.1.3	MPAs in the UK	64
4.2	Irish Sea Pilot	65
4.2.1	Background	65
4.2.2	Key outcomes from the Irish Sea pilot	67
4.2.3	Implementing body	67
4.2.4	Current situation and lessons learned	67
4.3	The UK Marine and coastal access Act	68
4.3.1	Marine spatial planning and Marine Management Organisation	68
4.3.2	Devolved issues	70
5	UK Marine and Coastal Access Act – moving to implementation/delivery	72
6	Conclusions	73
7	Lessons learned	76
7.1	Lessons relevant to infrastructure for the delivery of MSP	76
7.2	Lessons for the implementation of MSP	76
7.3	Lessons with respect to the development of a network of MPAs	76
7.4	Lessons with regards to managing expectations	77
8	Recommendations on the delivery of MSP	78
8.1	Recommendations for the delivery of marine management and planning in the UK	78
8.2	Recommendations for an ecologically coherent network of MPAs in the UK	79
8.3	Recommendations for the UK working in the EU	79
9	References	80
10	Acronyms and abbreviations	85
	Appendix 1	87
	Appendix 2	88
	Appendix 3	89
	Appendix 4	90
	Appendix 5	91

## Executive summary

This report aims to provide guidance on the implementation of the UK Marine and Coastal Access Act 2009, in particular marine planning. It builds on an earlier report by Malcolm MacGarvin (2000) and illustrates, using case studies, how other countries are developing marine governance structures and policy, focusing on marine spatial planning (MSP). It highlights examples of good practice and lessons learnt that are of relevance to the UK. The report also covers one of the many tools to be used within an MSP framework – marine protected areas (MPAs) – which in many countries have been developed further.

The report outlines international examples of MSP in Australia, Canada, New Zealand, California and Belgium, providing the learning curve which we in the UK can utilise to develop robust, stakeholder-endorsed planning, thereby avoiding unnecessary obstacles and delays in establishing our own MSP regime in the UK.

We strongly welcome the UK Marine and Coastal Access Act 2009. We have campaigned for 10 long years for comprehensive marine legislation to protect our seas and create a new MSP regime in UK waters, and look forward to its implementation. It is important that we grasp the opportunity presented to us and ensure that it is effectively implemented, to safeguard UK marine wildlife, habitats and resources for future generations to come. The UK minister for marine and natural environment, Huw Irranca-Davies, stated that “the UK is a world leader in many aspects of marine management and protection”<sup>1</sup>. We very much hope that with full implementation of the Marine and Coastal Access Act that may be the case.

In the last five years development of MSP, particularly in Europe, has grown. Historically Australia and Canada were generally considered international world leaders in the field of marine governance; however, progress in these countries over the last 10 years has been slow, and the level of attention focusing on MSP varies. Each country discussed in this report has approached integrated ocean management in its own unique way. This report illustrates how other countries are continuing to address spatial planning in the marine environment, highlights examples of good practice and identifies important lessons learnt with particular relevance to the UK. We urge the UK government to take on board these lessons in the implementation of its own Marine and Coastal Access Act.

- **AUSTRALIA**

A lack of integration of environmental issues into a fragmentary marine policy structure, plus the need to update the current policy and law to take into account United Nations Convention on the Law of the Sea (UNCLOS) and exclusive economic zone (EEZ) law, led to the development of Australia’s Oceans Policy (AOP). The aim of AOP was to provide national coordination and consistency for marine planning and management, while allowing for regional diversity. A central feature of AOP is the introduction of regional marine plans (RMPs) to implement multiple-use, ecosystem-based management. The RMP process has provided an impetus to the development of commonwealth MPAs, feeding into the national representative system of MPAs (NRSMPA). At first glance it appears that Australia is progressing well on its approach to oceans governance and marine planning, but further analysis shows that it has both stalled on delivery and suffered some setbacks to achieving effective implementation. Over the last 10 years, progress made in Australia on the delivery of MSP has been quite disappointing, while progress in designating MPAs has been better. With regards to MPA network aims and principles, however, it is recognised that there are some limitations that need to be addressed, not least that the network is not achieving its conservation goals and that economic considerations are taking priority.

---

<sup>1</sup> Full speech available from Defra: <http://www.defra.gov.uk/corporate/about/who/ministers/speeches/irranca-davies/hid081008.htm>

- **CANADA**

Canada's Oceans Act was introduced in 1997 and aims to create an integrated approach to Canada's ocean management. Canada's Oceans Strategy (COS) was launched in July 2002, with the objectives of understanding and protecting the marine environment. Canada's Oceans Action Plan (2005 - 2007) was developed as a tool to implement COS. The Eastern Scotian Shelf integrated management (ESSIM) initiative is one approach the Department for Fisheries & Oceans (DFO) has adopted to put integrated oceans management into practice. The Eastern Scotian Shelf ocean management plan is a five-year strategic plan (2006 - 2011) for the integrated management of all policies, programmes, sectoral plans, measures and activities in or affecting the Eastern Scotian Shelf large ocean management area. Although Canada was one of the first countries to develop a policy for the management of its marine environment, in reality the process of implementation of the Oceans Act and MSP has been extremely slow. There are concerns that there has been little or no change in practices on the water. A clear shortfall with the ESSIM plan is that it does not include "spatial" planning elements, such as maps identifying marine uses, activity designations or MPAs. The fact that there is no legislative requirement for spatial planning in Canada makes the process of integrated management very slow and, as yet, there is not an approach for the management of all Canadian waters.

- **NEW ZEALAND**

Despite New Zealand's intention in 2000 to introduce a national oceans policy new legislation remains in development, and the approach to managing marine resources and planning remains piecemeal. The intention of the policy is to ensure integrated and consistent management of the ocean within New Zealand's jurisdiction. New Zealand's Resource Management Act (RMA) 1991 is the primary legislative tool for the management of the marine environment, including the terrestrial environment and the territorial seas (12nm). Implementation of MPAs in the territorial seas (TS) is reasonably well developed, with 7.6% protected and highly protected MPAs designated, which are supported by and have generated economic benefits for the local community. With respect to MSP, however, New Zealand's approach for the waters of its EEZ lags behind recent developments in Europe and in the UK. There is currently a fragmented approach to the management of marine activities, with gaps in regulation and no commitment to MSP beyond 12nm.

- **CALIFORNIA**

In the USA there is no overarching legal framework for ocean management, but there is currently a process to develop a more integrated approach. Currently the system is complex, with the environmental impact of different activities managed by different regulations, and a number of agencies are involved. The US Coastal Zone Management Act 1972 was adopted to meet the challenge of continued growth in the coastal zone. Subsequently the California Coastal Act was adopted in 1976 with the aim to protect, conserve, restore and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable use by current and future generations. The Marine Life Protection Act (MLPA) was passed in 1999, which directs the state to re-evaluate and redesign California's system of MPAs to increase coherence and effectiveness in protecting marine life and habitats, ecosystems and natural heritage. There has been some success in establishing a number of MPAs, including highly protected sites, but seemingly despite extensive stakeholder engagement in the process, a component of the stakeholders has been disenfranchised by the outcome. There has been little progress in the development of marine planning in Californian waters, however integrated coastal zone management appears to be working, but this is restricted to 3nm.

- **BELGIUM**

The North Sea is one of the most heavily exploited marine areas in the world, and the Belgian part of the North Sea lies in the centre of commercial activities. Historically, there was a top-down approach to ocean management in Belgium, with a lack of common understanding between stakeholders. Furthermore, a lack of political will and consistency within government, and a lack of continuity, poor communication and poor stakeholder

involvement (particularly on MPAs) hindered progress. Belgium's Marine Protection Act was introduced in 1999, and brought about the "master plan" that aims to serve as an overarching framework for a multi-use planning system covering the entire TS and EEZ. Belgium is among the first countries to actually start developing an operational, multiple-use planning system covering its TS and EEZ; however, in the early days discontinuity within the government department caused setbacks. More recently, however, political momentum appears to have stalled, limiting further progress. A bottom-up approach with direct contact among actors brought some success in the process to develop MSP. In addition, scientifically-based MPAs have been designated with stakeholder involvement and acceptance. Strict marine reserves have been designated, where all activities are forbidden. MPA "user agreements" are, however, voluntary and dependent on stakeholder ownership and therefore have the potential to unravel.

## **OVERVIEW OF THE RECOMMENDATIONS & OUTPUTS**

In the past decade, considerable commitment has been made politically to the development of oceans governance and MSP. Ten years ago Australia and Canada were leading the way in delivery of MSP, including networks of MPAs. Since 2000, however, their progress has been disappointing. There have also been interesting developments in New Zealand and California from which we can learn. At this stage the UK and Europe were clearly lagging behind. In the last decade, however, the UK and Europe have made significant progress, particularly with respect to political commitment, through, for example, the marine strategy framework directive and the development of the UK's Marine and Coastal Access Bill, with new experience on the ground in the Belgian part of the North Sea and in the Irish Sea (although the Irish Sea pilot is a demonstration project only).

The evaluation, conclusions and lessons learned from each case study included in this report lead to a number of recommendations of relevance to the UK's future delivery of MSP. Broadly, recommendations include:

- delivering ecosystem-based MSP
- ensuring ecologically sustainable development
- ensuring clear accountability
- developing open and transparent processes
- delivering effective and frequent communication
- facilitating early stakeholder engagement
- providing ongoing political leadership
- providing adequate funding and resources.

The recommendations can be applied to the components of the new system of marine management and protection as envisaged through implementation of the Marine and Coastal Access Act.

## **RECOMMENDATIONS FOR THE DELIVERY OF MARINE MANAGEMENT AND PLANNING IN THE UK**

### **Marine governance**

- There is a need for national coordination and consistency regarding planning and management in the marine environment, which also allows for regional diversity. A marine policy statement should be UK-wide and signed by all devolved administrations.
- The Marine Management Organisation (MMO) should be established as a whole government body, to provide advice on operational aspects of national marine policy and the central programme of regional marine planning.
- The MMO should coordinate cross-jurisdictional issues, promote the conservation and sustainable use of nature resources and collaborate on national approaches to the development of a single marine policy statement for the UK.



## **Marine policy statement**

- A marine policy statement must have clear goals, objectives, processes and timelines.
- The marine policy statement must be comprehensive, and needs to include sufficient detail to be meaningful. It should be clear about processes and timescales, thus providing clarity and setting expectations for stakeholders.

## **Marine Management Organisation (MMO)**

- A strong MMO with a clear remit to deliver sustainable development and clear duties will be crucial to the success of the UK Marine and Coastal Access Act.
- Consideration should be given to the value of establishing regional steering committees as a key institutional arrangement for the development and implementation of regional marine spatial plans, along with advisory groups.
- Adequate long-term financing is essential for the MMO to carry out the full range of its functions.

## **Marine Spatial Planning (MSP)**

- Marine planning must be carefully integrated with land-use planning and coastal zone management.
- There needs to be a coordinated and consistent approach to marine planning between UK administrations.
- MSP should be applied to the whole UK maritime area, prioritising “busy” inshore areas.
- When developing MSP in the UK, stakeholders need to be involved from the earliest stages.
- There is a need for robust leadership and realistic and clear expectations in the stakeholder engagement process. Transparency in the process of MSP is essential.
- MSP should ideally be determined according to marine ecosystems, not administrative boundaries of marine planning bodies.
- A strategic environmental assessment must be undertaken for each plan.
- Each marine plan must aim to deliver ecologically sustainable use.
- The UK government and devolved administrations need to ensure that adequate funding is secured, for development, implementation, evaluation and enforcement.
- A clear and realistic timetable for development and implementation of marine spatial planning across all UK waters is necessary.
- There is the need for a strong strategy and comprehensive guidance clarifying processes, expectations and delivery.
- Effective and regular evaluation is needed, leading to an adaptive approach to marine plans as they are sequentially developed and implemented.

## **RECOMMENDATIONS FOR AN ECOLOGICALLY COHERENT NETWORK OF MPAS IN THE UK**

- MPAs must be based on the best available science, and networks based on the principles of comprehensiveness, adequacy and representativeness.
- Early development of the network concept and its application across UK waters is essential. This requires a strong strategy and comprehensive guidance clarifying processes, expectations and delivery.
- A bioregional approach should be used to develop the MPA network, irrespective of political boundaries; where political boundaries overlap, it is important that there are bilateral/multilateral agreements.
- The value of highly protected MPAs must be recognised and highly protected MPAs should be included as a core component in the development of MPA networks.
- Throughout the process of identifying and designating MPAs, the role and remit of stakeholders should be clearly established.

- Financial security is essential for the design and implementation of an ecologically coherent network of MPAs.
- If/where the socio-economic effects of the designation of an MPA are taken into account, consideration should only occur for MPAs that are not being designated for rare or threatened wildlife, there are alternative sites of equal ecological value and to do so would not compromise the ability to achieve an ecologically coherent network of MPAs. (It should be noted that the ability to take into account socio-economic considerations is not a requirement but a discretionary power for MPAs designated under the UK Marine and Coastal Access Act).
- Stakeholder and political processes should promote the economic benefits of MPAs, including highly protected MPAs, where possible.
- Regular monitoring and review of the MPA network is essential to ensure that conservation aims and objectives are being achieved.

## **RECOMMENDATIONS FOR THE UK WORKING IN THE EU**

- With the development of the Marine and Coastal Access Act the UK has one of the most advanced frameworks for MSP, licensing and delivering an ecologically coherent network of MPAs in Europe. The government should provide leadership for the development of similar systems across Europe, for example in the implementation of the EU Marine Strategy Framework Directive and the achievement of good environmental status.

In the 10 years since MacGarvin (2000) the UK and Europe have made significant progress, while other countries, that were previously seen to be world leaders in the field of marine governance, have struggled with the realities of developing MSP. A key lesson that can be taken from the case studies highlighted in this report is that it is critical that there is continued political momentum and consistent political commitment to keep MSP moving forward. In many cases MPAs have been developed much further than MSP. In the UK, while commitment is strong, the implementation and delivery of the Marine and Coastal Access Act is fundamental to eventual success. The hard work is just beginning, and we cannot afford to ignore the lessons that can be drawn from the experience in other parts of the world.

# 1 Introduction and background

## 1.1 REVIEW OF A MARINE ACT FOR THE UNITED KINGDOM?

The report *A Marine Act for the United Kingdom?*, published in 2000, by Dr Malcolm MacGarvin (MacGarvin, 2000) analysed a number of countries that had developed marine governance structures and policies. The report focused on two case studies, Australia and Canada, that were reviewed to develop a series of recommendations for delivering and implementing a marine act in the UK. MacGarvin (2000) also provided a brief overview of marine governance and policy in New Zealand and the United States of America. The report identified a number of recommendations for the UK including:

- The UK should consider implementing an integrated marine policy, given legal status by means of a marine act.
- There needs to be an integrated marine policy at European level, including within the EU.
- The UK should take leadership within the EU, and other relevant international bodies such as OSPAR (The Convention for the Protection of the Marine Environment of the North-East Atlantic) and ICES (International Council for the Exploration of the Sea), advocating the implementation of an integrated marine policy.
- Sufficient funding is required to provide the necessary research base for the implementation of an integrated marine policy. This research should involve cooperation with Commonwealth, European and other centres of excellence.
- The development of an integrated marine policy depends upon the exercise of both rights and responsibilities within a participatory democracy. An integrated marine policy should be seen as an important opportunity to give form to the wider concept of the “stakeholder society”.

The recommendations have, to varying degrees, been developed and are discussed throughout this report. In the past decade the countries investigated have made progress to varying degrees to implement integrated ocean management. One of the key aims of this new report is to identify progress and additional measures these countries have taken since 2000. The report also aims to draw lessons from these and additional case studies, in particular with reference to marine spatial planning (MSP).

It is generally accepted that the delivery of integrated ocean management requires the following elements:

- national policy
- legislation
- institutional arrangements and infrastructure
- political will and commitment
- the incorporation of key principles e.g. the ecosystem approach
- management measures, such as marine spatial planning (MSP), networks of marine protected areas (MPAs), licensing regimes, and fisheries tools.

We strongly welcome the UK Marine and Coastal Access Act 2009. We have campaigned for 10 long years for comprehensive marine legislation to protect our seas and create a new MSP regime in UK waters, and look forward to its implementation. It is important that we grasp the opportunity presented to us and ensure that it is effectively implemented, to safeguard UK marine wildlife, habitats and resources for future generations to come. The UK minister for marine and natural environment, Huw Irranca-Davies, stated that “the UK is a world leader in

many aspects of marine management and protection"<sup>2</sup>. We very much hope that with full implementation of the Marine and Coastal Access Act that may be the case.

In the UK there has been some progress in developing a more comprehensive and integrated marine policy. A UK Marine and Coastal Access Bill was introduced into the UK parliament in December 2008 and is nearing the end of the UK parliamentary process, with royal assent expected in the autumn of 2009<sup>3</sup>. In Scotland, the Marine (Scotland) Bill was introduced into the Scottish parliament in April 2009 and is expected to become statute early 2010. The Northern Ireland executive plans to introduce a Marine Bill to the Northern Ireland assembly by 2011.

Although the passing of the UK Marine and Coastal Access Act is an important milestone, it is the implementation and delivery that will be critical. This new report takes the opportunity to review the case studies analysed in MacGarvin (2000), and investigate additional case studies – New Zealand, California and Belgium. It aims to provide examples of good practice and lessons learned which can be used to guide and inform the implementation of the UK Marine and Coastal Access Act, particularly in relation to MSP.

MSP is increasingly being seen as one of the key tools for implementing integrated ocean management. Whilst this report provides an overview of marine governance issues, for the reason outlined above this report will focus on MSP. Networks of MPAs, however, are also covered because in many cases they are further forward in their development and they form a central component of MSP.

## **1.2 BACKGROUND TO MARINE SPATIAL PLANNING AND NETWORKS OF MARINE PROTECTED AREAS**

### **1.2.1 Context**

MSP is one of a number of tools increasingly being used for managing the marine environment. It is generally used as an overarching measure under which other relevant and important tools (such as MPAs, emissions controls, no development zones, fisheries closures etc.) can be developed and utilised. MSP can be defined as:

*a process of analysing and allocating parts of the three-dimensional marine spaces to specific uses, to achieve ecological, economic and social objectives that are usually specified through the political process; the MSP process usually results in a comprehensive plan or vision for a marine region (Ehler & Douvère, 2009).*

MSP by definition involves some kind of future vision/planning. There are a number of potential benefits of MSP that can create positive outcomes for both the environment and the economy (Table 1). MSP can be used as a positive process and a mechanism to avoid user conflict, to manage marine activities more sustainably and to implement improved area-based protection and conservation of marine living resources (Maes, 2008).

---

<sup>2</sup> A speech at the Joint Local Government Information Unit/Local Government Association event on the Draft Marine Bill in October 2008. The full speech is available from Defra: <http://www.defra.gov.uk/corporate/about/who/ministers/speeches/irranca-davies/hid081008.htm>

<sup>3</sup> Once adopted, this Bill will become an Act. Therefore, from this point on this report will refer to the UK Marine and Coastal Access Bill as the 'UK Marine and Coastal Access Act' or 'Marine Act'.

**Table 1** Potential benefits of marine spatial planning (Gilliland & Laffoley, 2008)

---

- A holistic approach that addresses social, economic, and environmental objectives and so helps to achieve sustainable development
  - Better integration of marine objectives (both between policies and between different planning levels)
  - A more strategic and proactive approach that delivers long-term benefits
  - Greater certainty for developers and thus reductions in commercial risk and the net regulatory burden
  - A more efficient and accountable licensing system
  - Reduced conflicts and a more equitable situation both across and within different industry sectors in the marine area
  - Reduced risk of marine activities damaging marine ecosystems, including through improved consideration of cumulative effects
  - More informed and rational site selection for development or conservation
  - Improved capacity to plan for new and changing activities, including emerging technologies
  - More efficient use of available marine space and resources
  - Broad framework within which to understand and maximise the value of other measures such as marine protected areas
  - More strategic and cost-effective information management
- 

MSP is also generally considered to be one of the tools to help achieve an ecosystem-based approach (EBA) to marine management. In May 2009, UNESCO (United Nations Educational, Scientific and Cultural Organisation) launched a guide that lays out a “step-by-step approach for marine spatial planning toward ecosystem-based management” (Ehler & Douvère, 2009). The guide defines the 10 keys steps towards MSP as:

- Step 1:** Identifying need and establishing authority
- Step 2:** Obtaining financial support
- Step 3:** Organising the process through pre-planning
- Step 4:** Organising stakeholder participation
- Step 5:** Defining and analysing existing conditions
- Step 6:** Defining and analysing future conditions
- Step 7:** Preparing and approving the spatial management plan
- Step 8:** Implementing and enforcing the spatial management plan
- Step 9:** Monitoring and evaluating performance
- Step 10:** Adapting the spatial management process

One of the products frequently produced when undertaking an MSP exercise is a strategic plan that provides forward planning and a proactive way in which to regulate, manage and protect the marine environment. Given the sustainable management component normally associated with MSP, plans should ideally recognise ecosystem boundaries rather than political boundaries. However, where the marine plans are based on political boundaries clear agreement on objectives and management input from all parties is essential.

MPAs are one of the many tools that fall into an MSP framework. MPAs are most often established to promote the conservation of marine species and habitats. MPAs have been defined by the International Union for Conservation of Nature (IUCN) as:

*Any area of 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 promote part or all of the enclosed environment<sup>4</sup>.*

There are many types of MPA, with management styles ranging from multiple-use to strict protection within marine reserves. The process of designating, establishing and managing MPAs requires careful planning and sensitive management. Within the context of MSP, MPAs provide clarity on where and how development can take place in the marine environment.

---

<sup>4</sup> Kelleher, G. (ed) (1990) *Guidelines for Marine Protected Areas*. IUCN, Gland, Switzerland, and Cambridge, UK.

It is generally accepted that decisions on identification of MPAs should be taken on the basis of best available science. The primary purpose of monitoring and evaluation should be to ensure that aims and conservation objectives for the site are being achieved and the MPA is delivering as anticipated or contributing to the network as anticipated.

There is a considerable bank of evidence, including from the IUCN<sup>5</sup>, of the positive effects of MPAs, primarily in terms of marine biodiversity but with additional social and economic benefits from the increased biodiversity. These include nature-based recreation and tourism, providing sites as baseline for scientific research, and reducing poverty and increasing the quality of life of surrounding communities.

MPAs can bring many benefits in environmental, social and economic terms. An example of social and economic benefits can be seen in the recent economic work carried out at Cape Rodney Okahari Marine Reserve in New Zealand<sup>6</sup> (see Appendix 1).

### **1.3 INTRODUCTION TO THE CASE STUDIES**

Australia, Canada, New Zealand and California have been chosen as international case studies for this report, and Belgium has been chosen as a European case study. The rationale for the chosen case studies are outlined below.

- **Australia**

Australia was the first country in the world to develop a comprehensive national plan to protect and manage the marine environment. It has also produced regional marine plans and a set up national representative network of MPAs. However, a gap between policy and delivery has developed over recent years and raises valuable lessons that can be applied to the implementation of marine spatial planning via the UK Marine and Coastal Access Act.

- **Canada**

Canada produced its Oceans Act in 1997, which aimed to create an integrated approach to Canada's ocean management. However, more than a decade later it is yet to be implemented fully or effectively in the marine environment. Canada still does not have an approach for the management of all Canadian waters. This report highlights lessons that can be learned from Canada. For example, some obstacles to implementing the policy include lack of funding, low government priority and the failure to set an enforceable timetable for implementation.

- **New Zealand**

Although New Zealand started to develop integrated marine management many years ago, with the adoption of the Resource Management Act 1991, there has not been much development of MSP in New Zealand in the last 10 years. There is currently a fragmented approach to marine management, with huge gaps and no commitment to MSP beyond 12nm. Therefore, this case study provides useful lessons learned to be applied to the implementation of MSP in the UK.

- **California**

The development of marine policy in California started back in the 1970s, with a mission to protect, conserve, restore and enhance environmental and human-based resources of the California coast and ocean. It seems that integrated coastal zone management is generally

---

<sup>5</sup> Laffoley, D. (ed) (2008). *Towards Networks of Marine Protected Areas. The MPA Plan of Action for IUCN's World Commission on Protected Areas*. IUCN WCPA, Gland, Switzerland. 28 pp.

<sup>6</sup> The Economic Impact Analysis of the Cape Rodney Okahari Point (Leigh) Marine Reserve on the Rodney District, L.Hunt, Aug 2009.

working well in California; however, this is restricted to 3nm. This case study provides great lessons learned for the implementation of MSP in the UK, such as the need to involve stakeholders from the start in order to generate local support.

- **Belgium**

Belgium's Marine Protection Act was introduced in 1999. It offers a useful case study for implementation of MSP in a relatively small, but busy part of the North Sea. It also provides some lessons on overcoming problems which can be experienced during the adoption and implementation of legislation, such as the lack of continuity and transparency during the early stages of the accompanying policy development. Belgium's master plan is currently being implemented and has led to a more diverse zoning system, with the introduction of new management zones.

## 2 Global context

### 2.1 KEY LEGAL AND POLICY STRUCTURES

It is commonly accepted that the 1982 Law of the Sea Convention (UNCLOS) provides the legal basis for sea exploitation, the right to allocate activities and the duty to protect the marine environment. UNCLOS also provides an international framework for the conservation and management of marine wildlife and habitats.

Under UNCLOS there are seven maritime areas in which coastal member states can exercise jurisdiction (legislation and enforcement) regarding MSP: internal waters, archipelagic waters, territorial seas, contiguous zones, continental shelves, exclusive economic zones and fishery zones<sup>7</sup>.

Two key global instruments for biodiversity conservation include the World Summit on Sustainable Development (WSSD) and the Convention on Biological Diversity (CBD).

The parties to the convention agreed on a programme of action for implementing the convention with respect to marine and coastal biodiversity<sup>8</sup>, including a target to establish a network of well-managed MPAs by 2021 to enable delivery of WSSD targets.

The WSSD was a United Nations summit gathering in September 2002 at which a *Plan of Implementation of the World Summit on Sustainable Development* was agreed. The WSSD provided the fundamental principles and the programme of action for achieving sustainable development, including to establish a representative network of MPAs by 2012.

The CBD is a legally binding agreement that opened for signature in 1992. It established a framework of general obligations that parties (over 145 countries) are to elaborate in more detail at the national level. The CBD has the following objectives:

- the convention of biological diversity
- the sustainable use of biodiversity's components
- the equitable sharing of benefits derived from generic resources.

The CBD encourages parties to establish and/or strengthen institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems and plans (DeFontaubert et al, 1996).

---

<sup>7</sup> All member states have the obligation to protect and preserve the marine environment under UNCLOS (article 192). While exercising their sovereign right to exploit their natural resources following their own environmental policies, member states also have the duty to protect and preserve the marine environment (article 193).

<sup>8</sup> At their second Conference of Parties, held in Jakarta in 1995.

## **2.1.1 MSP and MPAs in a global context**

Despite the importance of our seas they are being overexploited. According to WWF's Living Planet report (2008)<sup>9</sup> based upon an evaluation of 1,175 populations of 341 marine species, global marine species declined by an average of 14% between 1970 and 2005. The world's oceans are under increasing pressure from human activity, yet less than 1% of the oceans is protected – compared to the 12% of land area under protection (UNEP, 2009). A number of states, such as Australia, Canada, California and New Zealand, have begun to work towards ecosystem-based management. Often this starts as experimenting with MSP in their marine and coastal environment. Many plans and initiatives towards MSP have established, and incorporate, existing MPA networks, with the main focus to ensure that conservation objectives are not compromised by human activity.

## **2.2 AUSTRALIA**

The coastline of Australia is 36,000km long, excluding external territories. The wide range of ecosystems in Australia, ranging from tropical to Antarctic habitats, supports a wealth of marine biodiversity, which in turn supports a broad range of commercial and non-commercial activities and has important social, cultural and indigenous values, including coastal landscapes, amenity and access.

### **2.2.1 Governance framework**

#### **2.2.1.1 Jurisdictional boundaries**

The constitution of Australia divides jurisdictional responsibilities (Figure 1) for the marine environment between the commonwealth government and the state or territory governments as follows:

- (a) local authorities have jurisdiction over the coastal region down to low-water mark
- (b) state or territory governments have jurisdiction for “coastal waters”, being from the low water mark to three nautical miles<sup>10</sup> (nm) seaward
- (c) the commonwealth government has jurisdiction over “territorial waters” from 3nm to 12nm, covering some nine million sq km
- (d) the commonwealth government has jurisdiction for the exclusive economic zone (EEZ) that extends beyond the 12nm territorial sea to a distance of 200nm in most places.

Historically, management of the seas surrounding Australia was complicated by the uncertainty created by the various jurisdictions, management functions and policies across the commonwealth and eight state and territory governments, which resulted in sectoral planning based on political boundaries rather than marine ecosystems. In order to improve the management of the marine environment Australia's Oceans Policy was developed.

#### **2.2.1.2 Australia's Oceans Policy**

Australia's Oceans Policy (AOP) was formally launched on 23 December 1998 by the commonwealth government. The initial driving force behind the AOP came from concern from managers and environmental workers regarding the lack of integration of environmental aspects into a fragmentary marine policy structure and the awareness amongst administrations of the need to update policy and law to take into account UNCLOS and the EEZ. Seven “issue papers” were released publicly, including a review of earlier research, an analysis of the public response to a draft proposal, and a survey of the attitudes of prominent members of stakeholder groups.

The aim of AOP was to provide national coordination and consistency for marine planning and management, while allowing for regional diversity. The release of AOP gave rise to Australia's

---

<sup>9</sup> Available from: [http://assets.wwf.org.uk/downloads/lpr\\_2008.pdf](http://assets.wwf.org.uk/downloads/lpr_2008.pdf)

<sup>10</sup> One nautical mile is internationally defined as 1.852 kilometres



claim to be the first country in the world to develop a comprehensive national plan to protect and manage the oceans (Australian Government, 2008).

Australia's MSP policy is underpinned by an ecosystem approach as AOP focuses on the principles of ecologically sustainable ocean use through integrated coastal management (ICM) across sectors and jurisdictions.

A central feature of the AOP was the introduction of regional marine plans (RMPs) to implement multiple-use, ecosystem-based management. The first RMP was developed in the south-east region in 2004.

Stakeholder support for the integrated approach to legislation varied. Inevitably there were some discrepancies. For example, environmental groups who saw national legislation as important, supported the policy commitments in the AOP. Others, including some industry groups, had concerns that legislation would introduce another, unnecessary, layer of bureaucracy that would add limited value to the process.

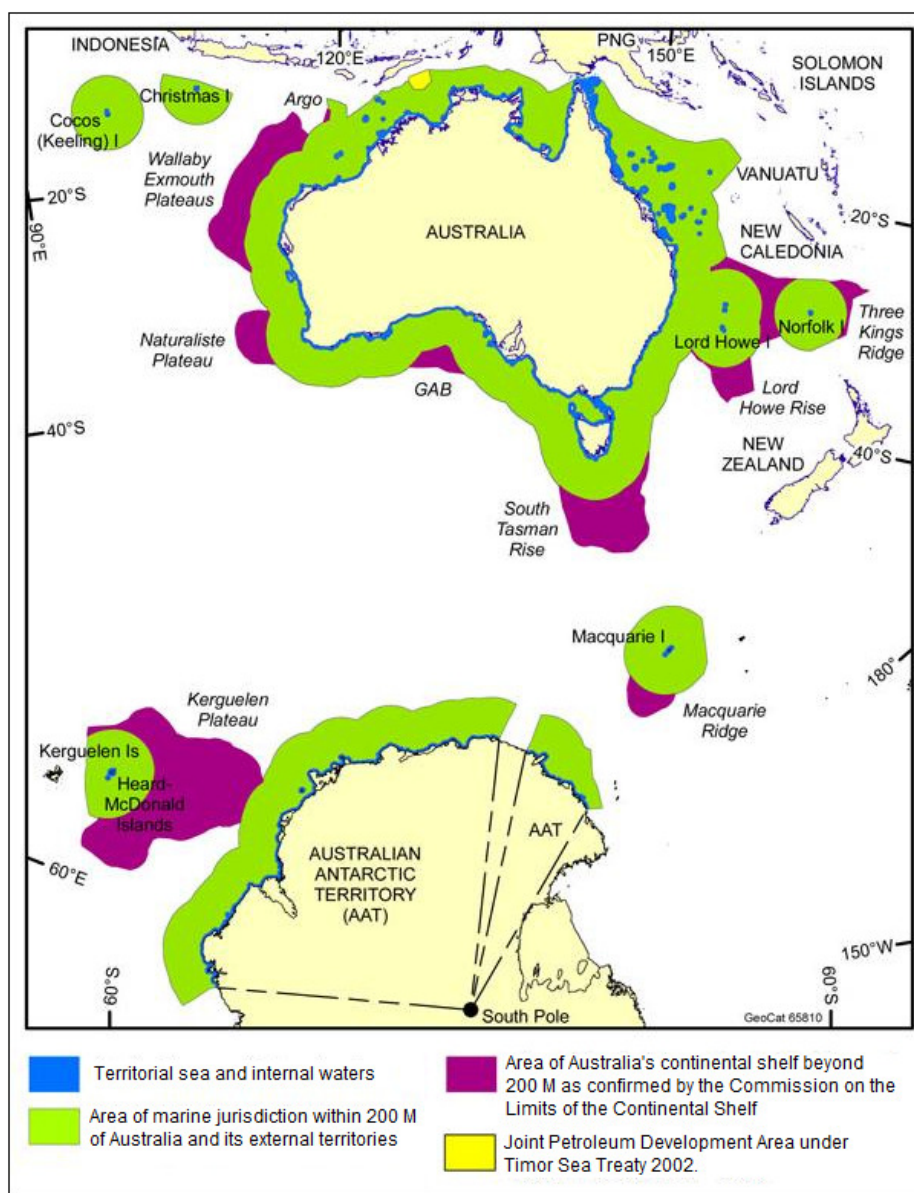


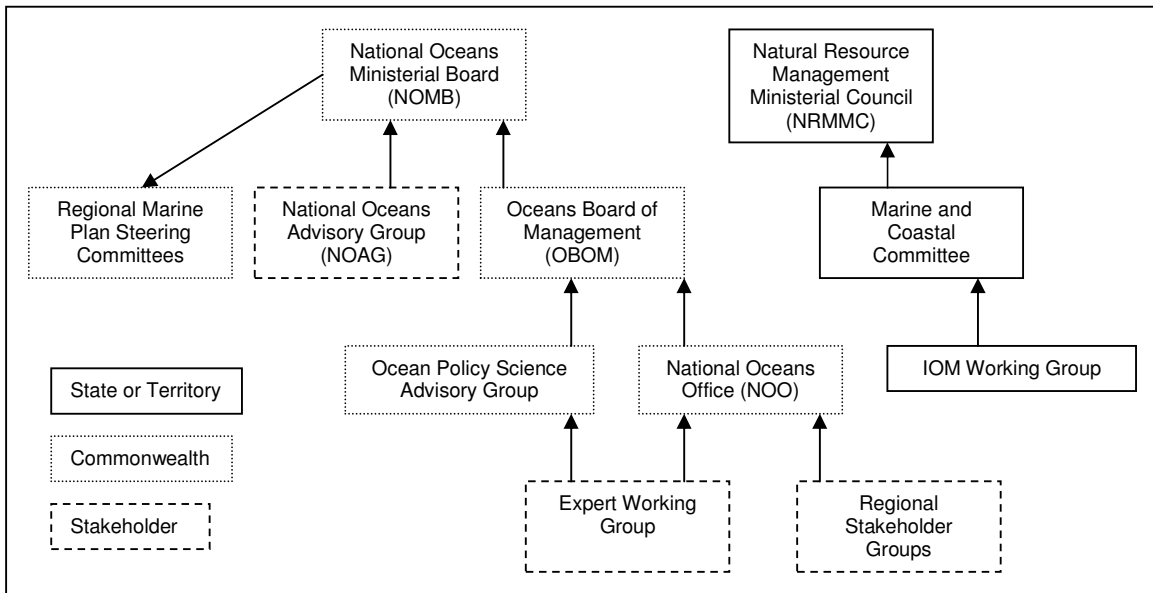
Figure 1 Map of Australia's marine jurisdiction (Modified from: [http://www.ga.gov.au/oceans/mc\\_los\\_Map.jsp](http://www.ga.gov.au/oceans/mc_los_Map.jsp))

### **2.2.1.3 Implementing body**

AOP was established with governance arrangements including those outlined in Table 2. The government proposed AUS\$50 million (approximately £25 million) over three years for the implementation of the initiatives in the AOP. The Oceans Policy is set out in two volumes, *Australia's Oceans Policy* (Commonwealth of Australia, 1998a) and *Specific Sectoral Measures* (Commonwealth of Australia, 1998b). Table 2 and Figure 2 show an overview of the institutional arrangements for implementing AOP and RMPs.

**Table 2** - Institutional arrangements for national marine governance in Australia

<b>Name of body</b>	<b>Description</b>	<b>Role</b>	<b>Date</b>
National Oceans Ministerial Board (NOMB)	Board of key Australian government ministers	Responsible for environmental, industry, resources, fisheries, science, tourism and shipping.	Dissolved in 2004
National Oceans Office	Established to provide secretariat and technical support and programme delivery for initiatives under the policy	Charged with developing a detailed and audible implementation schedule to ensure the conservation and ecologically sustainable use of Australia's oceans identified during development of the policy.  From 2004 onwards, the National Ocean Office reports to the minister for the environment and heritage (in the new marine division of the Department of the Environment, Water, Heritage and the Arts), rather than the NOMB, and continues to have lead responsibility for regional marine planning.	Until 2004  From 2004
Oceans Board of Management	Comprises representatives from seven Australian government departments and agencies relevant to Australia's marine jurisdiction.	Formed to provide high-level, whole-government advice on operational aspects of AOP and its central programme of regional marine planning.	Set up in 2003
Natural Resource Management Ministerial Council (NRMMC)	NRMMC took over the Australian and New Zealand Environment and Conservation Council's role when it was disbanded in 2002.	Represents states with the aim to coordinate cross-jurisdictional issues and promote the conservation and sustainable use of Australia's natural resources.	From 2002
Integrated Oceans Management Working Group	Consists of commonwealth and states working in collaboration to develop a national approach to integrated ocean management. (Part of NRMMC)	Work centres on establishing a framework and appropriate institutional arrangements to deal with oceans-related issues as they arise. For state and commonwealth collaboration and development of national approaches to integrated oceans management.	Set up in 2002
National Oceans Advisory Group	A commonwealth advisory body (non-government). Predominantly comprises members with non-government interest.	Established by the Australian government to implement Australia's Ocean Policy, and also acts as a forum for exchanging information and views between the various ocean sectors.	
Oceans Policy Science Advisory Group	Comprises representatives of Australian government marine science and related agencies, as well as state research institutions and non-government marine science interests.	This group was formed to promote coordination and information sharing between government marine science agencies and across the broader Australian marine science community.	Set up in 2003
Regional Marine Plan Steering Committees	Key government and non-government stakeholders. Established by the NOMB.	Key institutional arrangement in the implementation process.	



**Figure 2** Hierarchical structure of the institutional arrangement of AOP and RMPs in Australia (adapted from Foster *et al*, 2005)

#### 2.2.1.4 Regional marine plans

RMPs are the primary commonwealth mechanism for implementing the ecosystem-based principles of AOP<sup>11</sup>. RMPs are based on large marine ecosystems<sup>12</sup> and are legally binding on all commonwealth agencies. RMPs divide the areas into “natural boundaries” where the ecosystem of each region can be considered as a whole (Vince, 2006). The RMP process comprises four phases of development:

- the scoping, or definition of the plan
- determining the economic, social, environmental and cultural characteristics of the region via assessments
- developing potential options
- analysing those options in order to implement the plan.

The commonwealth terms of reference for the RMPs include:

- implementing ecosystem-based management as the basis for decision-making and management
- promoting ecologically sustainable marine-based industries that contribute to regional development
- developing integrated management of sectoral activities and achieving strong efficient cross-sector linkages
- working towards consistency in management across jurisdictional boundaries when impacting upon the same oceans resource or sector
- leading to clearly defined and agreed RMP outcomes that are integrated across all sectors
- leading to fair decision-making and conflict resolution regarding access to oceans resources within and between generations
- increasing involvement of resource users and the community at large in planning and decision-making
- engendering long-term responsible use of oceans resources – stewardship
- providing flexible management arrangements that focus on measurable outcomes coordinated across sectors

<sup>11</sup> Australian Government (2008). Department of the Environment, Water, Heritage and the Arts. More information available from: <http://www.environment.gov.au/coasts/oceans-policy/index.html>

<sup>12</sup> Large marine ecosystems are biogeographically distinct ecosystem units and provide an appropriate spatial scale for ecosystem-based regional ocean governance.

- contributing to adaptive management based on monitoring and evaluation of outcomes of management against expected performance including providing for auditing and review processes
- establishing clear and agreed definitions of issues and terminology.

State or territory governments are not required to implement AOP or RMPs inside their administrative boundaries. As a result, RMPs hold no legislative authority within state and territory jurisdictions.

In an attempt to encourage cooperation between the different levels of government, the commonwealth established institutional arrangements with the aim to develop cross-sectoral management within state or territory waters through a memorandum of understanding (MoU). Implementation of the RMPs is dependent on the institutional arrangements, as shown in Table 2 and Figure 2.

In 2005 the Australian government brought its programme of regional marine planning directly under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The EPBC Act is the Australian government's central piece of environmental legislation, which provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places<sup>13</sup>. The plans are subsequently known as marine bioregional plans to reflect the part of the EPBC Act under which they will be established.

This initiative gave new impetus for the implementation of Australia's Oceans Policy by streamlining the planning process and providing greater guidance about marine environment conservation priorities (Australian Government 2002a). The process includes the identification and establishment of marine protected areas (MPAs) in the commonwealth-managed waters around Australia (which exclude the coastal waters managed by the states and Northern Territory).

The waters around Australia have been divided into five marine regions (south-east, south-west, north-west, north and east) as shown in Figure 3. These five areas do not cover the whole area shown in Figure 1. Each marine region is further divided into bioregions based on ecological similarities, species distributions and oceanographic and seafloor characteristics. Australia has used the concept of marine bio-regionalisation as a platform for the development of MSP since the late 1990s. These bioregions reflect the understanding of the region's ecology and underpin the spatial management process. These bioregions are the basis for the development of a national representative system of marine protected areas (NRSMPA) (see Text Box 1).

A plan and bioregional profile for the south-east marine region has been completed but is yet to be fully implemented. The other four plans are in development and should be completed by 2012.

---

<sup>13</sup> For more information on Australia's Environment Protection and Biodiversity Conservation Act 1999 please visit: <http://www.environment.gov.au/epbc/about/index.html>

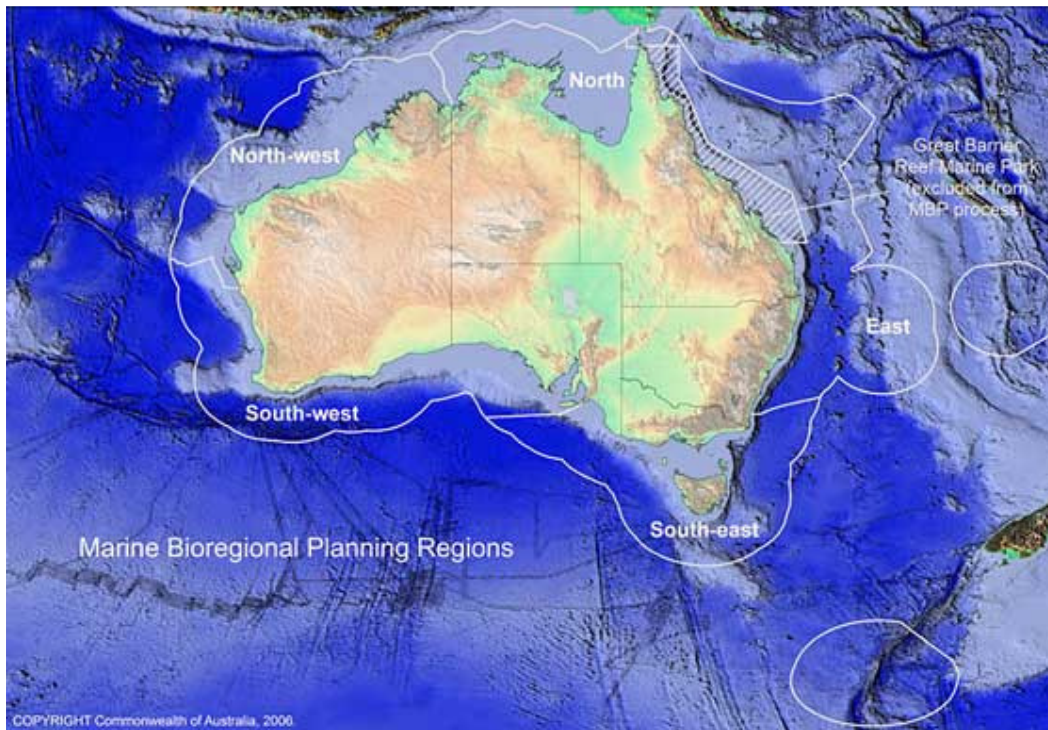


Figure 3 Marine biological regions (Australian Government, 2006)

### Text Box 1

#### National Representative System of Marine Protected Areas

Since the early 1990s Australia's state or territory and commonwealth governments have been working together to set up a national representative system of marine protected areas (NRSMPA) throughout the entire marine jurisdiction. In 1998 the Australian and New Zealand environment and conservation council task force on marine protected areas (ANZECC TFMPA) delivered an important milestone in the process to protect Australia's marine biodiversity, with the publication of the *Guidelines for Establishing the National Representative System of Marine Protected Areas* (ANZECC TFMPA, 1998). These guidelines outline the policy framework for the development of a "comprehensive, adequate and representative system of MPAs to contribute to the long-term ecological viability of marine and estuarine systems, to maintain ecological processes and systems, and to protect Australia's biological diversity at all levels". Government also released the *Strategic Plan of Action for the National Representative System of Marine Protected Areas: A Guide for Action* (ANZECC TFMPA, 1999).

The NRSMPA:

- forms part of an integrated strategy for marine conservation and management;
- is a national system of MPAs that aims to contain a comprehensive, adequate and representative sample of Australia's marine ecosystems; and
- consists of MPAs in commonwealth, state and territory waters.

Ultimately the goal of the NRSMPA is to establish MPAs that represent all major ecological regions and the species and habitats they contain, under the EPBC Act. In 2004 the NRSMPA covered approximately 648,000sq km, or 7% of Australia's marine jurisdiction, excluding the Australian Antarctic Territory.

The guidelines produced by the ANZECC TFMPA (1998) establish nine principles and seven secondary goals for the establishment of the NRSMPA (Appendix 2).



## 2.2.2 South-east region case study

### 2.2.2.1 South-east regional marine plan

The South-east regional marine plan (SERMP) was launched by the minister for environment and heritage, Hon. Dr David Kemp, on 21 May 2004, and was the first RMP to be evaluated by the Australian commonwealth government. The south-east marine region (Figure 4) covers more than 1.6 million square kilometers of water off the coast of Victoria, Tasmania (including Macquarie Island), southern New South Wales around the town of Bermagui, and eastern South Australia from the South Australia/Victoria border to Victor Harbor (Australian Government, 2006). It covers a complex region with four state governments and numerous local governments having some jurisdiction over the region.

The commonwealth worked with states through the south-east states consultative working group in the development of the SERMP to address cross-jurisdictional issues in the south-east region. This working group provides an opportunity for state officers to keep informed on progress related to the SERMP and to RMP processes.

The objective of the SERMP has evolved into the development of an ecosystem-based decision-making process. This will be a framework for making management and policy decisions at the regional level, whilst identifying specific issues that need to be addressed in meeting the objectives of the SERMP.

The SERMP is divided into three main sections:

- the way forward
- action plan
- status reports.

Whilst the Australian NGOs (non governmental organisations) found the SERMP to be a positive development, they recognised that there is still some progress to be made regarding ecosystem management. The plan was considered “a useful first step towards securing integrated management of all human activities in the marine environment covered by the plan” (WWF-Australia, 2004).

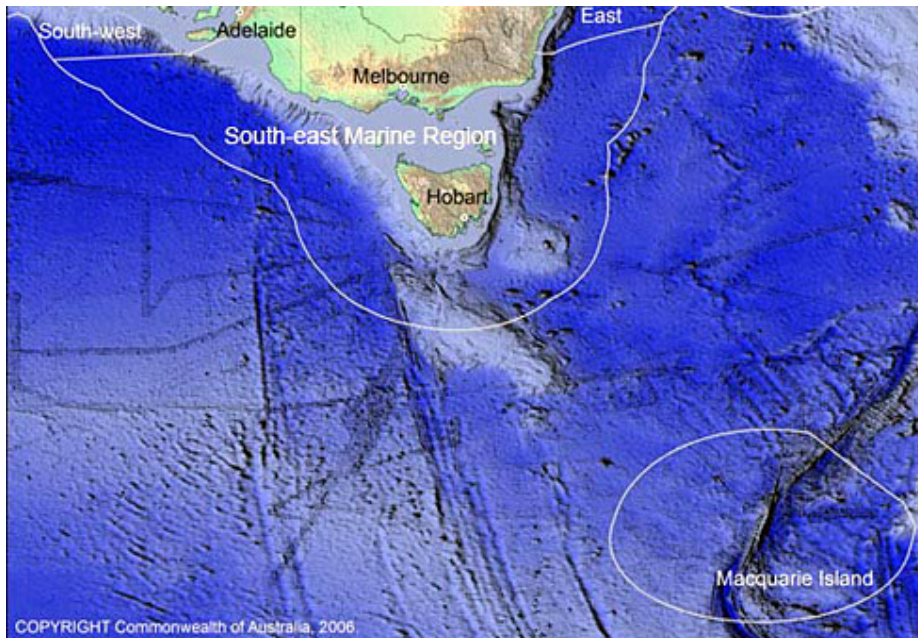


Figure 4 South-east marine region (Australian Government, 2006)

The area is recognised as having global significance for marine biodiversity, including whales, seals, sharks and tuna. Within the region more than 120 species are listed as having conservation significance under state or commonwealth legislation (Australian Government 2002b). The SERMP is broken down into sections reflecting AOP and then assigned corresponding regional objectives and sub-objectives that are addressed with specific actions outlined in the action plan.

The SERMP process has resulted in some communication between the states from the southern region and the commonwealth on a state officer level, through the south east states consultative working group. Regional forums/advisory groups develop their own priorities and operational framework within the overall framework of the national approach, and report to the national coordinating group. The aim of such groups is to ensure that each level of decision-making and evaluation reflects the overarching goals and objectives of the national policies and also those policies and guidelines set by government arrangements.

In 2006, a network of MPAs was announced for the marine region as part of this plan. The South-east bioregional marine plan was developed under the marine bioregional planning program, which is due to be completed by 2010 (see section 2.2.1.7). The south-east region consists of 16 bioregions, each with unique geophysical environments. The plan will enable more accessible information to be generated in order to influence the way marine issues are regulated for environmental protection.

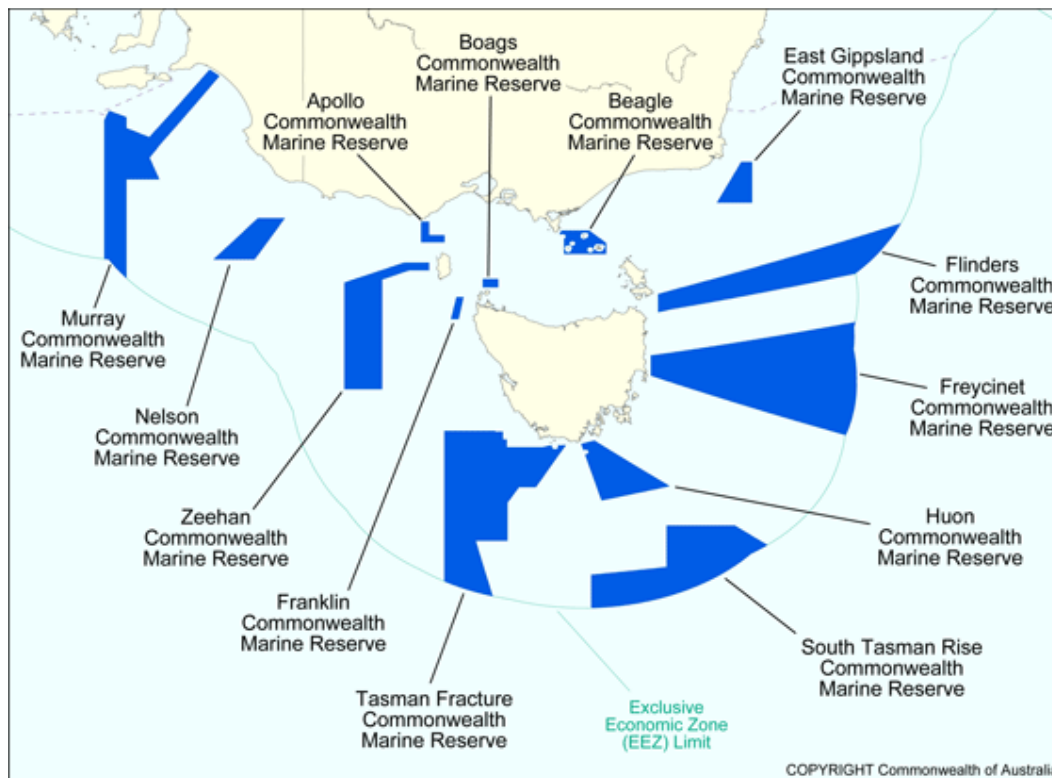
#### **2.2.2.2 Marine protected areas in the south-east region**

In July 2007 the Australian government announced the establishment of the south-east commonwealth MPA network. The MPAs in the south-east network have been declared under the EPBC Act (1999). They are managed by the Department of the Environment, Water, Heritage and the Arts under a delegation from the Australian government director of national parks.

The network of commonwealth MPAs in south-eastern Australia (highlighted in section 2.2.1.5) is designed to contribute to the national representative system of marine protected areas (NRSMPA). It provides for some areas to be strictly protected with no extractive use and limited disturbance whilst others are managed resource-use areas. This includes scientific study, recreational enjoyment and income generation through tourism and other sustainable uses such as mining and commercial fishing. MPA development in state waters (to 3nm offshore) is, however, handled separately. For example, the state of Victoria as a jurisdiction was not formally involved in the process to designate a representative system of marine reserves in adjacent commonwealth waters under the SERMP. It had previously designated a network of MPAs in 2002, which covers 5.4% of Victoria's waters (MARE, 2009).

The Murray and Zeehan reserves were the first two MPAs to be announced as part of the south-east regional marine plan in May 2004. A further 11 MPAs were announced with the release of the full network of south-east marine protected areas in early 2006 (Figure 5).





**Figure 5** South-east commonwealth marine reserve network (Australian Government, 2007)

The south-east commonwealth marine reserve network was the first temperate deep sea network of marine reserves in the world (Australian Government, 2008). This large network covering 226,458sq km covers representative examples of the diverse seafloor features and associated habitats found in the south-east marine region, including striking features such as underwater canyons and mountains, and the diverse marine life associated with them. The south-east MPA network was designed to contribute to the NRSMPA.

MPA planning for the south-east proceeded in two phases, science and stakeholder. The first stage included a major investment in data collection and collation, and publications on the ecosystems and uses of the region. This data was then used to produce an interim off-shelf bioregionalisation and to develop “broad areas of interest”. The broad areas of interest were intended to provide a focus for the development of proposals for marine protected areas. The identification of the biophysical operating principles was followed by a period of stakeholder consultation and negotiation, resulting in the final proposal of the network and the accompanying zonation.

There are two broad types of MPA networks: a marine reserve network of high protected areas (IUCN categories I and II; see Appendix 3) and a network of intermediately protected areas (IUCN categories III to VI). The majority of the MPAs established by the commonwealth in the south-east planning region are IUCN category VI (see Appendix 4). There are five MPAs in the south-east region that are classified as IA (strict nature reserves).

### **2.2.3 Evaluation for Australia**

At first glance it appears that Australia is progressing well on its approach to oceans governance and marine planning, but further analysis shows that they have both stalled on delivery and have suffered some setbacks to achieving effective implementation. They have experienced a number of shortfalls in RMPs, for example pursuit of sectoral interests and a weak scientific knowledge base (Vince, 2006). The introduction of regional marine plan steering committees as key institutional arrangements in the implementation process of RMPs aimed to overcome these shortfalls.

RMP development started as a comprehensive plan, but a year following the release of AOP, only three out of the five key institutions were established, with the SERMP remaining only in draft form, with little commitment to the process from the state jurisdictions, despite the MoU. The process appears to have been sidetracked at the expense of the development of the commonwealth MPA network. However, despite this partial integration, cohesion between sectors, community consultation and stakeholder communication between the sectors and jurisdictions was proactive (Vince, 2006).

There are a number of reasons why the RMPs have not been implemented, one being that there was not full state/territory government agreement and hence sign up to the RMP concept initially. This meant that planning could only take place offshore in waters beyond 3nm where the commonwealth government has jurisdiction. However, in the end, even commonwealth government support has diminished. Also, the government body/department that has responsibility for the RMP initiative is limited by its own environmental responsibilities and, therefore, could only deal with environmental issues. The SERMP draft plan was never finalised, and whilst marine bioregional mapping and the development of a network of MPAs are important elements of marine planning, they are not marine planning as we know it (personal comment from Sharon Thompson, RSPB, following discussions with various Australian NGOs and bodies involved in the SERMP (2008)).

It can be argued that it is important to have a clear and robust network of MPAs in situ prior to implementing MSP; however, it should not preclude the development of MSP. Implementation processes are flexible and adaptive.

A report entitled *Performance Analysis of the Commonwealth Network of Marine Protected Areas for the South-east Planning Region* (WWF-Australia, 2009) states that the south-east MPA network fails to meet both the primary goal and many of the principles for the establishment of the NRSMPA. The process of the reserve selection appears to have been largely stakeholder driven. The outcome from this, as identified by the report, is that it fails to meet the conservation goals and stated policy direction declared at the outset. The NRSMPA guidelines state that the MPA network “will include the full range of ecosystems recognised at an appropriate scale within and across each bioregion”. However, the report produced by WWF-Australia states that only five of the 16 bioregions in the SERMP area have achieved this objective.

WWF-Australia (2009) also identifies that the planning process of the south-east MPA network has not been accompanied by quantitative data on how well the network meets the goals identified in the 1998 guidelines. The report recommends that with MPA planning continuing across Australia it is timely to attempt to establish a systematic and efficient way of testing whether or not established or proposed MPA networks meet the conservation objectives of the NRSMPA.

Prior to the designation of the MPAs that now make up the commonwealth MPA network for the south-east planning region, there was only one MPA in the region. Therefore, relative to the previous situation, the establishment of the south-east MPA network represents an important step forward in the conservation of the region’s biodiversity. However, the report states that the final network fails to satisfy criteria of comprehensiveness and adequacy, and was not tested for being representative. Also, in the case of the design of the south-east MPA network, the decisions to accommodate existing economic activity appear to have taken priority over meeting stated conservation targets.

#### **2.2.4 Conclusions for Australia**

A lack of integration of environmental issues into a fragmentary marine policy structure led to the development of Australia’s Oceans Policy. There was a need to update the current policy and law to take into account UNCLOS and EEZ law. The aim of AOP was to provide national coordination and consistency for marine planning and management, while allowing for regional diversity. Stakeholder support for legislation varied – some felt it was important to support policy

commitments of AOP, while others were concerned it could add another layer of bureaucracy and would add limited value.

Regional management plans are the method to implement multiple-use, ecosystem-based management. However, state government is not required to implement national oceans policy within state waters (i.e. 3nm), nor regional management plans, which is surprising given that the inshore area generally can be considered a busy multi-use area. The commonwealth government has established institutional arrangements with the aim of cross-sectoral management through memorandums of understanding. The RMP process has provided an impetus to the development of commonwealth MPAs feeding into the NRSMPA.

On paper, the AOP and associated initiatives look positive. Indeed, before the policy was implemented, MacGarvin (2000) described it as “without doubt a model to be examined in depth when developing an integrated marine policy for the UK and European waters”. However, since this report, the progress made in Australia on the delivery of MSP has been quite disappointing, while progress in designating MPAs has been good. However, with regards to MPA network aims and principles it is recognised that there are some serious limitations that need to be addressed, not least that the network is not achieving its conservation goals and that economic considerations are taking priority.

### **Positive outcomes**

- AOP and RMPs are underpinned by an ecosystem approach.
- AOP and RMP process recognises the need for coordination and consistency for marine planning and management but allows for regional diversity.
- Significant funding was made available for implementation of the initiatives set out under AOP.
- An implementation schedule was developed.
- Considerable institutional arrangements have been introduced.
- Australia’s commitment to delivering a NRSMPA within the context of marine bioregional planning offers the opportunity to set global standards and best practice benchmarks in MPA network development.
- A bioregional planning process is at the heart of Australia’s NRSMPA and underpins the entire conceptual framework.

### **Negative outcomes**

- Sectoral interests and weak scientific knowledge base have been identified as shortfalls in regional marine planning.
- Regional MPA networks and state MPA networks (within 3nm) are not integrated.
- The development and implementation of AOP and RMPs in the last 10 years has been slow.
- NGOs are concerned that MPA selection has been largely stakeholder driven and that the network fails to meet the primary goal and many principles for establishing a network of representative MPAs.
- AOP and RMPs do not apply to state or territory government, subsequently relying on a MoU for cross-government coordination.
- The RMP programme was brought under environmental legislation (the EPBC Act) which could arguably result in perceived bias for some stakeholders, with potential negative consequences.
- There was not full state/territory government support for the initial RMP concept, which meant that planning could only take place offshore beyond 3nm where the commonwealth government has jurisdiction.

## **2.2.5 Lessons learned from Australia**

### **2.2.5.1 MSP lessons**

- The implementation of the SERMP has been a process of trial and error for the commonwealth, but it has provided direction for the development and implementation of the northern RMP and the south-west RMP. This shows the importance of feasible and adaptive working.
- There is a need for national coordination and consistency for marine planning and management while allowing for regional diversity. In the UK the marine policy statement should reflect this.
- A high-level whole government body could provide advice on operational aspects of national marine policy and the central programme of regional marine planning. It could also coordinate cross-jurisdictional issues and promote the conservation and sustainable use of natural resources.
- A national body should have lead responsibility for regional marine planning, working alongside working groups tasked with establishing a framework and institutional arrangements to deliver MSP and to address marine-related issues as they arise.
- Regional steering committees are a key institutional arrangement for implementation.
- Advisory groups can be beneficial to act as a forum for exchange of information and views between sectors, and to assist with the marine science coordination and information sharing. They can also assist in developing regional priorities and the framework for delivery within the overall national framework.
- Development of an implementation schedule is important and valuable to ensure delivery on time and on budget.
- Regional marine plans should implement multiple-use, ecosystem-based management and should be comprehensive. They should include all activities, whether managed nationally or regionally, and should be divided according to natural boundaries.
- It is important that stakeholders are engaged in marine planning and MPA processes. However, it is vital that government set clear expectation boundaries on outputs and processes as to how stakeholder input will be used.

### **2.2.5.2 MPA lessons**

- A network of MPAs should be based on the principles of comprehensiveness, adequacy and representativeness.
- A network of MPAs should include some highly/strictly protected areas as well as managed resource-use areas.
- A systematic and efficient way of testing whether or not MPA networks meet the conservation objectives of an ecologically coherent network of MPAs is necessary.
- Stakeholders need to be involved in the process of selecting MPA sites, and the network needs to meet the goals and principles for establishing a network of representative MPAs.

## **2.3 CANADA**

### **2.3.1 Governance framework**

Canada has the world's longest coastline, stretching over 243,000km along three oceans (Atlantic, Pacific and Arctic) as well as the second largest EEZ (Lockwood *et al*, 2006; DFO, 2007), and the second largest continental shelf (3.7 million km; DFO, 1997) in the world. Canada's ocean estate covers a surface area of approximately 7.1 million square kilometres<sup>14</sup>. Not surprisingly therefore, Canada's marine wildlife includes thousands of different species including orca, polar bear, walrus, sea otter, bowhead whale, shellfish, finfish, seabirds, marine plants and other seabed animals, including forests of thousand-year-old corals and unique glass sponge reefs.

---

<sup>14</sup> For more information: <http://www.dfo-mpo.gc.ca/oceans/canadasoceans-oceansduncanada/marinezones-zonesmarines-eng.htm>

### **2.3.1.1 Jurisdiction boundaries**

The jurisdictional breakdown in the Canadian marine environment is as follows:

- internal marine waters<sup>15</sup> comprising a surface area of approximately 2.5 million sq km
- territorial sea has a surface area of approximately 0.2 million sq km
- Canada's EEZ was formally established in 1997 when the Oceans Act came into force, and has a surface area of approximately 2.9 million sq km.

### **2.3.1.2 Canada's Oceans Act**

In 1997 Canada introduced an Oceans Act which made Canada the first country in the world to have comprehensive oceans management legislation. The reasons stated by the government for the introduction of the Oceans Act were the need to integrate policy and to assist long-term regional economic development, consistent with sustainable development and an ecosystem-based approach.

Canada's Oceans Act took over 10 years to develop from the time it and the ocean strategy were first proposed in the oceans policy for Canada, released by the Department for Fisheries & Oceans (DFO) in 1987 (DFO, 1987).

The act establishes the enabling framework for cross-sectoral integrated management through the development of a national oceans management strategy as outlined in part II of the act (Oceans Act, 1997, Part II). The act also directs management towards establishing an integrated ocean management regime through the development of integrated management plans (IMPs), which are to incorporate MPA designations and marine environment quality guidelines for outcome-based and adaptive management (Foster et al, 2005).

One of the earliest IMPs was the Eastern Scotian Shelf integrated management (ESSIM) plan (see Figure 6).

---

<sup>15</sup> Internal waters in Canada are so large because of the Great Lakes.

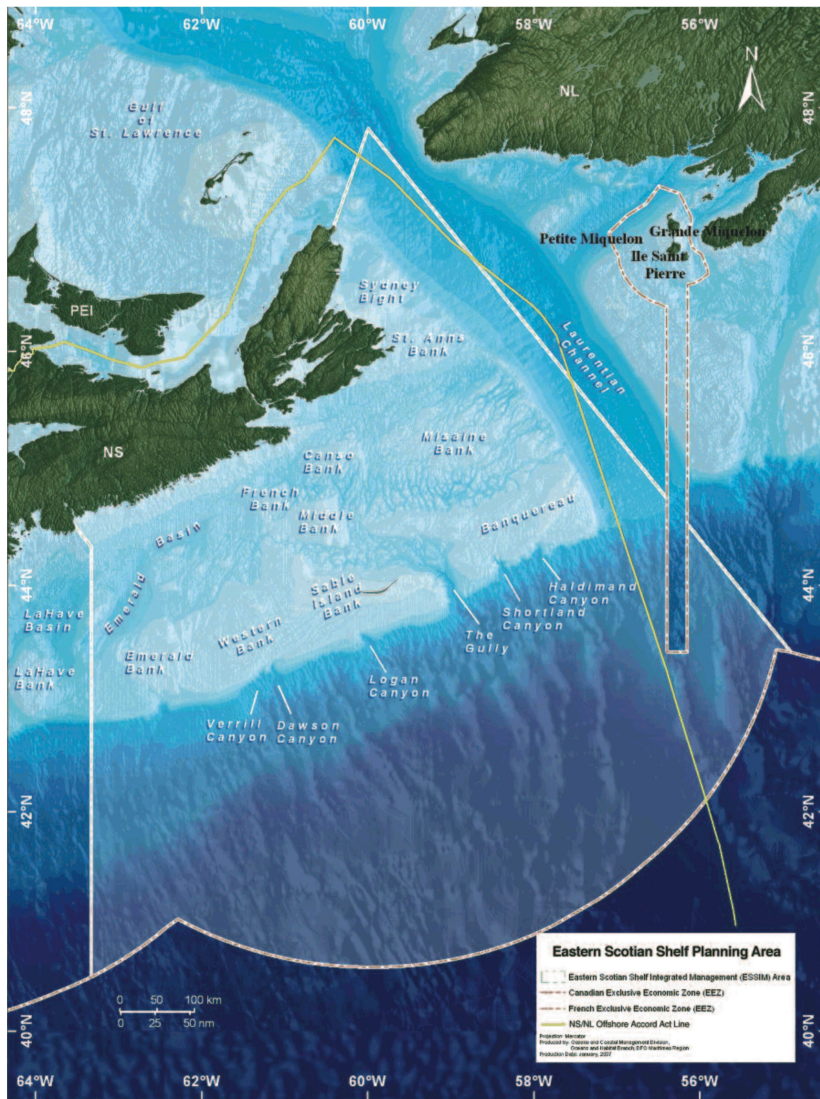


Figure 6. The Eastern Scotian Shelf large ocean management area (DFO).

### 2.3.1.3 Canada's Oceans Strategy

The Oceans Act led to the development of Canada's Oceans Strategy (COS) (DFO, 2007a), which was released in July 2002 with three main policy objectives:

- the understanding and protection of the marine environment
- to support sustainable economic opportunities
- to show international leadership in oceans management.

The COS is the government's policy statement for the management of estuarine, coastal and marine ecosystems. It is based on the principles of sustainable development, integrated management, the precautionary approach and the ecosystem approach (DFO, 2007a). The COS document was released by the DFO to:

- establish the context in which COS is being developed and implemented
- set a framework for future oceans management
- describe the strategic approach to be taken to achieve the policy objectives identified in COS
- identify all the federal activities that support the strategy, hence revealing gaps and direction for future activity.

Under the COS, the federal government aimed to establish institutional governance mechanisms to develop a more coordinated and collaborative approach to oceans management, both across the federal government and with other levels of government: for example, using new and existing mechanisms such as committees, management boards and information sharing. The COS was designed to set clearly defined objectives and stimulate partnerships among all those with a stake in oceans management. It is based on knowledge from a growing body of ocean management experiences both nationally and internationally.

Amongst the activities identified in the COS, the federal government is committed to promoting integrated management planning for all of Canada's coastal and marine waters. This includes supporting the planning process for large ocean management areas (LOMAs) and supporting coastal and watershed planning initiatives. Canada's Oceans Action Plan (2005-07) provided an initial step to take implementation of the strategy one stage further. Canada's Oceans Act, Oceans Strategy and Oceans Action Plan together commit the federal government to undertaking integrated oceans management in five LOMAs across Canada. All LOMAs were selected because they contain ecosystems that are under threat from increased human activities and uses (J. G. Bones Consulting, 2008).

#### **2.3.1.4 Canada's Oceans Action Plan**

In 2004 the Canadian government committed:

*to move forward on its Oceans Action Plan by maximizing the use and development of oceans technology, establishing a network of marine protected areas, implementing integrated management plans, and enhancing the enforcement of rules governing oceans and fisheries, including rules governing straddling stocks.*

Consequently the action plan aimed to serve as the overarching umbrella for coordinating and implementing oceans activities, and as the framework to sustainably develop and manage Canada's oceans.

The Oceans Action Plan is based on four interconnected pillars:

- international leadership, sovereignty and security
- integrated oceans management for sustainable development
- health of the oceans
- ocean science and technology.

This initiative was designed to be an innovative way to apply ecosystem-based management approaches to the management of human activity in the oceans. Ecosystem objectives are identified to inform oceans management and marine environmental protection by guiding the activity of industry and other stakeholders, who in turn make recommendations about marine environmental quality and indicators of progress to oceans decision-makers.

The implementation of integrated management planning for phase I of the Oceans Action Plan is focused in five priority areas (see Figure 7), based on ecologically and biologically significant factors:

- Placentia Bay and the Grand Banks (500,000 sq km)
- The Eastern Scotian Shelf (108,000 sq km)
- The Gulf of St Lawrence (461,400 sq km)
- The Beaufort Sea (1,750,000 sq km)
- The Pacific North Coast (88,000 sq km)



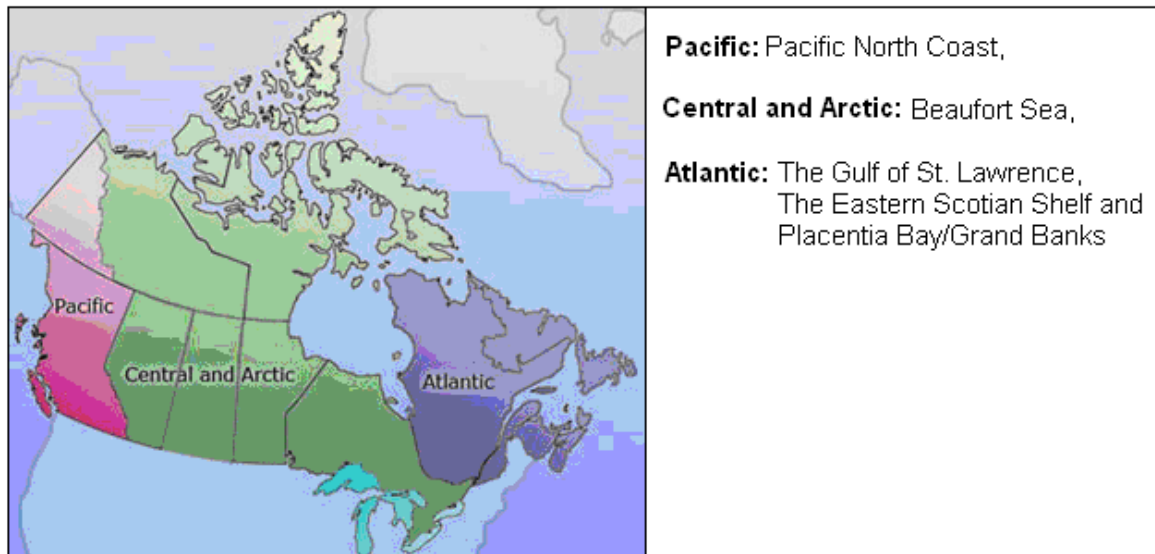


Figure 7 Large ocean management areas (LOMAs)<sup>16</sup>

### 2.3.1.5 Implementing body

The Oceans Act assigned the DFO as the lead body for integrated planning and management of all ocean activities, giving a leadership role to the minister of fisheries and oceans for stewardship of the oceans and the development of COS, integrated management and planning, and MPAs.

The policy framework is intended to guide the coordination and management of ocean activities. All levels of government retain respective legislative and jurisdictional responsibilities and authorities (DFO, 2007b).

Some 23 federal government departments and agencies, plus provincial interests who have some form of jurisdiction over the ocean or its resources, are required to meet the goals of the strategy in a collaborative effort with industry and the public (Chao et al, 2004).

Many of the management issues to be addressed fall within the provincial/territorial or municipal jurisdiction, therefore the role of DFO is identified as facilitator and provider of expertise and access to information. In some cases the DFO may lead the development of the integrated management plan, depending on the issues to be resolved and the willingness and capacity of local interests to lead the process. A typical model for an integrated management body, together with stages for developing the plan, is illustrated in Canada's policy and operational framework for integrated management<sup>17</sup>.

### 2.3.1.6 Marine protected areas

The Oceans Act provides the minister of fisheries and oceans with the obligation to develop a national strategy for oceans management, including the coordination of a federal marine protected area (MPA) programme. It is administered and implemented by the three federal departments: Parks Canada Agency, Environment Canada (EC) and Fisheries and Oceans Canada (DFO). The long-term objective of COS is the development of large-scale and local integrated management plans for all of Canada, starting with priority areas. A component of COS, as specified in the act, is the establishment of a national system of MPAs. MPAs are designated by the governor in council upon the advice of the minister. Both Canada Heritage and Environment Canada have legislative authority to establish MPAs. This has prompted

<sup>16</sup> Available from: <http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/loma-zego/index-eng.htm>

<sup>17</sup> Available from: <http://www.dfo-mpo.gc.ca/oceans/publications/cosframework-cadresoc/index-eng.asp>



cross-sectoral integration (Foster et al, 2005). The special protection of areas as MPAs is for the conservation and protection of:

- commercial/non-commercial fishery resources and their habitats
- endangered/threatened marine species and their habitats
- unique habitats, areas of high biological diversity/productivity
- any other resource/habitat deemed necessary to fulfil the mandate of the minister.

In 2005 the DFO released Canada's federal marine protected areas strategy (DFO, 2005a), to "clarify the roles and responsibilities of federal departments and agencies with marine protected area mandates, and to describe how federal MPA programmes can collectively be used to create a cohesive and complementary network of MPAs". This MPA strategy has the following goal:

*The establishment of a network of marine protected areas, established and managed within an integrated oceans management framework, that contributes to the health of Canada's oceans and marine environments.*

In support of this goal, the MPA strategy aims to fulfil its objectives to:

- establish a more systematic approach to MPA planning and establishment
- enhance collaboration for management and monitoring of MPAs
- increase awareness, understanding and participation of Canadians in the MPA network
- link Canada's network of MPAs to continental and global networks.

Canada's federal marine protected areas network is comprised of three core programmes:

- **marine protected areas** – established by Fisheries and Oceans Canada under the Oceans Act to protect and conserve important fish and marine mammal habitats, endangered marine species, unique features and areas of high biological productivity or biodiversity
- **marine wildlife areas** – established by Environment Canada to protect and conserve habitat for a variety of wildlife, including migratory birds and endangered species.
- **national marine conservation areas** – established by Parks Canada to protect and conserve representative examples of Canada's natural and cultural marine heritage, and to provide opportunities for public education and enjoyment.

Over the past 5–10 years, only three coastal and two ocean MPAs have been designated under the Oceans Act. However, designations for protection of the marine and coastal environment are also possible through other federal tools:

- through Environment Canada and the Canada Wildlife Act, Migratory Birds Convention Act and Species at Risk Act.
- through Parks Canada, national marine conservation areas can be established under the Canada National Marine Conservation Areas Act, national parks can have a marine component under the Canada National Parks Act, and marine/coastal species can be protected under the Species at Risk Act. (Government of Canada, 2005a).

The Canadian Wildlife Service is part of Environment Canada and manages wildlife matters that are the responsibility of the federal government. It has the authority to designate national wildlife areas, marine wildlife areas, and migratory bird sanctuaries with a focus on protecting marine migratory birds and species at risk. In 2005 the Canadian Wildlife Service managed 69 national wildlife areas and migratory bird sanctuaries with marine components that protect 31,000 sq km of marine habitat (AOG, 2005).

Within Canada there exists a spectrum of legislative and policy tools to establish and manage MPAs. Canada's federal MPA network is comprised of three core programmes:

- **Oceans Act MPAs** established to protect and conserve important fish and marine mammal habitats, endangered marine species, unique features and areas of high biological productivity or biodiversity
- **marine wildlife areas and migratory birds sanctuaries** established to protect and conserve habitat for a variety of wildlife including migratory birds and endangered species
- **national marine conservation areas** established to protect and conserve representative examples of Canada's natural and cultural marine heritage and provide opportunities for public education and enjoyment. In addition, several coastal national parks include significant marine components.

An important step in the development of Canada's national network of marine protected areas was a January 2008 workshop entitled "Bringing International Lessons Learned and Good Practices to Bear on Canada's Marine Protected Areas Networks Framework"<sup>18</sup>. From this workshop a report entitled *Guidance and Lessons Learned for Canada's Marine Protected Area Networks* was produced (DFO & WWF-Canada, 2009). In 2004, following the Convention on Biological Diversity (CBD), Canada committed nationally and internationally to establish an MPA network by 2012, comprising representative areas, as well as areas that protect ecologically significant habitats, species, and ecosystem components.

### 2.3.1.7 Integration with land use/terrestrial planning

Land-based activities and impacts are significant in the coastal zone, and interactions with terrestrial ecosystems need to be carefully considered. Given the many distinct characteristics of coastal areas, simply extending offshore integrated management plans and processes into inshore areas is unlikely to be successful. The ESSOMP recognises that a broader range of stakeholders need to be engaged when dealing with coastal areas. It is important that federal, provincial and municipal governments, coastal communities, aboriginal rights holders, industry sectors and other stakeholders work together to develop complementary management plans and processes for coastal and inshore areas. These plans will be linked to those for the offshore areas and will contribute to similar overall objectives, while focusing on local conditions, communities, issues and priorities (DFO, 2008).

## 2.3.2 Eastern Scotian Shelf case study

### 2.3.2.1 Eastern Scotian Shelf integrated management initiative

Integrated management initiatives are underway on all three of Canada's coasts (see Figure 7), including the Eastern Scotian Shelf integrated management (ESSIM) initiative in the Atlantic Ocean. The Scotian Shelf is approximately 325,000sq km in size and is part of the North American continental shelf, lying south east off the province of Nova Scotia. The Eastern Scotian Shelf was selected as one of the five priority ocean planning areas because it possesses important living and non-living marine resources, high biological diversity and productivity, and increasing levels of multiple use and competition for ocean space and resources. It was also chosen because this area encompasses the Gully, which was designated as Canada's first MPA under the Oceans Act in 2004. Key ocean use interests and activities include fisheries, offshore oil and gas, shipping, maritime defence operations, submarine cables, science, research and development, recreation and tourism, potential offshore minerals development, and marine conservation.

The ESSIM initiative is the model DFO has adopted to put integrated oceans management into practice. Both the government of Nova Scotia and the government of Newfoundland and Labrador participated in the ESSIM process. The ESSIM initiative was announced on 3 December 1998 and is made up of two main components: the cross-jurisdictional, cross-sectoral institutional arrangements (the ESSIM forum) and the development of an integrated plan for oceans management in the ESSIM area (Foster et al, 2005). In contrast to traditional "sector-based" management, which addresses individual industries or activities on a case-by-

<sup>18</sup> Hosted jointly by Fisheries and Oceans Canada and the World Wildlife Fund-Canada (WWF).

case basis, the ESSIM planning process aims to consider the ecosystem and all of its users comprehensively. Canada has taken a “learning-by-doing” approach to integrated management, with the ESSIM initiative informing and advising subsequent national policy development. Therefore, the process is still evolving with time and experience.

The government structure for the ESSIM consists of the federal-provincial ESSIM working group and the regional committee on ocean management. The stakeholder advisory council shares the responsibility for leadership and guidance in meeting the vision for the ESSIM initiative. It operates on a consensus basis for the stewardship of the plan and undertakes monitoring and evaluation functions for plan implementation.

The ESSIM initiative is a collaborative management and planning process led by the Oceans and Coastal Management Division (OCMD), Fisheries and Oceans Canada (DFO) and Maritimes Region (Rutherford et al, 2005). Ocean management plans and decisions are based on shared information where those with the decision-making authority and those affected by the decision jointly seek outcomes that meet the needs and interests of all parties to the greatest possible degree. The ESSIM forum has been established to provide a networked structure for engaging and linking federal and provincial government departments, boards and agencies, First Nations<sup>19</sup>, oceans industry and resource user groups, community associations, NGOs and academia in the ESSIM process.

The vision for the initiative is to have an effective, collaborative process that provides integrated and adaptive management plans, strategies and actions for social, economic, environmental and institutional sustainability.

As determined by the mandate of the Oceans Act, the four overarching objectives of the initiative are to:

- integrate the management of all measures and activities in or affecting the Eastern Scotian Shelf LOMA
- manage for conservation, sustainability and responsible use of ocean space and marine resources
- restore and maintain natural biological diversity and productivity
- provide opportunities for economic diversification and sustainable wealth generation to foster social well-being for coastal communities and stakeholders.

The DFO considers the ESSIM initiative as one of Canada’s flagship integrated ocean management programmes under the Oceans Act and believes it is providing lessons learned which can be used to aid the development of similar initiatives nationally. However, there are concerns from NGOs that this is not happening in practice (see section 2.3.5).

### **2.3.2.2 The Eastern Scotian Shelf ocean management plan**

The Eastern Scotian Shelf ocean management plan (ESSOMP) is a five-year strategic plan (2006-2011) for the integrated management of all policies, programmes, sectoral plans, measures and activities in or affecting the Eastern Scotian Shelf LOMA. The ESSOMP covers some 325,000sq km (half of the Scotian Shelf) (see Figure 1). The plan applies only to the offshore area, with the boundaries of the planning area comprising a mix of administrative and ecological considerations. The legislative basis for the plan is drawn from Canada’s Oceans Act, in accordance with the provisions contained in sections 31 and 32 of part II, oceans management strategy.

The plan provides an objectives-based approach to ocean management for the Eastern Scotian Shelf. The plan has identified ecosystem objectives for the following elements:

- biodiversity, including issues such as species at risk and invasive species

---

<sup>19</sup> Aboriginal groups in Canada

- marine ecosystem productivity
- ocean habitats, including physical, geochemical and biological components.

The plan also identifies human use objectives for the following elements:

- community well-being
- economic well-being
- industrial capacity and assets
- integrated management process (i.e. governance).

The plan has been developed through a collaborative and inclusive planning process. It has been shaped and accepted by stakeholders, supported and endorsed by government authorities, and is Canada's first integrated ocean management plan under the Oceans Act. This means that the work of developing and implementing the plan is done by all sectors and stakeholders through a consensus-based approach. The plan also addresses ocean management issues requiring interdepartmental and intergovernmental policy and regulatory coordination.

The plan also provides an area-based approach whereby planning, management and decision-making can be undertaken at appropriate spatial scales (regional to site-specific) and spatial interactions among users and between activities and the ecosystem can be taken into account. The plan aims to function as an umbrella for various ocean sector management processes and is built on and supported by existing management jurisdictions and responsibilities. Regulatory authorities remain responsible and accountable for implementing management policies and measures within their established mandates and jurisdiction to support the objectives of the plan.

The plan is supported by all provisions of the Oceans Act and responds to the policy and governance objectives of COS. It also supports Canada's Oceans Action Plan.

The plan involves a collaborative planning model, designed to support the integrated management process. The collaborative planning model has the following institutional components:

- the ESSIM forum
- the stakeholder advisory council
- The government sector structure
- The ESSIM planning office.

Implementation of the management objectives, strategies and actions contained in the plan is supposed to be undertaken through the regular development and implementation of shorter term action plans (i.e. two-year cycles). The planning office works in cooperation with the stakeholder advisory council and the government sector structure to provide shared leadership and coordination for development and implementation of the plan. The ESSIM planning office provided a lead role in the development of the action plans, with direct input from government and sectors through the mechanisms contained in the collaborative planning model. The plan is supposed to undergo a full review every five years, led by the ESSIM planning office.

With regards to the relationship between the eastern boundary of the planning area and the administrative line between the Canada-Nova Scotia and Canada-Newfoundland and Labrador offshore petroleum boards, the plan respects all jurisdictions and management responsibilities under the Accord Acts and promotes continued regional collaboration through existing coordination mechanisms.

### **2.3.3 Evaluation for Canada**

Although Canada was one of the first countries to develop a policy for the management of its marine environment, in reality the process of implementation of the Oceans Act and MSP has

been excruciatingly slow. According to Canadian NGOs, the Oceans Act has not yet led to any changes in the water, nor is it likely to for several more years, if ever, unless a major change in approach is taken. In particular, many stakeholders have spent several years engaging in the different planning processes with limited outputs. In addition stakeholders have recently advocated the need for regulatory change, so that there is a clear mandate to undertake MSP in all of Canada's oceans. Without this, Canada's oceans agenda is just too soft to make a difference without really strong leadership from central government. WWF-Canada describes Canada's ocean agenda as "enabling" rather than "directing".

A clear shortfall with the ESSIM plan is that it does not include "spatial" planning elements, such as maps outlining marine use and activity designations or MPAs. There is no legislative requirement for spatial planning in Canada, which makes the process of integrated management very slow. In order to overcome this problem there needs to be a long-term commitment and engagement from the DFO to build relationships and new structures for multi-stakeholder discussions.

The ESSIM case is often featured in international reviews of integrated management, EBM and MSP; however, according to NGOs, it appears that Canada has not delivered on implementing EBM or even really started on MSP.

J. G. Bones Consulting (2008) states that the ESSIM plan was released without the signature of the minister of fisheries and oceans, in part due to the concerns about the boundary of the LOMA relative to the boundaries of oil and gas agreements.

In contrast, in the Beaufort Sea LOMA, which is approximately 1,750,000 sq km, the politics are different<sup>20</sup>. A work plan has recently been developed for MSP, with an implementation timeline associated with it. Beaufort Sea integrated management planning initiative was established in 1999 to undertake the task of integrated management planning for the marine and coastal environment. Collaborative governance arrangements have been developed to manage the LOMA, and to facilitate the flow of knowledge needed to promote effective decision-making. The Inuvialuit Final Agreement (IFA) and the Oceans Act set the framework for the planning in the Beaufort Sea large ocean management area. It will be interesting to see if this region is able to effectively deliver MSP within this timeframe.

The DFO issued its 2005–2006 sustainable development strategy in March 2005 (DFO, 2005b). The oceans commitments were as follows:

- a national strategy for, and designation of, marine protected areas
- ecosystem overview reports completed for five high-priority LOMAs by the end of 2006
- integrated management plans in place for five high-priority LOMAs by 2007
- collaborative arrangements with the provinces and territories by 2006.

Therefore, deadlines were set for the implementation of the Oceans Act in Canada; however, it would seem that not all of these deadlines have been met.

In September 2005 the Office of Auditor General of Canada produced a report by the commissioner of the environment and sustainable development: *Fisheries and Oceans Canada—Canada's Oceans Management Strategy* (AOG, 2005). The main findings from the report (AOG, 2005) can be found in Text Box 2. The report concludes that the DFO has fallen far short of meeting commitments and targets for implementing key aspects of the Oceans Act. The report examined the DFO's actions to implement the Oceans Act by looking at progress in developing and carrying out the national Oceans Strategy and integrated management plans, and at its efforts to establish MPAs.

COS specified 55 activities to be undertaken by about 20 departments over four years. The 2005 report by the Office of Auditor General found that the outcomes of the strategy were not

---

<sup>20</sup> The area includes the Inuvialuit Settlement Region. The Inuvialuit are Inuit people who live in the western Canadian Arctic region.

well defined, and there has been no consolidated public reporting on what it has achieved. The report also found that no oceans management plans have been finalised.

#### **Text Box 2**

##### **The main findings from the Office of Auditor General report (AOG, 2005) carried out in 2005:**

- Implementing the Oceans Act and subsequent Oceans Strategy has not been a government priority. After eight years, the Oceans Act has still not been fully implemented. The DFO has fallen far short of meeting its commitments and targets: consequently it has no finalised integrated management plans and has designated only two MPAs.
- The DFO has had difficulty developing and implementing a workable and consistent approach to integrated oceans management. As a result, arrangements are not yet in place to resolve increasing conflicts among users of the oceans over access to space and resources.
- The government acknowledged in Canada's Oceans Action Plan that the approach remains fragmented and exceedingly complex, lacks transparency, and focuses on solving problems as they arise, rather than taking a positive approach.
- Parliament has not been given the financial and other performance information it needs to hold the DFO accountable for its Oceans Act responsibilities. The DFO has also not met its commitment to report periodically on the state of the oceans.
- The Oceans Action Plan is the government's framework for sustainably developing and managing Canada's oceans. However, it does not address all the barriers to implementing a national Oceans Strategy, including the need for strong leadership and coordination over the long term, adequate funding, and an accountability framework with appropriate performance measures and reporting requirements.
- Little progress has been made in establishing MPAs under the Oceans Act. There is concern that Canada will not meet its international commitment to establish representative networks of marine protected areas by 2012.

In 2006, the DFO released an update of the sustainable development strategy for 2007–2009 (DFO, 2006) based on the lessons learned from the 2005–2006 strategy (DFO, 2005b) and addressed the auditor general's 2005 report. The overall methodology of this new strategy was simplified and is more focused on the goals and expected outcomes for 2007-2009, and guides the work of the DFO in terms of what will be done, what will be achieved, and how success will be measured. DFO's 2007-2009 sustainable development strategy is organised according to the department's three strategic outcomes and a fourth goal related to the impacts of DFO's operations on the environment:

- safe and accessible waterways
- healthy and productive aquatic ecosystems
- sustainable fisheries and aquaculture
- environmentally sustainable operations and management.

Canada's oceans policy has not significantly progressed since MacGarvin (2000) was published. Regarding the subject of implementation, MacGarvin (2000) states that "no detailed discussion on alternative options for the method of implementation of the IMP was encountered in the course of this review", and that "it is currently difficult to demonstrate how the forthcoming implementation of Canada's Oceans Act will have any impact on integration over and above that which might be achieved from the ad-hoc collaborative arrangements expected from 'isolated' policies." Evidence suggests that there is still a lack of an overarching strategy for the overall implementation since this report was written nearly 10 years ago. The process seems to be piecemeal and ad hoc. Interestingly MacGarvin (2000) highlights concern about the process losing momentum: "the implementation of the Ocean Strategy appears to have lost momentum with the target date for implementation in 2000 having been postponed to that of a draft Strategy intended to be available in 2001."

### **2.3.4 Conclusions for Canada**

Canada's Oceans Act was introduced in 1997, which made Canada the first country in the world to have comprehensive oceans management legislation. The act aims to create an integrated approach to Canada's ocean management. Canada's Oceans Strategy (COS) was launched in July 2002, with the objectives of understanding and protecting the marine environment. Canada's Oceans Action Plan (2005–2007) was developed as a tool to implement COS. The Eastern Scotian Shelf integrated management initiative is one approach DFO has adopted to put integrated oceans management into practice. The Eastern Scotian Shelf ocean management plan is a five-year strategic plan (2006–2011) for the integrated management of all policies, programmes, sectoral plans, measures and activities in or affecting the Eastern Scotian Shelf large ocean management area. Although Canada was one of the first countries to develop a policy for the management of its marine environment, in reality the process of implementation of the Oceans Act and MSP has been extremely slow.

#### **Positive outcomes**

- Canada was one of the first countries to pass an Oceans Act, with an integrated approach to ocean management.

#### **Negative outcomes**

- There is not yet an approach for the management of all Canadian waters.
- Although Canada was one of the first countries to develop a policy for the management of its marine environment, in reality the process of implementation of the Oceans Act and MSP has been excruciatingly slow in the last 10 years.
- There are concerns that there has been little or no change in practices on the water.
- Multiple planning processes with limited outcomes are disenfranchising stakeholders.
- Historically there has been a lack of strong leadership from central government.
- An MSP aspect of oceans management is missing from Canada.
- The Canadian government acknowledge that the approach to ocean management remains fragmented, complex and lacks transparency, and is responsive not proactive.
- There has been inadequate funding for implementation.
- There has been poor accountability.

### **2.3.5 Lessons learned from Canada**

#### **MSP lessons:**

- There needs to be a strong leadership from central government, including accountability for delivery (or lack of it) and setting clear boundaries and expectations for stakeholder engagement in key processes.
- There is a need for a clear action plan and timetable at the outset leading to clear changes in practice, with adequate funding for delivery and transparent processes for engagement with stakeholders.
- There is a need for a whole-nation approach for all Canadian waters and a commitment to MSP and proactive management of marine activities (both existing and potential future activities).
- There is a need to simplify the process and clearly articulate outcomes.

## **2.4 NEW ZEALAND**

New Zealand has a rich diversity of marine habitats and wildlife. Scientists estimate that as much as 80% of New Zealand's indigenous biodiversity may be found in the sea<sup>21</sup>.

---

<sup>21</sup> For more information see: <http://www.doc.govt.nz/conservation/marine-and-coastal/new-zealands-marine-environment/>

## **2.4.1 Governance framework**

The following review should be considered in the light of a recent change in government following nine years of Labour-led governance. This could result in a change in policy and approach to the management and protection of New Zealand's marine environment. Many of the current policies and regulations were introduced while a Labour-led government was in power, and the recent change (late 2008) could result in significant changes in the coming months and years.

Since there has been little progress in developing MSP in New Zealand's EEZ since MacGarvin (2000), this section will focus more heavily on MPAs where there have been some interesting developments in recent years.

### **2.4.1.1 Jurisdictional boundaries**

New Zealand has the fifth largest EEZ (roughly 4.3 million sq km – about 15 times the size of its land mass)<sup>22</sup> in the world, extending from 12–200nm.

### **2.4.1.2 New Zealand ocean policy**

In 2000 the New Zealand cabinet established a group of six ministers to develop oceans policy in New Zealand for improved ocean management, particularly beyond 12nm, to ensure integrated and consistent management of the ocean within New Zealand's jurisdiction. An advisory committee was established in 2001, and development of the ocean policy was due for completion in 2002, with implementation due to start in 2003. The policy was to be cross-government and cover all aspects of ocean management, including effects from the land, and would extend to the edge of New Zealand's EEZ and the continental shelf. The completion of the proposed oceans policy options package was delayed in June 2003 to take account of government decisions on public access and customary rights to the foreshore and seabed (of the Maori people). The marine policy is an ongoing process; however, it has not yet been fully implemented. As a result, the approach to managing marine resources and planning remains piecemeal, particularly beyond 12nm.

### **2.4.1.3 New Zealand's Resource Management Act (RMA)**

New Zealand's Resource Management Act (RMA) 1991<sup>23</sup> is the primary legislative tool for the management of the marine environment, including the terrestrial environment and the territorial seas (12nm). The purpose of the Resource Management Act (1991) is to promote the sustainable management of natural and physical resources. Three different types of councils (regional, city & district and unitary) are responsible for looking after the environment under the Resource Management Act (1991), and the Ministry for the Environment and the Department of Conservation also have a role in environmental management<sup>24</sup>. District and regional plans are prepared in order to manage the environment in each area. These plans determine what can and cannot be done as of right, while regional policy statements set the basic policy direction for environmental management in the region<sup>25</sup>. All regional councils are required to prepare a regional coastal plan, and all regional coastal plans must be approved by the minister of conservation. Regional plans tend to concentrate on parts of the environment, such as the coast, soil, rivers or air. If central guidance is needed, the central government will issue national policy statements or set national environmental standards, such as the New Zealand coastal policy statement<sup>26</sup> (see section 2.4.1.4).

---

<sup>22</sup> <http://www.mfe.govt.nz/publications/oceans/offshore-options-jun05/html/page3.html>

<sup>23</sup> Resource Management Act 1991 No 69. (as at 05 August 2009), Public Act. For more information see:

<http://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html>

<sup>24</sup> For more information see: <http://www.mfe.govt.nz/rma/index.php>

<sup>25</sup> Getting in on the Act. An everyday guide to the RMA, Series 1.1. Ministry for the Environment Manatu Mo Te Taiao, June 2006

<sup>26</sup> New Zealand Coastal Policy Statement, 1994. Issued by notice in the Gazette, 5 May 1994



#### **2.4.1.4 New Zealand's coastal policy statement**

New Zealand's coastal policy statement<sup>27</sup> was adopted following consultation in 1994, and a review undertaken in 2008 is still under way. A board of inquiry was established to report on the proposed New Zealand coastal policy statement in 2008. It was due to report mid-way through 2009. The coastal policy statement is designed to provide local authorities with the necessary guidance for their day-to-day management of the coastal environment. Its preparation is undertaken by the minister of conservation.

The New Zealand coastal policy statement sets out the general principles for the sustainable management of the coastal environment and provides guidance on:

- national priorities for the preservation of the natural character of the coastal environment, including protection from inappropriate subdivision, use and development
- protection of the characteristics of the coastal environment of special value to the Maori people
- activities involving subdivision, use or development of areas of the coastal environment
- safeguarding the Crown's interest in the coastal marine area
- matters which have to be included in any or all regional coastal plans in regard to the preservation of the natural character of the coastal environment.

It includes a schedule defining the types of activities which will have or are likely to have a significant or irreversible adverse effect on the coastal marine environment, and for which the minister of conservation will make a decision on a resource consent application.

Regional councils prepare regional coastal plans for their coastal marine areas. These plans are restricted to coastal activities out to the 12nm limit and are required under the Resource Management Act. Policy statements and plans should (the following list is not comprehensive):

- define what form of subdivision, use and development would be appropriate in the coastal environment and where it would be appropriate
- ensure that cumulative effects of activities are not adverse to a significant degree
- identify ways whereby the quality of water in the coastal environment can be improved by altered land management practices
- identify areas in the coastal environment where natural hazards exist
- recognise the possibility of a rise in sea level and identify areas which would be subject to erosion or inundation, and identify and protect natural systems which are a natural defence against erosion and/or inundation
- maintain and enhance public access to and along the coastal marine area
- maintain and enhance water quality
- limit adverse environmental effects from vessel water disposal or maintenance.

Activities not allowed "as of right" require a resource consent or permit from the appropriate resource consent authority, either the regional, district or city councils or the Department of Conservation. Coastal permits are the responsibility of regional councils and might be required, for example to build a wharf or to discharge storm water.

#### **2.4.1.5 New Zealand's EEZ**

Consultation on *Improving Regulation of Environmental Effects in New Zealand's EEZ*<sup>28</sup> took place in late 2007/early 2008 and resulted in 46 responses. The Resource Management Act (1991) and the Marine Reserves Act (1971) do not apply in the EEZ, and there is no dedicated

---

<sup>27</sup> New Zealand Coastal Policy Statement, 1994. Issued by notice in the Gazette, 5 May 1994

<sup>28</sup> *Improving Regulation of Environmental Effects in New Zealand's Exclusive Economic Zone*: Discussion Paper, August 2007. Ministry for the Environment. Manatu Mo Te Taiao

marine protection tool in the EEZ. However, the revised Marine Reserves Bill, if adopted, will provide for comprehensive protection of biodiversity by enabling marine reserves in the EEZ.

The EEZ management consultation was initiated as a response to the development of New Zealand ocean policy, which had stalled somewhat in the previous years.

In 2005, two reports were published – *Getting Our Priorities Right* (MFE, 2005a), which explored the role of information in setting national priorities under an oceans policy, and *Offshore Options: Managing Environmental Effects in New Zealand's Exclusive Economic Zone* (MFE, 2005b), which looked at gaps in environmental controls in the EEZ. The MFE (2005b) report has effectively led to the consultation on EEZ management and the drafting of the EEZ management legislation.

Currently, environmental effects in the EEZ are managed by sector-specific legislation, in which the government recognises:

- gaps and inconsistencies in the control of environmental effects
- unclear environmental outcomes against which activities and their effects should be assessed
- uncertainty for investors about the regulatory environment
- uncertainty about how the effects of activities on each other should be managed.

The EEZ consultation specifically addressed the need for new legislation to fill key gaps in EEZ environmental regulation and promote a consistent approach to environmental management across different statutes. The focus of the consultation was on the effects of activities not covered by existing statutes (and still not covered) such as: seafloor disturbance by the installation and presence of an offshore structure; mining; the effects of seismic survey on marine mammals; or deep sea aquaculture. Seabed disturbance through fishing can be addressed under the Fisheries Act (1996) (see section 2.4.2).

The consultation proposed that legislation would define, through rules, the thresholds for when activities can proceed without any need for assessment, and which activities require assessment and approval through an EEZ consent. The outcome envisaged is the sustainable management of the EEZ and its resources, through the promotion of environmentally responsible access to EEZ resources and ensuring that human impacts do not threaten the integrity of ocean ecosystems.

In June 2008 the Ministry for the Environment (MFE) began drafting on an Exclusive Economic Zone Environmental Effects Bill<sup>29</sup>. The intention is that this legislation will help safeguard the integrity of New Zealand's ocean ecosystems in the EEZ by introducing new mechanisms to monitor and manage the impacts of particular activities in the EEZ. Activities in the EEZ, other than fisheries, are largely unregulated. There will, however, be no requirement for a spatial plan of the waters of the EEZ. The drafting of the bill was not complete before the general election late in 2008, and the intention is now for the draft bill to be before a select committee in 2009. The minister for the environment will be responsible for the new legislation, including decision-making on EEZ consent applications. The MFE will administer the new legislation and a new unit within it will make recommendations to the minister on consent applications for new activities in the EEZ.

#### **2.4.1.6 Marine protected areas**

The New Zealand biodiversity strategy (MFE, 2000) establishes a framework for action to conserve and sustainably use and manage New Zealand's biodiversity. The strategy set out a goal of 10% of New Zealand's marine environment in an MPA network by 2010. In 2005 the Department of Conservation released a report entitled *Protecting our seas: Tiakina a Tangaroa*

---

<sup>29</sup> The cabinet paper outlining their plans can be found at: <http://www.mfe.govt.nz/issues/oceans/current-work/cabinet-paper-eez-effects-legislation.html>

(DOC, 2005), an overview of New Zealand's marine biodiversity conservation and the role of marine protected areas, which explains how the marine goals set out in the New Zealand biodiversity strategy can be achieved.

New Zealand's Marine Reserves Act was adopted in 1971, and amended in 1996, but only applies to the territorial seas. New Zealand's first marine reserve was established in 1975 (Cape Rodney – Okakari Point marine reserve) and was one of the world's first no-take marine reserves. There are now over 30 marine reserves in New Zealand waters, with more than half of these sites initially proposed by non-governmental interest groups. Collectively, these reserves protect 7.6% of New Zealand's territorial seas, but 99% of this is in two marine reserves around very isolated offshore island groups (the Auckland and Kermadec Islands). Of New Zealand's total marine environment (territorial seas and EEZ) only 0.3% is protected in marine reserves. In 2000, the fisheries minister announced a prohibition on all trawling and dredging in 18 areas (115,200sq km) within the EEZ to protect the seabed. These areas included 19 seamounts. Therefore, along with these fisheries closures, over 3% of New Zealand's marine environment is protected<sup>30</sup>.

In January 2006, a *Marine Protected Areas Policy and Implementation Plan* (DOC, 2006) was published by the Department of Conservation, with the key components identified as:

- a consistent approach to classification
- a mechanism for a range of management tools
- an inventory to identify areas
- a national consistent basis for planning and establishing MPAs with a target of 2020.

In June 2007, the Department of Conservation released *Marine Protected Areas: Classification, Protection Standard and Implementation Guidelines* (DOC, 2007). The MPA protection standard (with respect to fishing) is interpreted and implemented as follows:

- bottom trawling, dredging and Danish seining prohibited in all MPAs
- methods that contact the seabed, such as potting and bottom set-netting, should be considered for prohibition in an MPA if they are being deployed on a fragile, biogenic habitat (the additional prohibition being confined to the fragile area, not extending to the entire MPA)
- mid-water fishing methods such as purse-seining, mid-water trawling and mid-water gill netting will be considered on a case-by-case basis to determine if these methods are having an adverse effect.

There are a number of types of MPAs (Figure 9) including: marine reserves (strictly protected), marine parks (not as highly protected), benthic protection areas, marine mammal sanctuaries, wildlife sanctuaries and refuges, taiapure, mataitai, and areas of significant conservation value.

#### 2.4.1.7 Other MPA designations

Other MPA designations in New Zealand include:

- **Marine mammal sanctuaries** – five marine mammal sanctuaries have been established under the Marine Mammal Protection Act<sup>31</sup>, and are managed by the Department of Conservation. Restrictions can be placed on activities in sanctuaries to protect marine species, such as dolphins, whales, sea lions and seals.

---

<sup>30</sup> More information from: <http://www.doc.govt.nz/conservation/marine-and-coastal/marine-protected-areas/marine-reserves-a-z/>

<sup>31</sup> Marine Mammals Protection Act 1978. No. 80 (as at 03 September 2007), Public Act. Available from:

[http://www.legislation.govt.nz/act/public/1978/0080/latest/DLM25111.html?search=ts\\_act\\_marine+mammals+protection\\_resel&p=1](http://www.legislation.govt.nz/act/public/1978/0080/latest/DLM25111.html?search=ts_act_marine+mammals+protection_resel&p=1)

- **Wildlife refuges** – sanctuaries and management reserves are established under the Wildlife Act 1953 to protect particular species and their habitats. They are subject to any prohibition or restriction imposed by proclamation or notice.
- **Taiapure** – these are areas that are given special status to recognise Maori ownership (rangatiratanga) as Taiapure-local fisheries. Management arrangements can be established under the Fisheries Act (1996) for Taiapure that recognise the special significance of the area as a food source or for spiritual or cultural reasons.
- **Mataitai** – a martaitai is an identified traditional fishing ground which has special status under the Fisheries Act (1996) to protect customary fishing values. Restrictions may be placed on taking fish, aquatic life or seaweed. A Maori committee (or kaitiaki) can be empowered to make bylaws over the reserve.
- **Areas of significant conservation value** – these are established through regional coastal plans, which identify areas of significant conservation value in the coastal marine area, and specify rules and methods to ensure that these areas not adversely affected. Regional coastal plans are managed by the regional and unitary councils. The areas are identified at a regional level, according to the policy of each region. However, this is now superseded by the comparatively recent publication of the national MPAs policy and implementation plan (DOC, 2006) and the national MPAs classification, protection standard and implementation guidelines (DOC, 2007).

## 2.4.2 Other relevant legislation/policy

- **New Zealand's Fisheries Act 1996**<sup>32</sup>. This sets up a framework for the sustainable use of fisheries resources. All actions under the act should include consideration of environmental principles.
- **Biosecurity Act 1993**<sup>33</sup>. This establishes the framework to protect New Zealand's natural wildlife and habitats from damaging pests and diseases.
- **Strategy for Managing Environmental Effects of Fishing (SMEEF)**<sup>34</sup>. The purpose of this strategy is to implement an ecosystem approach to fisheries, make significant improvements in managing the environmental effects of fishing, and ensure that the Ministry for Fisheries meets its environmental obligations under the Fisheries Act 1996 and other legislation.

## 2.4.3 Implementing bodies

- The Ministry for the Environment (MFE) is responsible for developing the oceans policy to ensure integrated and consistent management of the oceans within New Zealand's jurisdiction in the EEZ and the continental shelf beyond. This is a cross-government exercise covering all aspects of oceans management.
- Ministry for Fisheries is responsible for managing fishing, its effects, and fisheries resources under the Fisheries Act throughout all marine waters under New Zealand's jurisdiction.
- The Department of Conservation (DOC) is responsible for managing MPAs and marine species and also has a role in the management of the coastal marine area (excluding fishing and many significant fishing impacts).
- Regional councils are responsible for managing (along with DOC) the coastal marine area, including aquaculture under the Resources Management Act which includes all territorial seas to 12nm. They are also responsible for managing some land use activities and water quality, some of which have implications for the coastal area.
- An agency called Maritime New Zealand is responsible for ensuring that New Zealand's marine environment is protected by minimising waste and reducing the risk of accidental

<sup>32</sup> Fisheries Act 1996 No 88 (as at 01 October 2008), Public Act. Available from: <http://www.legislation.govt.nz/act/public/1996/0088/latest/DLM394192.html>

<sup>33</sup> Biosecurity Act 1993 No 95 (as at 09 April 2008), Public Act. Available from: <http://www.legislation.govt.nz/act/public/1993/0095/latest/DLM314623.html>

<sup>34</sup> More information available from:

<http://www.fish.govt.nz/en-nz/Publications/Historical+Documents/Environment+and+Sustainability+Archive/SMEEF/default.htm>

spills of harmful substances such as oil and chemicals. Along with other agencies Maritime New Zealand is jointly responsible for protecting New Zealand's marine environment. Maritime New Zealand is a crown entity, governed by an independent board appointed by the governor general on the recommendation of the minister of transport. It is responsible for maritime safety, security and marine environment protection<sup>35</sup>.

- Crown Minerals in New Zealand is a section of the Ministry for Economic Development which issues permits for offshore oil and gas development.
- The Ministry of Foreign Affairs and Trade is responsible for international agreements to maintain biodiversity in high seas areas beyond the EEZ.
- The Ministry of Agriculture and Forestry is the lead agency for biosecurity; however, marine biosecurity is dealt with by the Ministry for Fisheries.

#### **2.4.4 New Zealand evaluation**

With respect to marine spatial planning, New Zealand's approach for the waters of its territorial seas and EEZ lags behind recent developments in Europe and in the UK. However, with respect to the land/sea interface New Zealand has adopted an integrated approach which facilitates management of land-based activities to ensure that the impact in the coastal environment is taken into account, and eliminated or minimised.

Highly protected MPAs in New Zealand have highlighted that marine reserves in temperate waters can provide measureable ecological benefits within a few years. They have also shown that a marine reserve can generate economic benefits for the local community, and that highly protected MPAs can be supported by the local community<sup>36</sup>.

The EEZ management consultation was initiated as a response to the development of New Zealand ocean policy which had stalled in previous years. Currently environmental effects in the EEZ are managed by sector-specific legislation. The government recognises that this results in gaps and inconsistencies in the control of environmental effects, unclear environmental outcomes against which activities and their effects should be assessed, uncertainty for investors about the regulatory environment and uncertainty about how the effects of activities on each other should be managed. The EEZ consultation specifically addressed the need for new legislation to fill key gaps in EEZ environmental regulation and promote a consistent approach to environmental management across different statutes.

#### **2.4.5 Conclusions for New Zealand**

A driver for change in New Zealand was the uncertainty for investors with respect to the regulatory environment, and uncertainty on how activities that impact on each other should be managed. New Zealand's Resource Management Act (RMA) 1991 is the primary legislative tool for the management of the marine environment, including the terrestrial environment and the territorial seas (12nm). Implementation of MPAs in the territorial seas is reasonably well developed, although the largest protected areas are associated with offshore islands. In the EEZ management of the environment is piecemeal and there has been no development of MSP per se. Despite New Zealand's plan to introduce a national oceans policy in 2000 new legislation remains in development and the approach to managing marine resources and planning remains ad hoc.

#### **Positive outcomes**

- With respect to the land/sea interface, New Zealand has adopted an integrated approach which facilitates management of land-based activities to ensure that the impact in the coastal environment is taken into account, and eliminated or minimised.

---

<sup>35</sup> For more information see: <http://www.maritimenz.govt.nz/About-us/About-Maritime-New-Zealand.asp>

<sup>36</sup> See the Cape Rodney Okakari Point case study, available from: <http://www.doc.govt.nz/conservation/marine-and-coastal/marine-protected-areas/marine-reserves-a-z/cape-rodney-okakari-point/>

- In New Zealand there are highly protected MPAs, which have generated economic benefits for the local community, and are supported by the local community.

### **Negative outcomes**

- There is inadequate recognition of the rights and roles of indigenous peoples in New Zealand.
- There is currently a fragmented approach to management of marine activities, with gaps in regulation and no commitment to MSP beyond 12nm.
- There is inconsistency in the application of regulation in the marine environment due to a fragmented approach.
- There are currently unclear environmental outcomes against which activities and effects can be judged.
- The fishing sector has stalled progress on MPAs in the EEZ and opposes an extension to the Marine Reserves Act into the EEZ. It has also attempted (unsuccessfully) to downgrade some of the existing protected areas.
- The fishing sector came forward with its own proposals for benthic protection areas, which have been criticised by the environmental NGOs, who claim that the areas are not important for fisheries; however, they do form an important precedent for the protection of areas of EEZ.

## **2.4.6 Lessons learned from New Zealand**

### **2.4.6.1 MSP lessons**

- The approach to spatial planning across the land/sea interface allows an integrated approach to the management of land-based activities which affect coastal waters.
- The approach to develop an ocean policy for the future management of the EEZ stalled, in large part because of inadequate attention to the rights of the indigenous populations, even beyond 12nm. This relates to a more fundamental problem of recognising the rights of the indigenous population rather than simply a question of inadequate stakeholder involvement. This reinforces the importance of transparent and thorough involvement of stakeholders from the early stages.

### **2.4.6.2 MPA lessons**

- The report *MPA Classification, Protection Standard and Implementation Guidelines* (DOC, 2007) was prepared following stakeholder consultation.
- Strictly protected areas are clearly an important component of MPA networks and form an important part of the developing network of MPAs.
- Fishing within 100m of the seabed within a BPA is a criminal offence, and within 50m of the seabed is a serious criminal offence involving a fine of NZ\$100,000 and seizure of the vessel.
- Highly protected marine reserves can benefit both local economies and biodiversity through improved habitat and larger-size fish.

## **2.5 UNITED STATES OF AMERICA**

### **2.5.1 Governance framework**

#### **2.5.1.1 Jurisdictional boundaries**

The US “has the largest ocean area of any country in the world and currently has 140 laws and 20 agencies managing its oceans”<sup>37</sup>. Regulation and management of US waters is split between the federal government and state government. Beyond 3nm is the remit of the federal government; from 0–3nm is the responsibility of the state government but generally within a federal framework.

#### **2.5.1.2 The US Oceans Act**

The US Oceans Act was adopted in 2000. The purpose of the Oceans Act was to establish a commission to make recommendations for a coordinated and comprehensive national ocean policy. Once the Oceans Act was passed the president appointed 16 members from diverse backgrounds to the US commission on ocean policy. The commission’s mandate was to establish findings and develop recommendations for a new and comprehensive national ocean policy.

#### **2.5.1.3 Integrated coastal zone management**

The Coastal Zone Management Act (CZMA) 1972 was adopted to meet the challenge of continued growth in the coastal zone. It is administered by the National Oceanic and Atmospheric Administration (NOAA) (an agency of the Department of Commerce) through its Office of Ocean and Coastal Resource Management and aims to balance economic development with environmental conservation. The CZMA outlines two national programmes – the national coastal zone management programme and the national estuarine research reserve system. The overall programme objectives of CZMA remain balanced to “preserve, protect, develop, and where possible, to restore or enhance the resources of the nation’s coastal zone”. Although administered at the federal level, the CZMA emphasises the primacy of state decision-making regarding the coastal zone and federal agency activities and development projects must be consistent with a coastal state’s federally approved coastal management programme.

#### **2.5.1.4 Marine protected areas**

In 2000, president Bill Clinton adopted an executive order<sup>38</sup> on marine protected areas. The purpose of the executive order is to protect the significant natural and cultural resources within the marine environment by strengthening and expanding the national system of MPAs throughout waters over which the US has jurisdiction.

The executive order established a national MPA centre, located within the NOAA. It is also a division of the Office of Ocean and Coastal Resource Management. The centre’s mission is to facilitate the effective use of science, technology, training and information in the planning, management, and evaluation of US MPAs. It works in partnership with federal, state, tribal and local governments, tribes and stakeholders to develop a science-based, comprehensive national system of MPAs<sup>39</sup>. Its goals are derived from the executive order and the NOAA strategic plan<sup>40</sup>– to build and maintain the national system of MPAs, to improve MPA

---

<sup>37</sup> As quoted in a speech made by President Obama, see: <http://www.cep.unep.org/news-and-events/afp-obama-gives-us-first-national-ocean-policy>

<sup>38</sup> Executive Order 13158 of May 26, 2000 Marine Protected Areas. Federal Register / Vol. 65, No. 105 / Wednesday, May 31, 2000 / Presidential Documents. An executive order is an order made by the president, or may also be issued at the state level by a state’s governor.

<sup>39</sup> For more information see: [http://mpa.gov/mpa\\_center/about\\_mpa\\_center.html](http://mpa.gov/mpa_center/about_mpa_center.html)

<sup>40</sup> Available from: [http://www.ppi.noaa.gov/PPI\\_Capabilities/Documents/Strategic\\_Plans/FY09-14\\_NOAA\\_Strategic\\_Plan.pdf](http://www.ppi.noaa.gov/PPI_Capabilities/Documents/Strategic_Plans/FY09-14_NOAA_Strategic_Plan.pdf)

stewardship and effectiveness, and to facilitate international, national and regional coordination of MPA activities.

A MPA federal advisory committee was also established by the executive order and is supported by the national marine protected areas centre. It consists of individuals with diverse backgrounds and experience, who represent parties interested in the use of MPAs as a management tool, including scientists, academics, commercial fishermen, anglers, divers, state and tribal resource managers, energy and tourism industries and environmentalists. The national marine protected areas centre was established in 2000, soon after the executive order came into effect, and facilitates the effective use of science, technology, training and information in the planning, management and evaluation of the nation's system of marine protected areas.

On 12 June 2009, President Obama set up a task force to develop the first US national policy for sustainably managing the country's oceans within 90 days (i.e. early September), and also declared June "National Oceans Month". The Pew Oceans Commission (an NGO) and the US commission on ocean policy in 2003 and 2004 respectively had previously called for a national oceans policy. The US commission on ocean policy published a report *An Ocean Blueprint for the 21<sup>st</sup> Century*<sup>41</sup> in 2004, 35 years after the last comprehensive review of US oceans policy. This stemmed from the passing of the Oceans Act of 2000 with the express purpose of establishing a commission to make recommendations for coordinated and comprehensive national ocean policy, including (but not limited to):

- the protection of life and property against natural and manmade hazards
- responsible stewardship, including use, of fishery resources and other ocean and coastal resources
- the protection of the marine environment and prevention of marine pollution
- the enhancement of marine-related commerce and transportation, the resolution of conflicts among users of the marine environment, and the engagement of the private sector in innovative approaches for sustainable use of living marine resources and responsible use of non-living marine resources
- the expansion of human knowledge of the marine environment including the role of the oceans in climate and global environmental change and the advancement of education and training in fields related to ocean and coastal activities.

This has ultimately led to the announcement in June this year by President Obama and with a US oceans policy being published in September 2009. The Interagency Ocean Policy Task Force released an interim report<sup>42</sup> which provides proposals for a comprehensive national approach.

## **2.5.2 California case study**

Since there has been little progress in the development of MSP in California's EEZ since MacGarvin (2000), this section will focus more heavily on MPAs, where there have been some interesting developments in recent years.

### **2.5.2.1 Coastal and marine management**

California Coastal Commission was established by voter initiative<sup>43</sup> in 1972, and made permanent through the adoption of the California Coastal Act in 1976. Its mission is to protect, conserve, restore and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable use by current and future generations. It is an

---

<sup>41</sup> US Commission on Ocean Policy. *An Ocean Blueprint for the 21<sup>st</sup> Century*. Final Report. Washington, DC, 2004.

<sup>42</sup> The Interagency Ocean Policy Task Force interim report can be found at:  
<http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interimreport/>

<sup>43</sup> Voter initiative is the originating of a law or constitutional amendment by popular petition. It is intended to allow the electorate to initiate legislation independently of the legislature.



independent, quasi-judicial state agency which plans and regulates the use of land and water in the coastal zone.

California has 1,770km of coastline, where the coastal zone varies in width from several hundred metres in highly urbanised areas, up to five miles in some rural areas. The offshore coastal zone includes a three mile width of ocean<sup>44</sup>. The state has responsibility for 0-3nm in California. The development activities in the coastal zone that generally require a permit from the Coastal Commission or the local government include construction of buildings, divisions of land, activities which change the intensity of use of land or public access to coastal waters.

The Coastal Act (1976) includes specific policies, including fisheries, ports, and offshore oil and gas activities.

The policies constitute the statutory standards to be applied to planning and regulatory decisions made by the commission and local governments.

The Coastal Commission is one of two agencies responsible for administering the federal CZMA (1972) in California<sup>45</sup>. The CZMA (1972) gives the Coastal Commission and the Bay Conservation and Development Commission regulatory control over all federal activities and federally licensed, permitted or assisted activities if the activities affect coastal resources, for example:

- outer continental shelf oil and gas licensing
- exploration and development
- designation of dredge material disposal sites in the ocean
- military projects at coastal locations
- certain US Fish and Wildlife Service<sup>46</sup> permits
- national park projects
- highway improvement projects (if assisted with federal funds).

Implementation of Coastal Act policies is achieved through the preparation of local coastal programmes that are required to be prepared by each of the 15 counties and 60 cities located in whole or in part in the coastal zone. Completed local coastal programmes are submitted to the Coastal Commission for review and approval. Development within the coastal zone may not commence until a coastal development permit has been issued by the Coastal Commission or local government. A local coastal program includes a land-use plan, zoning ordinances, zoning district maps and the legal instruments necessary to implement the land-use plan. Each plan is reviewed at least once every five years.

The function of the California Coastal Commission's enforcement programme<sup>47</sup> is to:

- protect coastal resources by ensuring that proposed development projects are consistent with the Coastal Act;
- ensure that coastal development permits are obtained for all development in the coastal zone
- ensure that all terms and conditions of coastal development permits are complied with
- deter and address violations of the Coastal Act
- work with local governments to assist with enforcing coastal protection policies.

---

<sup>44</sup> <http://www.coastal.ca.gov/whoweare.html>. Accessed 07/09/09

<sup>45</sup> The Bay Conservation and Development Commission is responsible for the waters of San Francisco Bay.

<sup>46</sup> For more information on the US Fish and Wildlife Service, see: <http://www.fws.gov/>

<sup>47</sup> [http://www.coastal.ca.gov/enforcement/enforcement\\_program.pdf](http://www.coastal.ca.gov/enforcement/enforcement_program.pdf)

### 2.5.2.2 Marine protected areas

California's first six MPAs were created between 1909 and 1913, but by 1950 all had been removed. Later more than 50 other MPAs were created; however, these were not identified in a systematic manner. Most of the MPAs have been thought to be too small and ineffective in preventing habitat and species loss. Less than 1% of coastal waters is covered<sup>48</sup>.

The Marine Life Protection Act (MLPA), which is Californian state law, was passed in 1999. It directs the state to re-evaluate and redesign California's system of MPAs to increase coherence and effectiveness in protecting marine life and habitats, ecosystems and natural heritage. California Department of Fish and Game (CDFG) is responsible for developing and managing the network of MPAs<sup>49</sup>.

The first two attempts to develop a network along the Californian coast failed. The first attempt failed because stakeholders were not involved from the start, and the second failed when funding was lost.

From 2004, a regional approach has been adopted, with the Californian coast split into five regions (north coast, south coast, north central coast, central coast and San Francisco Bay). The intention is that a network is developed that works together as a whole. A proportion of the sites are to be no-take zones or highly protected MPAs. The process is funded through a public-private model, i.e. state government and a private philanthropic group, set up by the California Natural Resources Agency, the CDFG and the Resources Legacy Fund Foundation and backed by a memorandum of understanding (MoU).

A variety of MPAs are possible, including:

- **State marine reserve** – in these areas it is unlawful to injure, damage, take or possess any living, geological, or cultural marine resource except under permit or authorisation for research, restoration or monitoring purposes. Where feasible areas shall be open to the public for managed enjoyment and study. The area must be maintained in an undisturbed and unpolluted state. Even access and use such as walking, swimming boating and diving might be restricted to protect the marine resources. A state marine reserve would be the equivalent to a highly protected area in the UK. Enforcement of the reserve is the responsibility of CDFG.
- **State marine park** – in these areas it is unlawful to injure, damage, take or possess any living or non-living marine resources for commercial exploitation. Human use in these areas may also be restricted if necessary, such as scientific collection with a permit, research, monitoring and public recreation (including recreational harvest unless otherwise restricted). Public use, enjoyment and education are encouraged in these areas.
- **State marine conservation area** – in these areas commercial and recreational activities may be restricted. Research, education and recreational activities, along with some commercial and recreational harvest of marine resources, may be permitted.

In early August 2009, the CDFG adopted the proposals for a network on the north-central coast and angered the local fishing population. It will create 24 MPAs and ban or restrict fishing in nearly 20% of the coastal waters. However, despite significant participation by stakeholders in the process and public involvement, fishermen feel that they have lost historic fishing grounds and that their livelihoods are threatened. The MPAs are due to come into effect from 1 January 2010.

---

<sup>48</sup> For more information see <http://www.dfg.ca.gov>

<sup>49</sup> For more information see <http://www.dfg.ca.gov/mlpa/>

A MLPA (1999) initiative is now under way to develop a network for the south coast region, but has experienced recent controversy, with accusations of conflicts of interest and unfair practices in the process.

#### **2.5.2.2.1 California Marine Life Protection Act master plan for marine protected areas**

A California Marine Life Protection Act master plan for marine protected areas (CDFG, 2008) was developed to guide the adoption and implementation of MPAs. It provides guidance on the context for the Marine Life Protection Act (MLPA) goals and objectives, background information on California's marine resources and policies, a description of the process for designing alternative MPA proposals, and overviews on the design management, enforcement, monitoring and funding of California's MPAs. It was approved as a living document in February 2008. As the networks for the five regions are completed, it is intended that the master plan will be updated to provide more extensive information.

In 2004 the MLPA initiative assembled a "blue ribbon task force" on MPAs, a science advisory team and a regional stakeholders group to develop and evaluate the first set of MPAs in the central coast region. The blue ribbon task force<sup>50</sup> is convened by the state-appointed secretary for resources to make public policy recommendations and to enhance the state's ability to deliver the commitments under the MLPA. It is composed of 7–10 distinguished, knowledgeable and highly credible public leaders selected by the secretary for resources.

After three years, the Fish and Game Commission evaluated and voted on the final proposal for the central California coast, which included 29 MPAs covering 328sq km or 18% of state waters. They came into effect in September 2007 and consist of several types of MPAs including:

- 13 designated no-take state marine reserves
- 15 state marine conservation areas (SMCAs), which limit recreational and commercial fishing
- one state marine recreational managed area where recreational fishing is limited or restricted.

A similar process was implemented on the north central coast. A number of planning groups were established in 2007, including a blue ribbon task force (of five public leaders), a science advisory team, a regional stakeholder group and a state-wide interests group.

The blue ribbon task force recommended to the Californian Fish and Game Commission a preferred alternative MPA proposal for the region, based on months of design, evaluation, negotiation (facilitated between stakeholders) and proposal refinement. The preferred alternative proposal was based on proposals from the regional stakeholder group. These proposals took into account science guidelines, a desire to build the proposals focused around a "backbone" of marine reserves, cross-interest involvement and support, the need to minimise, where possible, socioeconomic impacts to fisheries, ports and communities, feasibility criteria, and the broad range of public and stakeholder comments.

The blue ribbon task force then developed the proposals into a single preferred alternative which met science guidelines, achieved the original goals of the MLPA, addressed feasibility issues and bridged remaining areas of divergence.

The final proposal consisted of 22 MPAs: 11 state marine reserves, nine state marine conservation areas and two state marine parks. Two state marine recreational management areas and six special closures were also included in the recommendation.

The final MPAs adopted on 5 August 2009 (and due to come into effect in January 2010) establish 24 MPAs covering approximately 246sq km (20.1%) of state waters in the region, with approximately 138sq km (11%) of the designated area as "no take" marine reserves. However,

---

<sup>50</sup> For more information on the blue ribbon task force see: [http://www.dfg.ca.gov/mlpa/brtf\\_phase1.asp](http://www.dfg.ca.gov/mlpa/brtf_phase1.asp)

despite the significant participation by stakeholders in the process, fishermen feel that they have lost historic fishing grounds and that their livelihoods are threatened.

The other three study regions under the MLPA include:

- **The north coast study region** (*California/Oregon border to Alder Creek near Point Arena in Mendocino County*) is the fourth MLPA study region to undergo the regional marine protected area (MPA) planning and redesign process. This regional process started June 2009 with a series of introductory workshops and open houses.
- **The south coast region** (*Point Conception to the California/Mexico border, including offshore islands*) is the third MLPA study region to undergo the regional marine protected area (MPA) planning and design process. This regional process started in the summer of 2008 and is scheduled to continue through 2009.
- **The San Francisco Bay region** (waters within San Francisco Bay, from the Golden Gate Bridge to the Carquinez Bridge) will be the fifth and final study region to undergo the MLPA planning process. A process for planning MPAs in the San Francisco Bay study region will be determined in late 2010.

### 2.5.2.3 Implementing bodies

The California Natural Resources Agency<sup>51</sup> is responsible for restoring, protecting and managing the state's natural, historical and cultural resources and is based on science, collaboration and respect for all communities and interests involved. It has overall responsibility for managing the MLPA initiative.

The CDFG is responsible for maintaining native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and benefits to people<sup>52</sup>. Their responsibilities include habitat protection and maintenance to ensure the survival of all species and natural communities. They are also responsible for diversified use of fish and wildlife (including recreational, commercial, scientific and educational uses) and for the management and enforcement of MPAs.

### 2.5.3 California evaluation

In the US there is no overarching legal framework for ocean management, but there is currently a process to develop a more integrated approach to oceans management. Currently the system is complex, with environmental impact of different activities managed by different regulations and a number of different agencies are involved. The Coastal Zone Management Act (1972) required NOAA to conduct periodic performance reviews of federally approved coastal management programmes. The most recent evaluation of California's coastal management programme was undertaken in 2005 (NOAA, 2005) and identifies 12 suggestions for future improvement to the existing scheme and no actions that are "necessary". The suggestions largely focus around securing financial stability for the delivery of the programme, improving outreach to the general public and local partners, strengthening partnerships and improving the delegation of management decisions by ensuring that local coastal programmes are approved, thus facilitating local decision make against the local coastal programme. The document is being evaluated again in 2009.

There has been some success in establishing a number of MPAs, including highly protected sites, but seemingly at a cost, with a component of stakeholder groups disenfranchised, despite stakeholders engagement processes.

---

<sup>51</sup> For more information on the California Natural Resources Agency see: <http://resources.ca.gov/oceans.html>

<sup>52</sup> For more information see: <http://www.dfg.ca.gov/>

#### **2.5.4 Conclusions for California**

The California Coastal Act was adopted in 1976, with a mission to protect, conserve, restore and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable use by current and future generations. The Coastal Zone Management Act (CZMA) was adopted in 1972. The CZMA gives the California Coastal Commission and the Bay Conservation and Development Commission regulatory control over all federal activities and federally licensed, permitted or assisted activities that affect coastal resources.

Integrated coastal zone management appears to be working well in California; however, this is restricted to 3nm. From 2004, a regional approach to marine management was adopted, with the Californian coast split into five regions, with the intention that a network of MPAs is developed that works together as a whole.

The first two attempts to develop a network of MPAs along the Californian coast failed. The first attempt failed because stakeholders were not involved from the start, and the second attempt failed because funding was lost.

The Marine Life Protection Act (MLPA) was passed in 1999. It directs the state to re-evaluate and redesign California's system of MPAs to increase coherence and effectiveness in protecting marine life and habitats, ecosystems and natural heritage. The California Department of Fish and Game (CDFG) is responsible for developing and managing the network of MPAs.

A regional approach has been adopted to the development of networks of marine protected areas in state waters. The first set of 29 MPAs were adopted and came into effect for the central coast region in 2007 following considerable involvement of a wide range of stakeholders. However, in 2009 adoption of a network of 24 MPAs in the north central coast region was not well received by some stakeholders despite extensive involvement in the process of identifying proposed sites. They claimed they have lost historic fishing grounds and that livelihoods are threatened. The list of proposed MPA sites from the stakeholders consisted of 22 MPAs. This appears to have affected future processes as the next stage focusing on the south coast region is now struggling amid accusations of conflicts of interest and unfair practices.

#### **2.5.5 Lessons learned from California**

- For a process that involves the local stakeholders it is essential to ensure outreach to generate the local support required.
- A consensus approach is feasible, but it is likely that some stakeholders will never be satisfied.
- Ensure that an MSP initiative is financially well funded.
- Involving the local stakeholders early on is essential.
- Seeking consensus is valuable but it is unlikely that all stakeholders will be wholly supportive, and it is important that an independent body makes final decisions.
- It is essential that expectations on stakeholder input are clear.
- Financial security is essential for the design and implementation of a network of MPAs.

### 3 European and regional context

The European Union (EU) has a coastline of 68,000km, equivalent to seven times that of the United States and four times that of Russia (Douve, 2008). During recent years, the need for the development of MSP in European seas has become increasingly important, and this is reflected in various legal and policy documents.

The need for an ecosystem-based approach to marine planning under jurisdiction of coastal states is recognised by the European Commission in its 2006 green paper<sup>53</sup> *Towards a future Maritime Policy for the Union: A European vision for the oceans and seas*.

#### 3.1 EU MARINE STRATEGY DIRECTIVE

The EU Marine Strategy<sup>54</sup> introduces the principle of an ecosystem-based approach to MSP within the European context and provides a supportive framework for national initiatives towards marine planning. The Marine Strategy Framework Directive<sup>55</sup> (MSFD) adopted by the European Commission in 2008 forms a part of a larger scheme of initiatives under European environmental policy process. It requires member states to draw up regional marine strategies for maritime areas under their national jurisdictions, with the aim of achieving “good environmental status” in the marine environment by 2021, at the latest.

There is a long history behind the MSFD. The UK played a major role in its development in order to make the goals challenging but achievable. Member states are required to cooperate where they share a marine region or sub-region. Annex VI of the directive lists examples of possible measures, including spatial planning and temporal distribution controls and tools for coordinated management. The UK Department for Environment, Food and Rural Affairs (Defra) considers that the UK Marine and Coastal Access Bill would give the UK the necessary tools to deliver the MSFD successfully<sup>56</sup>.

There have been a number of Defra lead MSFD stakeholder workshops in 2009, which aimed to:

1. provide an update on plans for transposition and implementation of the directive
2. obtain stakeholders' views on policy options for transposition, along with the broad approach to implementation.

The marine ecosystem is a complex and fluid system that cuts across administrative borders. For balanced, long-term management, the whole ecosystem must be taken into account. Work on MSP at the EU level provides an appropriate forum for member states to discuss and develop a holistic approach to the management of marine activities in line with ecosystem requirements.

##### 3.1.1 MSP roadmap

In October 2007 the European Commission adopted “An Integrated Maritime Policy for the European Union” (“the blue book”)<sup>57</sup>, and a detailed action plan<sup>58</sup>. MSP is a key instrument for

---

<sup>53</sup> Green Paper: towards a future Maritime Policy for the Union: A European vision for the oceans and seas. Commission of the European Communities. COM (2006) 275 final, Brussels, 7 June 2006, p.49.

<sup>54</sup> Thematic strategy in the protection and conservation of the marine environment. Communication from the Commission to the Council and the European Parliament. COM(2005)504 final. Brussels, 2005.

<sup>55</sup> Marine Strategy Directive. COM (2005) 505 final - 24/10/2005; Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

<sup>56</sup> At a MSFD Stakeholders workshop on 16<sup>th</sup> January 2009

<sup>57</sup> COM (2007) 575

<sup>58</sup> SEC (2007) 1278

the blue book, helping public authorities and stakeholders to coordinate their action and optimise the use of marine space to benefit economic development and the marine environment. The roadmap for marine spatial planning<sup>59</sup> was adopted by the European Commission in November 2008 and aims to facilitate the development of MSP by member states and encourage its implementation at national and EU level<sup>60</sup>. The roadmap sets out key principles for MSP and seeks to encourage the development of a common approach among member states.

Management of maritime spaces through MSP should be based on the type of planned or existing activities and their impact on the environment. MSP operates within three dimensions, addressing the:

- sea bed
- water column
- sea surface.

This allows the same space to be used for different purposes. Key principles emerging from MSP practice as set out in the roadmap are:

- **Defining objectives to guide MSP** – MSP should be used to manage ongoing activities and guide future development in a sea area.
- **Developing MSP in a transparent manner** – transparency is needed for all documents and procedures related to MSP.
- **Stakeholder participation** – in order to achieve broad acceptance, ownership and support for implementation, it is important to involve all stakeholders at the earliest stage in the planning process.
- **Coordination within member states** – simplifying decision processes.
- **Ensuring the legal effect of national MSP** – MSP should be legally binding if it is to be effective.
- **Cross-border cooperation and consultation** – cooperation across borders is necessary to ensure coherence of plans across eco-systems.
- **Incorporating monitoring and evaluation in the planning process** – a transparent regular monitoring and evaluation mechanism should be part of MSP.
- **Achieving coherence between terrestrial and maritime spatial planning** – terrestrial spatial planning should be coordinated with MSP, in relation with integrated coastal zone management (ICZM).
- **A strong data and knowledge base** – MSP has to be based on sound information and scientific knowledge.

In identifying key principles, the European Commission seeks to encourage a debate to help guide the development of MSP in the EU. To facilitate this debate, the European Commission launched a work programme in 2009, which consists of the following steps:

- a series of 4 workshops in 2009 to bring together representative stakeholders from all relevant areas, with the objective of discussing the principles suggested in the MSFD roadmap
- pilot projects in 2009, aimed at developing cross-border cooperation aspects of MSP
- a report drawing conclusions based on the results of the workshops, and proposing further steps and action to follow up.

The roadmap marks a first step, by way of debate, towards the development of a common approach to MSP as an important tool for the implementation of the EU's blue book. Implementation of MSP is the responsibility of the member states.

---

<sup>59</sup> Communication from the Commission, COM (2008) 791 *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU*, Brussels, 25 November 2008

<sup>60</sup> The communication is in accordance with Section 3.2 of the Blue Paper.

### **3.2 EU BIRDS AND HABITATS DIRECTIVES**

MPAs in the EU are mainly based on small, ecologically defined areas under the Birds and Habitats Directives. Member states are required to designate special protection areas (SPAs) under the Birds Directive<sup>61</sup> for rare, vulnerable or regularly occurring migratory species and bird migration must be secured. Under the Habitats Directive<sup>62</sup>, special areas of conservation (SACs) have to be designated in order to protect valuable natural habitats for plants and/or animals to re-establish favourable conservation status. Together the establishment of SPAs and SACs should form a network of protected areas across the EU, known as Natura 2000, for which member states have to take protective measures. The Birds and Habitats Directives are part of the EU contribution to implement the 1992 Convention on Biological Diversity.

### **3.3 COMMON FISHERIES POLICY**

Also of relevance to the successful implementation of MSP and MPA objectives in the EU is the Common Fisheries Policy (CFP), which is a framework for the management of EU and national fisheries for both stock conservation and environmental purposes. The current review<sup>63</sup> includes continued debate on integration of the CFP within the IMP, including support to implement the marine strategy to ensure environmental protection of marine ecosystems.

This improvement in stewardship and delivery of an ecosystem-based approach would help support the MPA strategy and deliver not only habitat protection but also an improvement in fisheries conservation.

### **3.4 STRATEGIC ENVIRONMENTAL ASSESSMENT DIRECTIVE**

The Strategic Environment Assessment (SEA) Directive<sup>64</sup> requires a formal environmental assessment of certain plans and programmes which are likely to have significant effects on the environment. The directive applies to plans and programmes whose preparation began on or after 21 July 2004, and also to those whose formal preparation began before this date but which have not been adopted, or submitted to a legislative procedure leading to adoption, by 21 July 2006. Authorities which prepare and/or adopt a plan or programme that is subject to the directive must prepare a report on its likely significant environmental effects.

### **3.5 OSPAR**

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. OSPAR is the mechanism by which 15 governments of the western coasts and catchments of Europe, together with the European Community, cooperate to protect the marine environment of the north-east Atlantic. The OSPAR commission<sup>65</sup> is the forum through which the contracting parties cooperate.

In 2003 environment ministers from OSPAR countries committed to establish, by 2010, an ecologically coherent network of well-managed MPAs in the north-east Atlantic. They further adopted necessary instruments for MPA selection and identification, including a list of threatened and declining species and habitats. In 2009, it became clear that the ministers' ambitious commitment is far from being met by the target date. Even the deadline set out by global fora such as WSSD (World Summit on Sustainable Development) and the CBD (1992 Convention on Biological Diversity) with regard to MPAs might be missed. However, compared to other sea regions, OSPAR has made considerable progress in terms of designating offshore MPAs, including in areas beyond national jurisdiction (ABNJ).

<sup>61</sup> Council Directive 79/409/EEC of 2 April 1979 on the Conservation of wild birds. OJ 103, 24 March 1979, as amended.

<sup>62</sup> Council Directive 92/43/EEC of 21 May 1992 on the Conservation of natural habitats and of wild fauna and flora, OJ L 206, 22 July 1992.

<sup>63</sup> Green Paper: Reform of the Common Fisheries Policy. Commission of the European Communities. COM (2009) 163 final, Brussels, 22 April 2009

<sup>64</sup> European Directive 2001/42/EC

<sup>65</sup> More information from: <http://www.ospar.org/>



## 3.6 BELGIUM CASE STUDY

### 3.6.1 Jurisdictional boundaries

The North Sea is one of the most exploited marine areas in the world with a long history of competition and conflicts relating to access and use of space and resources for trade and fishing. The Belgian part of the North Sea (BPNS), with its small size (3,600sq km, with a coastline of about 67km in length), lies in the centre of these commercial activities. In 1987, Belgium expanded its territorial seas from three to 12 nautical miles and concluded delimitation agreements with neighbouring countries (France, Netherlands, Germany and Luxemburg) (see Figure 7).

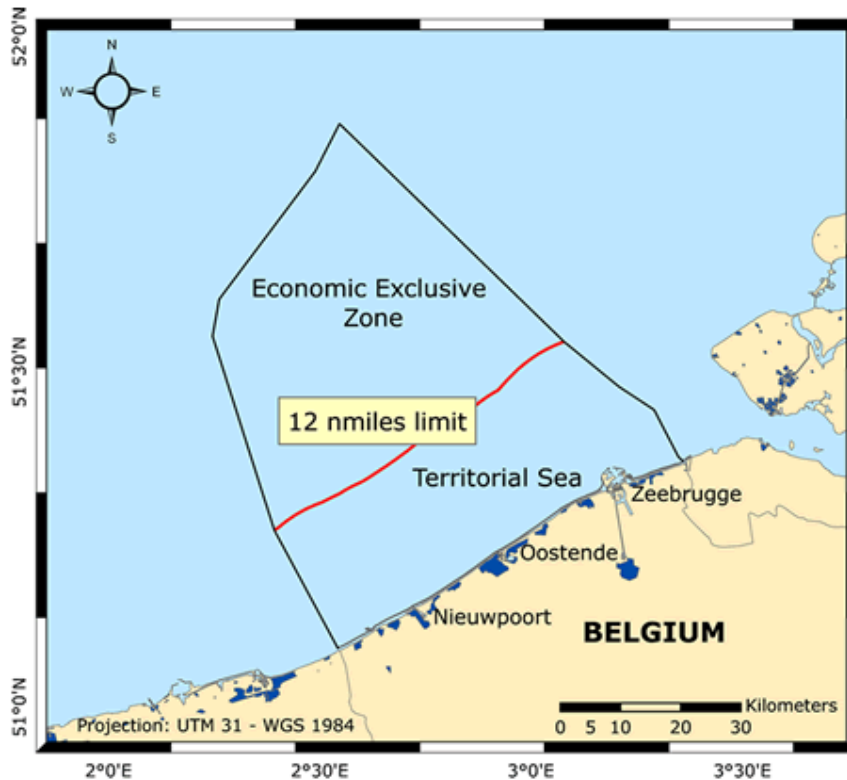


Figure 7 Map of Belgium's territorial sea and economic exclusive zone (MUMM, 2009)

### 3.6.2 Governance framework

#### 3.6.2.1 Principle legislative tools

Globally, more recent attention has been placed on managing the multiple use of marine space, especially in densely used areas such as the North Sea where conflicts among users and the environment are already clear.

Following the ratification and parliamentary approval of the UNCLOS III in 1998, two important implementing laws were adopted in 1999: concerning the Belgian EEZ in the North Sea (EEZ Act of 22 April 1999) and the protection of the marine environment under Belgian jurisdiction (Marine Protection Act of 20 January 1999). Together, these acts provide the legal basis to guide discussions and decision-making regarding new and existing uses of the sea, with the aim of formalising a system of MSP. As a result Belgium was one of the first countries to actually start implementing an operational, multiple-use planning system covering its territorial sea (TS) and EEZ (Douvere, 2008). Prior to these two pieces of legislation MSP was carried out on an ad hoc basis.

Belgium's Marine Protection Act (1999) requires a licence and an environmental impact assessment for the following activities:

1. civil engineering works
2. the digging of trenches and raising of the seabed
3. the use of explosives and high-powered acoustic devices
4. the abandonment and destruction of wrecks and sunken cargoes
5. industrial activities
6. the activities of advertising and trading companies.

These additional activities are **not** subject to licensing or authorisation under this law:

1. commercial fishing
2. scientific marine research
3. shipping, with some exceptions<sup>66</sup>
4. the activities referred to in the Continental Shelf Act (1969)
5. non-profitable individual activities
6. the activities necessary for exercising the authority of the Flemish Region (see section 5.1.4).

The Marine Protection Act 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*".

### 3.6.2.2 Licensing

Licences are required for any industrial or public activities at sea. Except for the licences granted under fishing laws and the concessions granted under the Continental Shelf Act 1969, any other activity in the BPNS that is subject to licensing or authorisation by either the present Marine Protection Act (1999) or any other legal or regulatory provisions in force, is also subject to an environmental impact assessment by the competent authority (Douvere, et al, 2007). This is required both before and after the licence or the authorisation is granted. The environmental impact assessment is intended to allow an evaluation of the effects of these activities on the marine environment. Any person who wishes to carry out an activity referred to in article 25, section 1 of the Marine Protection Act must enclose an environmental impact report with an application for a licence or authorisation. After the licence or authorisation has been granted, the activity is subjected to monitoring programmes and continuous environmental impact surveys. If any study reveals new harmful effects for the marine environment, the licence or authorisation may be suspended or withdrawn in accordance with the applicable suspension or withdrawal procedure.

Two royal decrees of 2003<sup>67</sup> introduced the licensing procedure and the environmental impact assessment (EIA) procedure. Both decrees cover the question of allocation and suitability of projects such as offshore wind farms, and make ad hoc spatial decisions possible by means of licences and concessions that are required. To construct and operate a wind farm in the BPNS, the following concessions and licences are required (Douvere, et al, 2007):

- i. a domain concession<sup>68</sup>
- ii. an environmental licence for the construction and exploitation of the wind farm based on an EIA
- iii. a licence for the laying and exploitation of submarine electricity cables<sup>69</sup>.

<sup>66</sup> Article 25, section 1 of the Marine Protection Act (1999)

<sup>67</sup> A royal decree of 7 September 2003 concerning the procedure for licences and the authorisation of certain activities in the marine areas under Belgian jurisdiction (Licence Decree); and a royal decree of 9 September 2003 concerning the rules of an environmental impact assessment in application of the law of 20 January 1999 on the protection of the marine environment in the marine areas under Belgian jurisdiction (Environmental Impact Decree).

<sup>68</sup> A domain concession can be granted before an environmental permit is granted. However, the concession is not valid until the environmental permit is granted.

Today most activities in the BPNS are covered by legal rules and procedures allowing or rejecting a licence or concession for the activity. Belgium can manage shipping within 12nm and beyond 12nm, provided a proposed measure is adopted within the International Maritime Organisation (IMO), and provided it does not prevent international shipping accessing its ports or transiting its waters. Fisheries are governed by the EU CFP; the EU CFP 2002 provides member states with the power to manage their inshore fisheries (out to 12nm) including measures to minimise the effect of fishing on marine ecosystems. There are two government administrations covering the management of activities taking place in the marine environment. Licences, concessions and environmental impact assessments for the exploration of the non-living resources of the TS and continental shelf fall under the Continental Shelf Act (1969) and are economically driven, while licences and environmental impact assessments for other activities are dealt with by the Marine Protection Act and are environmentally driven.

### **3.6.2.3 Implementing bodies**

Despite the relatively small area, there are a number of government departments which exercise a range of competences over the BPNS. There are probably only a handful of countries in which such a large number of ministers, administrations and institutions are involved on such a small maritime surface (Cliquet et al, 2007).

Marine policy is spread over several institutional levels, and includes the Flemish Region, one coastal province (West-Flanders) and 10 coastal municipalities (Cliquet et al, 2007). It is the federal government that is competent for the marine part of the coastal zone, except the competences for specific activities that have been transferred to the Flemish Region, such as dredging, pilotage and fisheries. The federal government has competences over:

- 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
- coastal defence.

### **3.6.3 BPNS master plan**

#### **3.6.3.1 Background**

The BPNS master plan supersedes an earlier ad hoc process that aimed to integrate the management of commercial activities such as offshore wind energy and international, European and national requirements for the protection and conservation of ecologically and biologically valuable areas. An earlier proposal for MSP in the BPNS in 1999 and for the protection of MPAs in 2003 failed due to the absence of a common understanding between stakeholders, and the approach being exclusively top-down, particularly in relation to the designation of MPAs. The process was further hindered by lack of political will and lack of consistency within government,

---

<sup>69</sup> Concerning the rules for the laying of electricity cables that enter the territorial sea or national territory, or that are placed or used for the exploration of the continental shelf, the exploitation of mineral resources and other non-living resources thereof, or for activities of artificial islands, installations or structures under Belgian jurisdiction.

particularly with reference to the key relevant minister not being engaged in the process. A key lesson is the value and importance of stakeholder engagement processes.

In 2002, a federal minister responsible for the management of the BPNS was appointed with the responsibility to coordinate all issues and to get the key institutions and administrations to work together. The core issues of this policy framework provided the basis for the “master plan” and include:

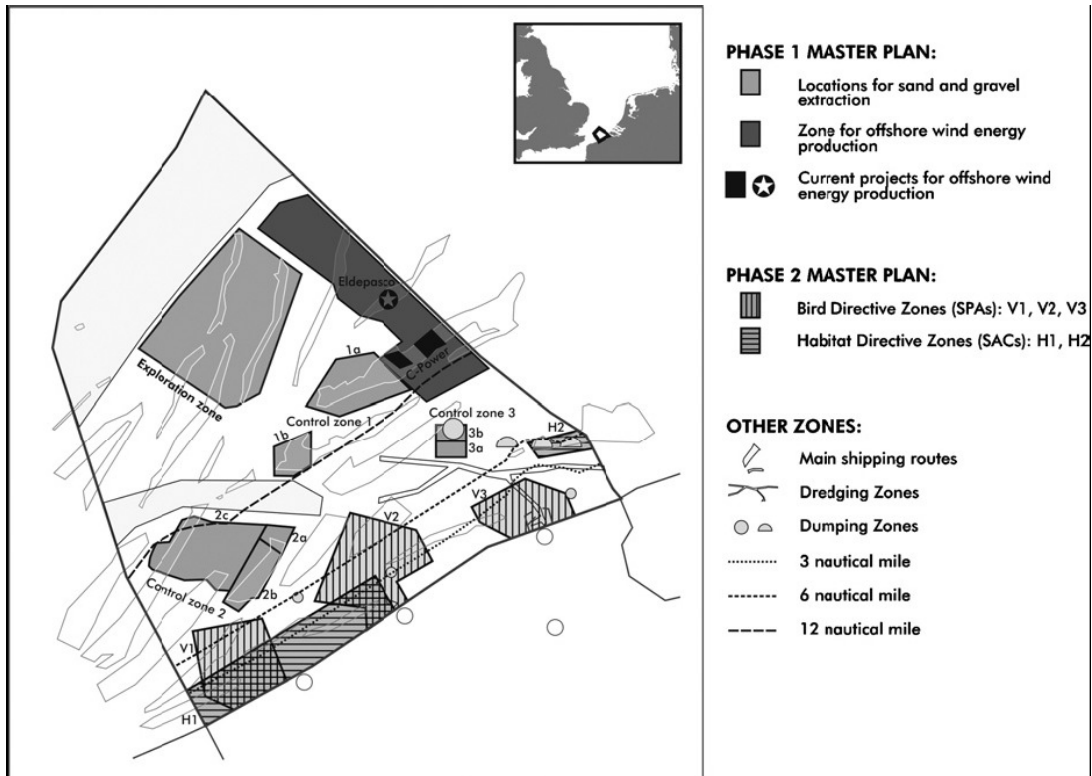
- the development of offshore wind farms
- the delimitation of marine protected areas
- a policy plan for sustainable sand and gravel extraction
- enhanced financial resources for the prevention of oil pollution
- the mapping of marine habitats
- protection of wrecks valuable for biodiversity
- the management of land-based activities that have an impact on the marine environment.

In 2003 a new government was formed which included a minister with specific competence for the North Sea. This 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. It is clear that since 1999 the Belgian North Sea policy has lacked continuity. The new minister promised to tackle the North Sea policy in a more inclusive manner and presented the North Sea master plan to accomplish this.

### **3.6.3.2 Implementation**

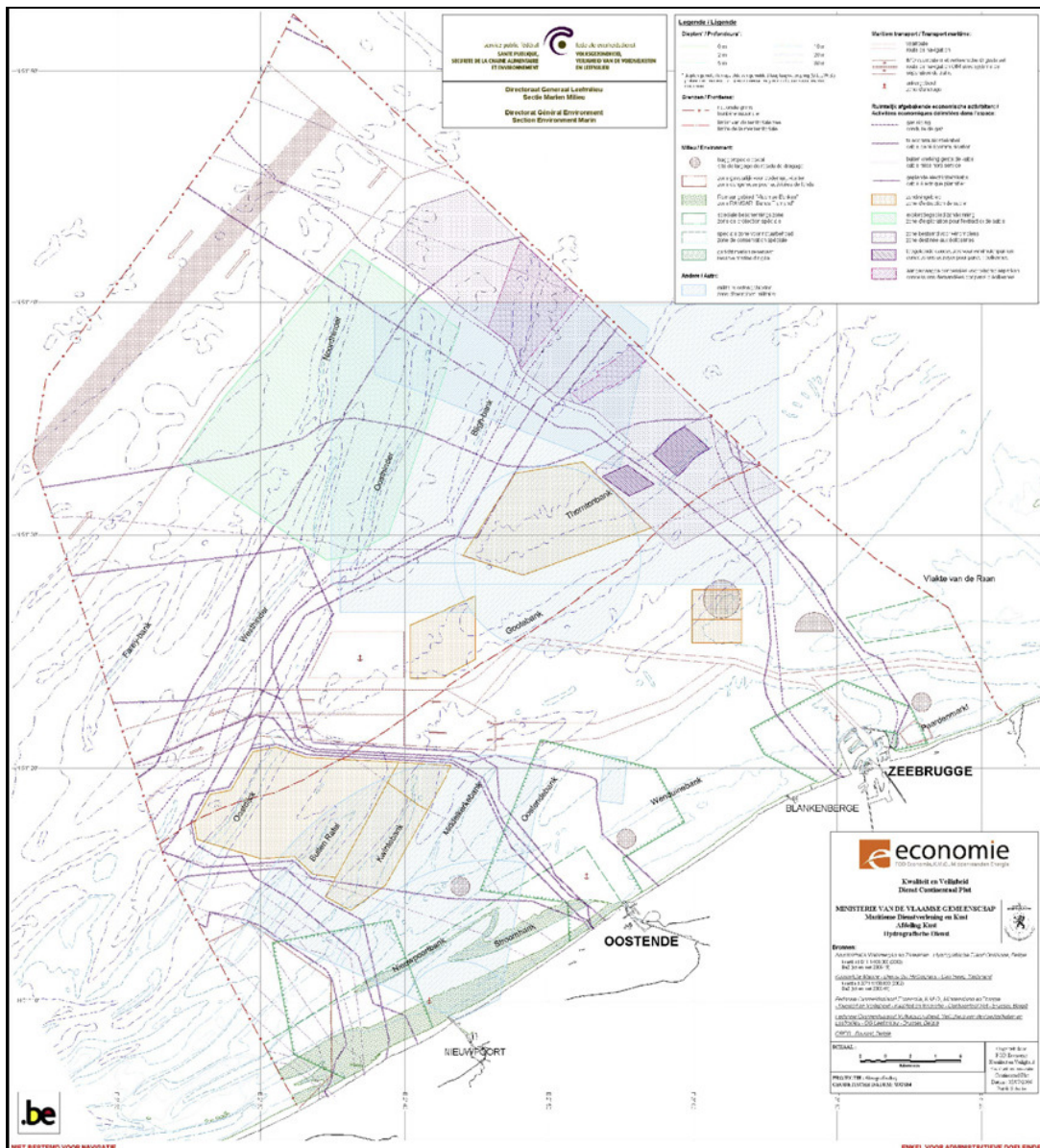
Despite its small size, the Belgian marine and coastal area is an intensely used area. The BPNS master plan was implemented in 2003 in an attempt to respond to new challenges, such as the need for offshore energy production and the need for a network of European MPAs. It aims to serve as an overarching framework for a multi-use planning system covering the entire TS and EEZ. This master plan represents the first step towards marine spatial planning in the Belgian marine environment. It uses zoning to allocate marine space for specific maritime uses.

The first two phases of the master plan are now operational (Figure 8). The first component included a revision of the demarcation of the sand and gravel extraction and exploration areas, and also a demarcation of a zone for future offshore wind energy projects. The second phase included the delimitation of MPAs as part of the EU Natura 2000 network.



**Figure 8.** Phases 1 and 2 of the sustainable master plan for the BPNS (Douvere et al, 2007)

The marine spatial plan (Figure 9) has led to a more diverse zoning system for sand and gravel extraction. This includes new management zones with sequential rotation for the most intensive exploitation areas, seasonally closed zones in which extraction is prohibited during fish spawning seasons, and an exploration zone where potential future use is examined. The spatial planning map of the BPNS illustrates this ongoing process, identifying smaller areas as ecologically and archeologically important preservation zones, such as shipwrecks.



**Figure 9.** Implementation of marine spatial planning in Belgium. Source: Belgian Federal Government, Directorate General for Environment (Plasman, 2008).

### 3.6.3.3 Marine protected areas

The Marine Protection Act enabled the Belgian federal government to designate MPAs in the Belgian marine environment. Five types of MPAs can be designated:

- integral marine reserves<sup>70</sup>
- specific marine reserves<sup>71</sup>
- SPAs or SACs (under the Birds and Habitats Directives)
- closed zones (for certain activities for all or part of the year)
- buffer zones (restrictions on the activities are less strict than in the marine reserves).

In 2005, the first five zones, including Ramsar sites and areas under the European Birds and Habitats Directive, received legal status (see Figure 10).

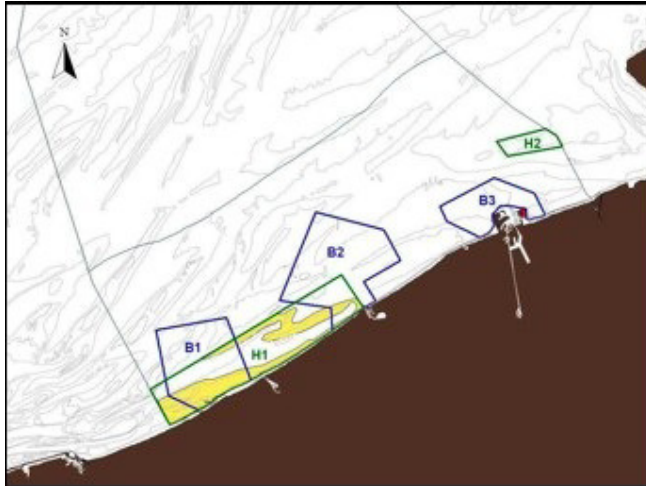
<sup>70</sup> In the integral marine reserves all activity is prohibited, with the exception of surveillance and control, scientific research and monitoring, shipping, professional fishing and military activities.

<sup>71</sup> In the specific marine reserves all activity is prohibited, with the exception of surveillance and control, scientific research and monitoring, shipping, professional fishing, military activities, measures of management, conservation, and restoration or nature development.



In March 2006, a sixth area was agreed, which introduced a strict protection regime whereby all activities are forbidden, except those activities that are explicitly allowed by the law or royal decree. The list of allowed activities is somewhat comprehensive and includes: surveillance and control, scientific research and monitoring, military activities, sea fisheries, pilotage, rescue and towing services, dredging, laying and maintaining cables and pipelines, digging of trenches and raising of seabed, and those activities that are mentioned in the voluntary user agreements (Christiansen, 2009).

Another area has been proposed as a recovery area for the European oyster which will cover 3.4% of the Belgium marine waters at Hinder Banks and is proposed as an SCI (Site of Community Importance) and OSPAR MPA. So far Belgium has not nominated any MPA sites to be included in the OSPAR network of MPAs (Christiansen, 2009).



**Figure 10:** Map of designated Natura 2000 areas in Belgian waters (source: Christiansen, 2009):

H1 Trapegeer Stroombank SAC, H2 Vlakte van de Raan SAC, B1-3 are SPAs.

There is a nature reserve (Baai van de Heist, too small to show) next to the port of Zeebrugge, inside B3.

The delimitation of these MPAs was based on scientific knowledge and criteria through a process of consultation. Consultation with stakeholders in the preparatory phase of the policy process marked an important shift in policy style.

The delimitation took place after the protection measures were communicated to all sectors and interested parties. Stakeholders and lower governing boards were consulted in the preparation. The government no longer focused solely on legal prohibitions and commandments, as was the case previously. Instead they opted for a mix of formal and informal rules, including “voluntary user agreements”, taking a voluntary approach to the conservation areas. If the sea-user/stakeholder repeatedly, intentionally or unintentionally, violate the agreements the minister can cancel the agreement.

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 2005<sup>72</sup> 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 MPAs.

For each designated MPA a policy plan is drawn up which must contain information on the protection measures, the user agreements and the results of the monitoring (Cliquet et al, 2007). The user agreements will be evaluated based on this information. The procedure for

<sup>72</sup> 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.

making the policy plans includes a public inquiry, consultation meetings with users and a public consultation meeting.

#### **3.6.3.4 Integration with land-use/terrestrial planning**

The master plan includes a policy framework for the management of land-based activities that have an impact on the marine environment. The GAUFRE<sup>73</sup> project is one of the first systematic attempts to apply and translate land-use planning concepts to the marine environment. Using a land-use planning approach, the GAUFRE study envisaged the creation of scenarios expressing a general vision for the BPNS. It was among the first of its kind to actually apply the tools and concepts of land-use planning to the marine environment. Using a land-use planning approach, the GAUFRE study envisaged the creation of scenarios expressing a general vision for the BPNS. The first phase of the project included the analysis of all available scientific data, which then led to the creation of basic Geographic Information System (GIS) layers, suitability maps and interaction maps.

Once this analytical framework was in place, a structural approach was taken to create maps to represent a conceptual framework for sustainable spatial content. These maps reflect a strategic vision of the planning without determining what can and cannot be done on every single piece of space. These structural maps of the actual situation were then shaped into six possible future scenarios by using criteria that were considered as key values for sustainable management of the BPNS. Each scenario map reflects a unique array of decision rules according to which specific structural maps could be created. Each “use” of the BPNS was considered under these six scenarios in terms of its development potential, and each map provides a basic tool for discussion about a future decision towards an overall vision and structure for the BPNS. The GAUFRE study has made it possible to anticipate new developments in the BPNS in a balanced and sustainable way.

#### **3.6.4 Belgium evaluation**

Given the busy and dynamic nature of the BPNS, a sectoral approach or strict zoning approach is not a suitable management strategy. To have a sustainable BPNS the integration and participation of many different parties in the policy-making process is essential.

Almost immediately after the Marine Protection Act was approved in Belgium in 1999 a first proposal was made by the federal environmental secretary of state for the delimitation of several marine reserves. The fact that certain activities could be prohibited or limited in these areas quickly led to the eruption of protest against the demarcation of these marine reserves. Stakeholder concern rapidly got support from individual local politicians and municipal authorities, and in a relatively short period of time this resulted in the process being put on hold. The law on the marine environment did not provide for a formal participation procedure during the process of delimitation. In response to this the environmental secretary of state organised a consultation round with local politicians and certain administrations. This is a good example of the need to demonstrate consultation with stakeholders at an early stage.

The initial stages of the policy process in Belgium were fragmented and lacked consistency; for example, there were three different ministers for the marine environment in a three-year period. In 2002 the environment minister announced the demarcation of three special protection areas for the Belgium coast. This time consultations were held in advance with the different sectors, concerning possible restrictions, although not concerning the demarcation itself. No lessons learned were taken on board from the previous attempt to delimitate the marine reserves. Both the first and second attempts were characterised by poor (missing, late, unclear) communication. Both attempts damaged the confidence in the federal (and regional) North Sea policy and in particular the concept of MPAs.

---

<sup>73</sup> GAUFRE stands for “Towards a Spatial Structure Plan for Sustainable Management of the Sea”. For more information see: [http://www.maritieminstituut.be/main.cgi?s\\_id=165=&lang=en](http://www.maritieminstituut.be/main.cgi?s_id=165=&lang=en)



For the first time in 2003, with the new government in place, the North Sea policy was tackled in a more inclusive manner. The master plan became a first step towards MSP in the Belgium marine environment. It is clear that the approach of the new minister strongly differed from the approaches of his predecessors. The delimitation of the MPAs was still based on scientific knowledge and criteria, but by means of several forms of consultation this demarcation was accepted by the stakeholders, and the discussion concerning the measurements was held parallel to the delimitation procedure. The increase in participation and transparency was a positive evolution.

Belgium is among the first countries to actually start developing an operational, multiple-use planning system covering its TS and EEZ, although in the early days discontinuity within the government department caused setbacks. More recently, however, political momentum appears to have stalled, limiting further progress.

There is a weakness with the MPA user agreements. 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 for a limited period of time, whereas sustainable management of the marine environment requires a long-term perspective.

### **3.6.5 Conclusions for Belgium**

Historically, there was a top-down approach to ocean management in Belgium, with a lack of common understanding between stakeholders. There was also a lack of political will and a lack of consistency within government, and a lack of continuity, poor communication and poor stakeholder involvement (particularly on MPAs initially).

Belgium's Marine Protection Act was introduced in 1999, and bought about the master plan for the BPNS, which has been developed and implemented since 2003 and became a first step towards MSP in the Belgium marine environment. The BPNS master plan includes a policy framework for the management of land-based activities that have an impact on the marine environment. The GAUFRE project in Belgium is one of the first systematic attempts to apply and translate land-use planning concepts to the marine environment.

#### **Positive outcomes**

- The use of zoning and seasonal closures in Belgium has been advantageous in developing a marine spatial plan.
- The management of land-based activities that impact on coastal waters is beneficial.
- Stakeholder engagement/participation has worked well in Belgium.
- MPA demarcation in Belgium remains scientifically based with stakeholder involvement and acceptance.
- The system is now transparent.
- Stakeholder involvement during the development and implementation stages of MSP in the BPNS was essential for its success.
- The bottom-up approach, with lots of direct contact among actors and a great deal of transparency, brought the MSP process in Belgium to a successful end.
- Strict marine reserves have been designated in Belgium, where all activities are forbidden.

#### **Negative outcomes**

- Lack of formal documentation to reinforce the master plan.
- Inconsistencies in political will and overall momentum, which has limited further success.
- MPA user agreements are voluntary and therefore dependent on stakeholder ownership and have the potential to unravel.

### **3.6.6 Lessons learned from Belgium**

- Strong government leadership and continuity in government engagement is essential.
- Clear communication and stakeholder engagement/involvement in a well-managed manner is important.
- Transparency is important.
- Including the management of land-based activities is valuable.
- Including zoning and seasonal closures within a marine spatial plan is valuable.
- The North Sea as a whole is a very dynamic system. A good national policy should take an international approach in which the specific issues of the BPNS are considered in the context of the whole sea.

## 4 United Kingdom

The UK's 20,000km of coastline has an incredibly diverse array of coastal and marine habitats. The UK's marine environment has long provided people with a livelihood, but it now faces increasing pressure from overuse. To ensure it thrives we must improve the management of our seas. We need legislation that will ensure we use our seas sustainably, prevent further losses of marine wildlife, habitats and resources, and help us limit and adapt to climate change. Wildlife and Countryside Link (LINK)<sup>74</sup> welcomed the introduction of the UK Marine and Coastal Access Bill into parliament in December 2008, and hopes that it will lead to a Marine Act that is strong enough to protect our wonderful array of marine wildlife and habitats.

As well as establishing a network of MPAs to safeguard nationally important species and habitats, such as basking sharks and salt marshes, the provisions in the Marine and Coastal Access Act could simplify our activities at sea by establishing detailed marine plans to guide sea users. In an area like the Solway Firth, for example, this would ensure that future offshore renewable developments do not come into conflict with fisheries activities or upset the balance of the ecosystem by displacing key species and damaging the seabed.

A new Marine Management Organisation (MMO), to be established under the UK Marine and Coastal Access Act, will be responsible for leading the delivery of sustainable development in English and offshore UK waters, with equivalent and compatible bodies in Northern Ireland, Scotland and Wales.

### 4.1 GOVERNANCE FRAMEWORK

#### 4.1.1 Jurisdictional boundaries

Currently the UK does not have an EEZ; it has a renewable energy zone and an exclusive fishing zone from 0–200nm. However, the Marine and Coastal Access Act will enable an EEZ to be declared instead of this. Under the Marine and Coastal Access Act local authorities will have jurisdiction from inland to the low-water mark and the MMO (and equivalent bodies in devolved administrations) will have jurisdiction for the territorial seas (0–12nm) and the EEZ (0–200nm).

#### 4.1.2 Strategic and policy context

Prior to the UK Marine and Coastal Access Act no comprehensive marine planning system operating in the UK existed. There are only regulatory processes by which licences, consents and other authorisations have to be obtained for specific proposals or activities. These regulatory regimes have evolved over a long period of time, in response to changing forms and patterns of developments in the marine environment. The regulatory processes have tended to take a sectoral approach.

Further, there has been no “planning authority” for the sea; there is no equivalent body to a local authority, whereas on land, the planning authority prepares, plans and regulates proposals for most forms of development.

At a strategic level the UK recognised the potential benefit of MSP in addressing the need for a more coherent and integrated approach to the threats from ongoing and increasing use. The government's marine stewardship report – *Safeguarding Our Seas: A strategy for the conservation and sustainable development of our marine environment*<sup>75</sup> – was published on 1 May 2002 and sets out a vision of “clean, healthy, safe, productive and biologically diverse oceans and seas”.

---

<sup>74</sup> Wildlife and Countryside Link is a coalition of the UK's major environmental organisations working together for the conservation and protection of wildlife, the countryside and the marine environment.

<sup>75</sup> Available from: <http://www.defra.gov.uk/marine/environment/stewardship.htm>

The report commits the government to a framework of new initiatives that will enhance marine nature conservation, conserve biodiversity, improve management of our marine resources and develop scientific research to help government make more informed policy decisions. Underpinned by the principles of sustainable development, integrated management and the conservation of biological diversity, the report outlines how the government aims to adopt an ecosystem-based approach to marine management.

The report drew on another initiative, the review of marine nature conservation<sup>76</sup>, which promoted the need for action at different governance levels and highlighted the potential importance of MSP as a tool to integrate economic, social and environmental objectives. Interest in MSP was partially derived from nature conservation and environmental concerns. A key recommendation from the interim report of the review of marine nature conservation was a proposal for a pilot scheme to test ways of integrating nature conservation into key sectors at the regional seas level in order to make an effective contribution to sustainable development on a regional basis.

The government's 2005 election manifesto included the following commitment:

*Through a Marine Act, we will introduce a new framework for the seas, based on marine spatial planning, that balances conservation, energy and resource needs. To obtain best value from different uses of our valuable marine resources, we must maintain and protect the ecosystems on which they depend.*

In a preparatory phase prior to introducing the UK Marine and Coastal Access Bill, Defra commissioned an Irish Sea pilot project (see section 4.2) to research options for developing, implementing and managing regional MSP in all UK offshore waters. Informed by the pilot project, the UK government came forward with proposals for legislation in the marine bill white paper, *A Sea Change*<sup>77</sup>, published on 15 March 2007. The white paper included proposals for establishing a new UK-wide system of marine planning, to enable more strategic management of the seas.

### **4.1.3 MPAs in the UK**

In the UK there are several types of MPAs giving different levels of protection:

- special areas of conservation (SACs)
- special protection areas (SPAs)
- sites of special scientific interest (SSSIs) / areas of special scientific interest (ASSIs)
- marine nature reserves (MNRs)
- Ramsar sites.

Currently, only around 2% of the UK's seas have been designated as marine protected areas (MPAs) under EU and UK law in order to protect marine biodiversity. Alongside this there are three marine nature reserves (Skomer island in Wales, Strangford Lough in Northern Ireland and Lundy island in England) designated under UK law (these are also SACs). These provide some legal protection from damaging activities, but only part of one of these sites receives the highest level of protection available – at Lundy island, where fishermen have agreed to limit their activities in a designated area to restore fish stocks and marine wildlife. The benefits of highly protected marine reserves are being increasingly recognised. Another example of an MPA encompassing strict protection measures is Lamlash Bay, Isle of Arran. However, this still means that only 0.001% of UK seas are highly protected.

Once sites have been identified by statutory nature conservation agencies they are recommended to government for approval to undertake a public consultation. The government

<sup>76</sup> Available from: <http://www.defra.gov.uk/marine/biodiversity/rmnc.htm>

<sup>77</sup> Available from: <http://www.defra.gov.uk/marine/pdf/legislation/marinebill-whitepaper07.pdf>

then determines which sites are put forward to the EU for inclusion in the Natural 2000 network. However, SACs are not immune to degradation as can be illustrated by the horse mussel beds (*Modiolus modiolus*) at Strangford Lough. In Strangford Lough, trawling and dredging were banned in December 2003 to protect horse mussel reefs. However, this was too late, as much of the damage had already been done.

The Habitats and Birds Directives do not permit social or economic considerations to influence the choice of sites or their boundaries. The UK, as a member state, must identify the sites and boundaries based only on scientific criteria and the presence of qualifying habitats and bird populations specified in the directives. Impact assessments cannot influence site selection or the boundaries.

The UK has signed up to international agreements that aim to establish an ecologically coherent network of MPAs by 2012. This means that the MPA network should be a collection of areas that work together to provide more benefits than an individual area could on its own. In England and Wales the MPA network will be made up of the current MPAs, plus the new type of MPA – marine conservation zones, identified under the UK Marine and Coastal Access Act. In Scotland there will be three types of MPA – a ‘nature conservation MPA’, a ‘demonstration and research MPA’ and a ‘historic MPA’ – designated under the Scottish Marine Act.

However, in terms of designating nationally important sites as MCZs/MPAs, the devolved administrations are moving at different speeds. This is a particular concern in Northern Ireland where new marine legislation is not expected to be introduced until 2012. According to Gubbay (2009), using the IUCN/WCPA<sup>78</sup> guidelines as a reference, progress towards an ecologically coherent network of MPAs in the waters around Northern Ireland was assessed as “mostly ‘Poor’”. This will have implications for the UK MPA target for 2012. It therefore seems clear that a much higher degree of integration across the devolved administrations is needed in the implementation of UK-wide commitments, especially in relation to the designation of MPAs, MSP and other aspects of the UK Marine and Coastal Access Act.

## **4.2 IRISH SEA PILOT**

The UK government set up the Irish Sea pilot project in 2002 to test the potential for an ecosystem approach to managing the marine environment on a regional sea scale. The Irish Sea contains a wide range of marine habitats and wildlife that would benefit from improved regional scale conservation. It is a summer feeding area and ecological corridor for species such as basking sharks and leatherback turtles, and also supports internationally important populations of sea birds, cetaceans and fish.

### **4.2.1 Background**

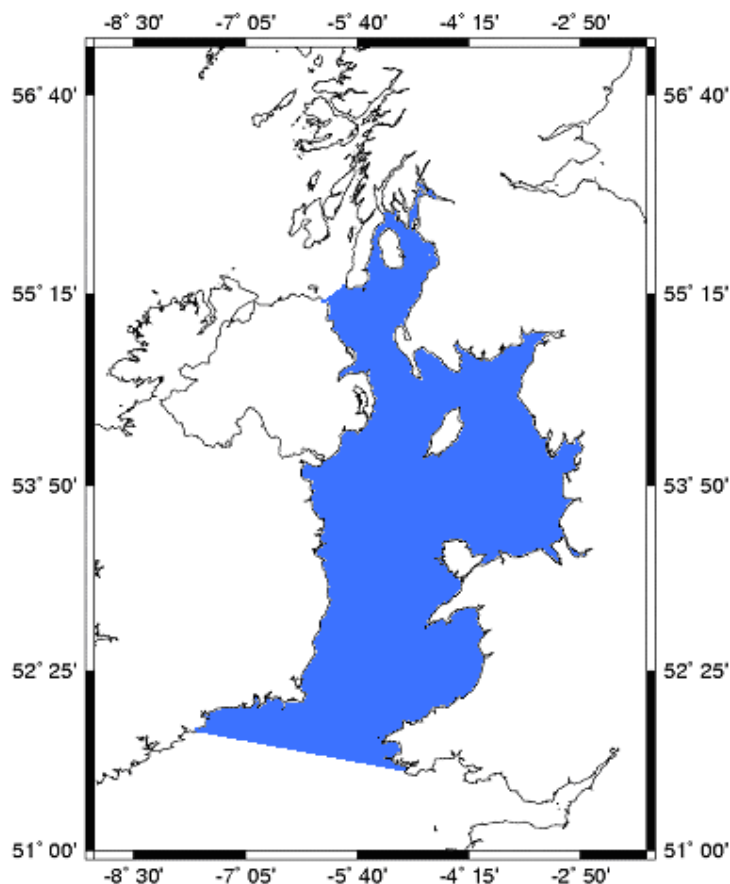
The purpose of the Irish Sea pilot was to help develop a strategy and plan for marine nature conservation in the Irish Sea that could be applied to all UK waters and, with international collaboration, the adjacent waters of the north-east Atlantic. The work fulfils a commitment made by the UK government in May 2002, at the launch of *Safeguarding our Seas*, and was funded (£397,200 over 21 months) primarily by Defra, with contributions from other partners. The purpose of the pilot was to “pilot test” a new “marine nature conservation framework”. The framework was designed to apply the two principles of using a whole ecosystem approach and managing the sea on a regional scale, to cover the whole of the Irish Sea. Although this pilot was focussed on marine nature conservation, the scale of the project and holistic approach is linked to MSP.

Following stakeholder consultation in September 2002 the boundaries for the pilot were recommended (Figure 11). The location was chosen because the Irish Sea is semi-enclosed, has a wide range of stakeholders and activities, and management requires the involvement and agreement of all devolved administrations of the UK, Ireland and Isle of Man. Key development

---

<sup>78</sup> Laffoley, D. (2008). *Towards Networks of Marine Protected Areas. The MPA Plan of Action for IUCN's World Commission on Protected Areas*. IUCN WCPA, Gland, Switzerland.

pressures in the Irish Sea include oil and gas activities, renewable energy, pollution, shipping and tourism. The pilot had a theme of promoting the maximum sustainable development of all these activities with effective protection for the wildlife of the area.



**Figure 11** Recommended boundaries for the Irish Sea pilot following stakeholder consultation (modified from JNCC, 2002)

The aims of the pilot were to:

- i) test the framework proposed by the paper *An implementation framework for the conservation, protection and management of nationally-important marine wildlife in the UK* on the scale of the Irish Sea
- ii) determine the potential of existing regulatory and other systems for delivering effective marine nature conservation; identify any gaps and recommend measures to fill them.
- iii) evaluate the efficiency and effectiveness of current governance and enforcement regimes in implementing legislation relevant to marine nature conservation, and make recommendations for improvements
- iv) test ways of integrating nature conservation into key sectors (e.g. fisheries, energy, transport, minerals, tourism) in order to make an effective contribution to sustainable development on a regional basis.

Key activities undertaken in the pilot were<sup>79</sup>:

- developing and implementing a communications strategy to inform and involve stakeholders
- collating and mapping information on the physical and biological characteristics of the Irish Sea, its natural resources and human activities
- handling, analysing and mapping essential data on GIS
- testing draft criteria for the identification of nationally important habitats and species
- developing nature conservation objectives relevant to the various levels of the framework for marine nature conservation having regard to the needs of other sectors

<sup>79</sup> The full work programme is available online at <http://www.jncc.gov.uk/irishseapilot>

- reviewing existing legislation, governance and enforcement mechanisms against the conservation objectives
- assessing the potential contribution of the framework for marine nature conservation to sustainable development.

#### **4.2.2 Key outcomes from the Irish Sea pilot**

The results of the pilot have been published in *Irish Sea Pilot Final Report*<sup>80</sup> and cover 64 recommendations. The following recommendation was made in relation to completing the marine nature conservation framework for the Irish Sea:

**R64** *Resources should be sought from the relevant national jurisdictions and statutory agencies, and from the European Union, to complete the work identified in this report in relation to the marine nature conservation framework for the Irish Sea, and to develop detailed proposals for a comprehensive marine spatial planning framework following a trial of initial proposals on the Irish Sea.*

Additional key findings and conclusions from the report cover the wider sea, regional sea, nationally important features, conservation objectives, data and information, enforcement and governance, and overarching measures required (see Appendix 5)

#### **4.2.3 Implementing body**

Implementation of the Irish Sea pilot included the advice and involvement of:

- the governments of Ireland and the Isle of Man
- all devolved administrations of the UK.

The work of the pilot was overseen by a steering group chaired by Defra and comprised representatives of the government of Ireland, the government of the Isle of Man, the devolved administrations, relevant statutory agencies, representatives of the fishing industry and of other industries, and conservation NGOs. During the course of the pilot the steering group met seven times and considered progress of work and expenditure against the timetable and budget set out in the specifications.

The overall management of work undertaken through the pilot was the responsibility of the Joint Nature Conservation Committee (JNCC), with the JNCC project team and 23 contractors responsible for the day-to-day management. In addition, the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) provided fish nursery data and assisted with the collection and mapping of fisheries data. Data was contributed by the government of Ireland and the government of the Isle of Man, which also provided support for an analysis of legislation, regulation and enforcement for the Isle of Man. Countryside Council for Wales (CCW), the Environment and Heritage Service (Northern Ireland) and the government of the Isle of Man contributed financially to the work undertaken to identify areas of geological and geomorphological importance in the Irish Sea.

#### **4.2.4 Current situation and lessons learned**

The Irish Sea pilot emphasised the need to undertake further research into the potential benefits of developing a MSP system for UK waters. It recommended that the data and information collated provided a strong basis for trials of possible MSP approaches. The pilot provides a good case study to consider new approaches to the management of UK seas; for example, proposed multiple-use zoning schemes for the Irish Sea, based on the data collated from the pilot study, have been suggested (Boyes *et al*, 2007), and designed to inform the development of MSP.

---

<sup>80</sup> Available from: <http://www.jncc.gov.uk>

Overall, most of the recommendations from the Irish Sea pilot have been met. However, not all of them have been adequately covered by the UK Marine and Coastal Access Bill and are discussed in Section 6.

### **4.3 THE UK MARINE AND COASTAL ACCESS ACT**

The UK Marine and Coastal Access Act is expected in late 2009 and will introduce a number of provisions for improved protection and management of the marine environment. The legislation will establish a network of MPAs to be known as “marine conservation zones (MCZs)”, a holistic spatial planning system, a streamlined licensing regime, a new strategic delivery body (the Marine Management Organisation) and a modernised framework for inshore fisheries management.

#### **4.3.1 Marine spatial planning and Marine Management Organisation**

The new marine planning system will take into account a UK-wide agreed “marine policy statement” that will guide the development of a series of marine plans for UK waters, with sustainable development of the UK marine area at its heart. Marine planning will be one of the major functions of the new Marine Management Organisation (MMO), which will have responsibility for preparing marine plans in accordance with the policies and objectives set out by the government and translated into the marine policy statement. The introduction of a new marine planning system through the UK Marine and Coastal Access Act will enable the government to set a clear direction for managing our seas, clarify objectives and priorities, and direct decision-makers, users and stakeholders to a more strategic and efficient approach towards the sustainable development and protection of UK marine resources.

Alongside the marine policy statement, there will be a series of marine plans, which will apply the policies in more detail to particular parts of the marine area.

Defra has produced a document entitled *Implementing Marine Planning*<sup>81</sup>, which states that ‘both the marine policy statement and marine plans will guide and direct decisions in the marine environment. Marine plans will be a source of information, which developers and other marine industries can use when considering where and how they might carry out activities’.

Legislation in relation to development and provision of national infrastructure, both on and offshore, has recently been subjected to major reform in the UK. The MMO will have responsibility for managing a new system of marine planning and licensing – a streamlined, single consent regime for development of offshore projects ranging from small jetties to large-scale dredging operations. It is intended that this new system will provide greater certainty and guidance for all users of the marine environment, as well as enabling the proper management of offshore development.

It is intended that the MMO will:

- be the centre of marine expertise
- provide a consistent and unified approach
- deliver improved coordination of information and data
- reduce administrative burdens
- work with Natural England and JNCC to create effective links between the MCZ and marine planning processes
- work closely with local authorities, the Environment Agency, inshore fisheries and conservation authorities (IFCAs), the Crown Estate, coastal partnerships and other coastal stakeholders to integrate the management of the seas with coastal land.

---

<sup>81</sup> Available from: <http://www.defra.gov.uk/environment/marine/documents/implementing-mp.pdf>



In addition to establishing the MMO, the UK government has established another independent statutory body, the Infrastructure Planning Commission (IPC), under the Planning Act 2008. The IPC is charged with deciding applications for development of nationally significant infrastructure projects, as defined by the Planning Act. These include certain offshore developments such as generating stations above 100MW, ports and harbours. The result is that the MMO's remit to decide certain developments in the marine environment is limited, as deciding applications for developments above a certain threshold will be the responsibility of the IPC.

The MMO, and equivalent management bodies in Wales, Scotland and Northern Ireland, must deliver a consistent and coordinated approach across borders and the boundaries between land and sea. The Scottish Marine Bill provides for the establishment of Marine Scotland, which is the equivalent to the MMO, and for a national marine plan (out to 12nm). The Welsh assembly government will implement licensing in Welsh waters up to 12nm and will agree marine plans in conjunction with the UK secretary of state and MMO for inshore and offshore Welsh waters (0nm to the median line with Ireland) where they include functions reserved to the UK government.

Unfortunately, at the time of writing, Northern Ireland had not made any commitment to establishing an equivalent body to the MMO. However, it is essential for the full integration of planning across UK waters that the MMO coordinate with similar bodies in other jurisdictions including Marine Scotland and any Northern Ireland MMO if and when established. The Marine and Fisheries Agency has produced a report entitled *Implementing Marine Planning*<sup>82</sup> to provide a high level overview of marine planning for English inshore and UK offshore waters. It sets out an early view of how the MMO will approach the implementation of its marine planning responsibilities under UK Marine and Coastal Access Act. The report also describes an outline timetable for establishing the MMO's marine planning capability and for delivery of marine plans once the MMO has been established. The Marine and Fisheries Agency administers a range of statutory controls that apply to marine works, including the control of coastal and marine developments such as construction, coastal defenses, dredging and the disposal of waste materials in the sea. This is done on behalf of the secretary of state for Defra, and covers English, offshore UK and in some cases Welsh waters.

#### **4.3.1.1 MCZs and conservation**

The UK Marine and Coastal Access Act will provide for the designation and protection of MCZs. Because most MCZs are likely to be designated before marine plans are formally adopted, the marine plans need to take account of these existing designations and the feature(s) for which they are designated. They should also contain policies which support the management and preservation of any designations.

MCZs will exist alongside UK and European marine sites (SACs and SPAs), to form an MPA network. The MCZs will need to be both large enough, and close enough together, to support a range of communities of marine wildlife and habitats. Connectivity of MPAs is vital to achieving ecological coherence due to the movement of species and the transport of their offspring through UK seas. They should protect areas that are important for conserving the diversity of rare, threatened and representative habitats and species.

The UK Marine and Coastal Access Act will also allow for the making of byelaws, which are localised measures to regulate otherwise unregulated activities, when this is necessary to further the conservation objectives for an MCZ (or potential MCZ).

Natural England and the Joint Nature Conservancy Committee (JNCC) are working together to begin identifying areas that could be recommended as MCZs. The identification of MCZs will follow a different process and a later timetable than that for the Natura 2000 sites, and will be developed through stakeholder involvement in four regional MCZ projects (Countryside Council

---

<sup>82</sup> Available from: <http://www.mfa.gov.uk/mmo/documents/Implementing-Marine-Planning.pdf>

for Wales (CCW) is working with the Welsh assembly government on a similar project in Welsh waters):

- Finding Sanctuary (south-west England)
- Irish Sea Conservation Zones
- Net Gain (North Sea)
- Balanced Seas (south-east England).

The projects aim to recommend a network of sites to government by October 2011. Natural England is also currently processing seven potential/proposed SACs and two SPAs.

On 1 July 2009, recruitment of eight panel members and a chair to comprise the science advisory panel (SAP) began. The SAP will be an advisory, non-departmental public body that will support the four regional MCZ projects in selecting MCZs under the UK MCAB.

Defra has recently published for public consultation a draft document on MPAs entitled *Delivering Marine Conservation Zones and European Marine Sites: A draft strategy for Marine Protected Areas*<sup>83</sup>. It sets out what Defra intends to do over the next 10 years to deliver the government's commitment to build an ecologically coherent network of MPAs.

A key challenge is to design networks that are both representative *and* ecologically coherent (Jones and Carpenter, 2009). In their paper, Jones and Carpenter argue that the success of MPAs depends on connectivity amongst protected areas and spillover into unprotected areas through linkages at various scales.

The UK government has stated that it intends to designate some areas as highly protected MPAs, proving the greatest benefit to biodiversity of any type of MPA. Highly protected MPAs facilitate recovery from past impacts (Blyth-Skyme *et al*, 2006).

#### **4.3.2 Devolved issues**

As a result of the current devolution settlements in the UK, not all aspects of the UK Marine and Coastal Access Act extend to all of the UK's marine area. Different responsibilities are held by each devolved government.

The majority of the provision in the UK Marine and Coastal Access Act will apply to Wales. The act will give powers to Welsh ministers to prepare marine plans, encompassing all activities, for the inshore and offshore waters adjacent to Wales (with the agreement of the secretary of state when plans encompass reserved activities). The act will give powers to Welsh ministers to designate MCZs and implement the streamlined licensing regime. Welsh ministers will be assuming full responsibility for inshore fisheries management instead of creating IFCAs.

The Scottish Marine Bill was introduced to the Scottish Parliament on 29 April 2009 and will introduce a framework for the sustainable management of the seas around Scotland. It will also introduce:

- an equivalent body to the Marine Management Organisation, called Marine Scotland
- a new statutory marine planning system to sustainably manage the marine environment
- a streamlined licensing regime, minimising the number of licences required for development in the marine environment
- a new system of MPAs, with new powers to protect and manage areas of importance for marine wildlife, habitats and historic monuments
- a range of enhanced powers of marine conservation and licensing.

The UK government needs to work closely with the Scottish executive to ensure compatibility with the UK Marine and Coastal Access Act and the Scottish Marine Bill.

---

<sup>83</sup> Available from: <http://www.defra.gov.uk/corporate/consult/marine-conservation-zones/>

The Northern Ireland executive plans to introduce a marine bill to the Northern Ireland Assembly by 2011, which will outline proposals for nature conservation in Northern Ireland's territorial waters.

The devolved administrations have different activities developed to varying degrees in different parts of the UK marine areas. Therefore, the UK government must coordinate with the devolved administrations to make sure that marine policies and plans work well across marine and coastal areas which are shared between England, Wales, Scotland and Northern Ireland. The MMO and devolved administrations must integrate plans and activities across borders. The four administrations should agree to a UK-wide marine policy statement and work towards a formal method for regional seas planning. This will make it simpler for developers to apply for licences, and allow their impacts on the marine environment to be better assessed.

The MMO must have strong working links with Welsh ministers and its equivalent bodies in Scotland and Northern Ireland. This is essential to manage the interface between reserved and devolved functions, and to secure joined-up, ecosystem-based management throughout UK seas.

## 5 UK Marine and Coastal Access Act – moving to implementation/delivery

The UK Marine and Coastal Access Act aims to simplify and unify the currently complex and sectorally based planning and licensing systems. The UK Marine and Coastal Access Act will establish a new independent statutory body, the MMO, to manage English waters and UK offshore regions (for non-devolved activities). NGOs strongly support the establishment of the MMO as a robust, specialist body with the best marine expertise to oversee the use and sustainable development of the marine environment. The MMO should have a proactive role in our seas with the strongest possible obligation towards achieving sustainable development.

A strong MMO with clear duties will be crucial to the success of the UK Marine and Coastal Access Act. Large infrastructure projects, such as large offshore wind farms and ports, are likely to be approved by the Infrastructure Planning Commission rather than the MMO. However, the MMO must play a leading role in deciding where best to place large projects at sea, such as large renewable energy developments, and have responsibility for all reserved marine licensing functions.

The UK has various international obligations, such as the commitments under the WSSD and the CBD to achieve a significant reduction in biodiversity loss by 2010, to encourage the application of an ecosystem approach to marine management, and to establish a network of MPAs by 2012. The UK also has a commitment under OSPAR to develop an ecologically coherent network of MPAs.

An ecologically coherent network of MPAs, including marine conservation zones (MCZs), to be delivered under the Marine and Coastal Access Act, is a vital management tool to address the threats to marine biodiversity, and to deliver effective nature conservation. In order to achieve this, MCZs must be identified using scientific criteria alone in order to determine their role in supporting ecosystem function, protecting biodiversity and contributing to an ecologically coherent network of sites. The integrity of an ecologically representative network of MPAs is paramount to the delivery of ecosystem-based management of UK seas.

After the Marine and Coastal Access Bill receives royal assent, the government will release the following guidance notes and consultations:

- development of the marine policy statement
- marine spatial planning (MSP) consultations on order, scope and details of marine plan areas
- MCZ guidance and stakeholder involvement in the designation process
- licensing consultations and secondary legislation
- statement on ecologically coherent network of MPAs to be laid before the appropriate legislature

NGOs will continue to feed into this process, with the aim of fully securing an integrated MSP system that achieves nature conservation objectives, so that the act can meet national, European and international marine biodiversity targets. These supporting documents, guidance and secondary legislation are essential for the success of the act. As the case studies in this report illustrate, legislation cannot fully deliver its aims and objectives without thorough and swift implementation.

A number of Defra-led stakeholder workshops will take place over the next couple of months to discuss the development of the marine policy statement. Following this, Defra will produce a draft marine policy statement for consultation. It will outline what the marine plans should cover.

## 6 Conclusions

In the past decade, considerable commitment has been made politically to the development of MSP, increasingly incorporating networks of MPAs. Given that nearly a decade has passed since MacGarvin (2000) delivery of MSP has been slow; however, some progress has been made on developing networks of MPAs. When MacGarvin was published it was clear that Australia and Canada were leading the way in committing to and considering delivery of MSP, and MPA networks. There were also interesting examples emerging from New Zealand and California. At this stage the UK and Europe were lagging behind. However, in the last decade the UK and Europe have made significant progress, whereas the overall progress from Australia and Canada since 2000 has been disappointing.

In the past decade there has been considerable change worldwide with regard to integrated ocean management:

- The UK and Europe have made significant progress (e.g. the Marine Strategy Framework Directive and the development of the UK Marine and Coastal Access Bill), with some new experience on the ground (e.g. in the Belgian part of the North Sea and the Irish Sea pilot, although the latter represents a demonstration project).
- Australia, Canada and New Zealand have made progress, but have also struggled to some extent:
  - In New Zealand there is currently a fragmented approach, with huge gaps and no commitment to MSP beyond 12nm. New Zealand still has no commitment to MSP in the EEZ and has delayed delivery on MPAs in the EEZ. There is no commitment to strictly protected MPAs in the EEZ, despite a strong commitment to highly protected MPAs in the TS. The situation in the TS has not substantially changed over the past 10 years
  - Australia has not effectively delivered on MSP in quite the way anticipated. There has been some progress on MPAs in the south-east region, but there is still a disconnection between the commonwealth and state. There are still major gaps in terms of the delivery of a whole-waters approach in Australia.
  - Canada has been very slow on delivering MSP, and there are major concerns about the level of real change on the ground. Canada still does not have a whole-waters approach. In theory it should allow for an adaptive approach in each region, but progress has been exceptionally slow. Canada needs to develop momentum and ideally stakeholder enthusiasm and input. But this ideally needs a clear political steer, and the establishment of clear expectations and budget.

The Irish Sea pilot final report made a number of recommendations (see Appendix 5). Generally, most of these recommendations have been met. However, not all of them have been adequately covered by the UK Marine and Coastal Access Act.

- **Data and information.**  
Currently in the Marine Act there is no clear plan to take up the recommendation of a national marine information network. However, there are a couple of marine data and information networks that have been set up in the UK already, since the Irish Sea pilot study. The marine environmental data and information network (MEDIN) and the United Kingdom directory of marine observing systems (UKDMOS) were set up by Defra. Although this progress regarding data and information in the UK is welcome, there is a concern that MEDIN and UKDMOS are poorly funded. There is no mention in the act whether these two networks will be taken on and coordinated by the MMO. The data also needs to be more available in the public domain.
- **The wider sea**  
The first and second recommendations under “the wider sea” (see Appendix 5) should be covered by the UK national policy statements. However, goals that are set in UK legislation need to support international and European marine policy requirements. The “national system of coordinated environmental monitoring” mentioned in the third recommendation

should also be covered by the Marine Act. A strategy for this was set in place by Defra after the Irish Sea pilot, with the formation of the United Kingdom marine monitoring and assessment strategy (UKMMAS). UKMMAS was developed as a result of the report produced by Defra in 2005, *Charting progress: An integrated assessment of the state of the UK seas*<sup>84</sup>. Again, there is little mention in the Marine Act of how UKMMAS will be utilised by the MMO for marine planning.

- **Regional seas**

Marine planning at a regional seas level is not covered under the UK Marine Act. There is still much to be done in order to provide sound environmental management that is coordinated and implemented by all countries that share this common body of water, whether the Irish Sea or the English Channel. The regional MPA projects such as Finding Sanctuary and the Irish Sea Marine Conservation Zone projects are looking into where and what kind of MPAs should be established in their regions. JNCC has released a paper entitled *Developing regional seas for UK waters using biogeographic principles*<sup>85</sup>. Although these projects are under way to identify and establish an ecologically coherent network of MPAs which will contribute to a regional management system for the UK marine area, further work is needed to ensure that regional management is not restricted by administrative boundaries.

- **Nationally important features**

The nationally important marine features were developed as part of the review of marine nature conservation (as mentioned in section 4.2.1). However, the term is not used in the UK Marine Act, so this recommendation has not been taken up. The Marine and Coastal Access Act will, however, include legislation to deliver a UK-wide network of nationally important marine sites.

- **Conservation objectives**

Conservation objectives have been established under the marine bill. These objectives should be met through the creation of MCZs, in line with EU and international legislation, set out in the MPA strategy and guidance. Following consultation, the UK government, the Welsh assembly government, the Northern Ireland executive and the Scottish government published their high level marine objectives for the UK marine area in *Our seas – a shared resource: high level marine objectives*<sup>86</sup>. This document sets out the outcomes that all UK administrations are seeking to achieve in the UK marine environment.

- **Overarching measures required**

In terms of the first recommendation (see Appendix 5), the Marine and Coastal Access Act will deliver “a statutory process of MSP involving national guidelines”. The guidelines will be the marine policy statement that will be agreed by the devolved administrations. There is nothing in the marine bill about strategic plans on the regional sea scale. Instead each planning authority (i.e. each country within the UK) will produce its own plans, though there are some weak requirements about coordinating between adjoining plans. There will be more detailed plans in the form of marine plans themselves. There has been no detail yet on the scope, order or coverage of marine plans, but hopefully this will start to come out soon in guidance/consultation expected later in the year. On the second recommendation (regarding an ecologically coherent network), the Marine and Coastal Access Act will include legislation to deliver a UK-wide network of nationally important marine sites. The guidance and MPA strategy could go further to make sure it is ecologically coherent.

- **Enforcement and governance**

The marine bill identifies the Marine Management Organisation (MMO) (see section 4.3.1) as having responsibility for managing a new system of marine planning and licensing in the UK. There must be consistency between the MMO and the equivalent bodies in the

---

<sup>84</sup> Available from: <http://www.defra.gov.uk/marine/pdf/science/stateofsea/chartprogress.pdf>.

<sup>85</sup> Available from: [http://www.jncc.gov.uk/pdf/RegionalSeas\\_consultationpaper.pdf](http://www.jncc.gov.uk/pdf/RegionalSeas_consultationpaper.pdf)

<sup>86</sup> Available from: <http://www.defra.gov.uk/environment/marine/policy.htm>

devolved administrations. Whilst there will be a significant degree of overlap with the content of the English/Welsh bill, there are a number of differences in the legislative regime between England and Wales and the rest of the UK. The government has promised an MoU between the MMO and Marine Scotland (and equivalent for Wales). The MMO should be under the strongest possible remit towards sustainable development, to ensure that marine activities do not push the natural environment beyond its limits.

## 7 Lessons learned

Despite disappointing progress in other parts of the world, there is still much that can be learnt from a range of experiences. The key lessons emerging from the case studies are no great surprise, but serve to enforce a number of important lessons. The following lessons are repeated across the range of case studies.

### 7.1 LESSONS RELEVANT TO INFRASTRUCTURE FOR THE DELIVERY OF MSP

The lessons relating to the infrastructure for delivery of MSP (many also apply to an MPA network) include the need for:

- political will and strong political leadership
- adequate funding (for development, implementation and evaluation)
- a cross-government approach, particularly for MSP
- clear goals and objectives, which are communicated well
- a clear action plan and timetable to deliver objectives
- stakeholder engagement and involvement at the earliest opportunity
- good and consistent leadership at an official level
- clear accountability, which should include final decisions lying with government (not stakeholders)
- an open and transparent process
- a respect for and recognition of rights of indigenous peoples
- meaningful evaluation and clear reporting
- momentum in moving from development to delivery.

### 7.2 LESSONS FOR THE IMPLEMENTATION OF MSP

The lessons relating to the development of MSP (some may also be relevant for an MPA network) include the need for:

- a comprehensive and cross-sectoral approach
- a simplified administrative framework and planning system
- a clear regulatory framework
- a whole-waters approach, which can be tackled in stages; however, to prevent accusations of unfairness, and ensure all interests are treated evenly, no areas should be omitted. Government should allow for an adaptive approach in each region.
- proactive management (though there will be times when reaction is also necessary)
- inclusion of the land/sea interface
- effective and frequent communication
- minimising the number of planning processes which stakeholders need to engage in – simplifying the system
- clear and realistic expectations amongst stakeholders as to their role and with respect to final outcomes.

### 7.3 LESSONS WITH RESPECT TO THE DEVELOPMENT OF A NETWORK OF MPAS

The lessons relating to the development of a network of MPAs include the need for:

- site selection based on science
- ultimate accountability to lie with the government – consensus among stakeholders is ideal, the process should include stakeholder consultation/involvement, but the government should make the final decision on inclusion of sites in the network



- recognition of the value of highly protected sites within a network should be reflected in practice
- recognition of the economic as well as the biodiversity benefits
- consideration of the development of the network approach.

#### **7.4 LESSONS WITH REGARDS TO MANAGING EXPECTATIONS**

There is the need to manage the expectations of stakeholders in both the MSP and MPA processes. Currently in the UK there appears to be a belief that, through the regional projects, the stakeholders will propose MCZs, which will be adopted. However, Government will reserve the right to designate the sites they feel are necessary to complete the ecologically coherent network of MCZs, while taking into account the thinking of the stakeholder projects and any consensus gained. Managing stakeholder expectations is fundamental to the success of any initiative, be it developing marine spatial plans or a network of MPAs. The lessons learned which relate to managing stakeholder expectations include the need for:

- clear goals, with objectives that are communicated well
- stakeholder engagement and involvement at the earliest opportunity
- clear accountability
- open and transparent processes
- effective and frequent communication
- understanding among stakeholders of their role in the process and the limitations of their involvement.

It is important that during the process of MSP or developing a network of MPAs:

- ultimate accountability lies with the government and its statutory advisors/managers
- stakeholders understand that their role is to provide insight and views, and where possible to reach consensus, thereby building a sense of ownership

Disenfranchised stakeholders have the potential to undermine an initiative by questioning (publically or legally) the outcomes, the process, the government or its statutory managers'/advisors' intent, inevitably leading to delay of the process and even abandonment. This has been illustrated in the case studies:

- California has adopted a regional approach to the development of networks of MPAs in state waters. The first set of 29 MPAs was adopted and came into effect for the central coast region in 2007 following considerable involvement of a wide range of stakeholders; however, in 2009 adoption of a network of 24 MPAs in the north central coast region was not well received by some stakeholders despite extensive involvement in the process of identifying proposed sites. They claimed they had lost historic fishing grounds and that livelihoods were threatened. The list of proposed sites from the stakeholders consisted of 22 MPAs. The next stage focusing on the south coast region is now struggling amid accusations of conflicts of interest and unfair practices in the process.
- In Canada, stakeholders have been disenfranchised from the ocean management initiative because the process has been complicated with limited outputs. Consequently environmental NGOs anticipate that the Oceans Act is unlikely to lead to any changes "in the water". No oceans management plans have been finalised despite the Oceans Act being adopted 12 years ago and the Oceans Strategy published seven years ago.
- In Australia, the government started out with the intention of delivering MSP throughout its waters, but to date has only one regional plan in draft and little commitment to the process at a state level. MSP has not been delivered and environmental NGOs believe that it has now lost political backing. This could have been turned around with a more thorough stakeholder process.
- In Belgium, initial attempts to introduce MSP and MPAs failed due to the absence of a common understanding between stakeholders and the top-down approach adopted. Protests against the proposed MPAs from stakeholders gained support of local politicians and authorities and in a short period of time the process was put on hold.

## 8 Recommendations on the delivery of MSP

The evaluation, conclusions and lessons learned from each case study in this report lead to a number of recommendations that can be applied for the future delivery of MSP and MPA networks in UK waters.

### 8.1 RECOMMENDATIONS FOR THE DELIVERY OF MARINE MANAGEMENT AND PLANNING IN THE UK

#### Marine governance

- There is a need for national coordination and consistency regarding planning and management in the marine environment, which also allows for regional diversity. A marine policy statement should be UK-wide and signed by all devolved administrations.
- The MMO should be established as a whole government body to provide advice on operational aspects of national marine policy and the central programme of regional marine planning.
- The MMO should coordinate cross-jurisdictional issues and promote the conservation and sustainable use of nature resources and collaborate on national approaches to the development of a single marine policy statement for the UK.

#### Marine policy statement

- A marine policy statement must have clear goals, objectives, processes and timelines.
- The marine policy statement must be comprehensive, and needs to include sufficient detail to be meaningful. It should be clear about processes and timescales, thus providing clarity and setting expectations for stakeholders.

#### Marine Management Organisation (MMO)

- A strong MMO with a clear remit to deliver sustainable development and clear duties will be crucial to the success of the UK Marine and Coastal Access Act.
- Consideration should be given to the value of establishing regional steering committees as a key institutional arrangement for the development and implementation of regional marine spatial plans, along with advisory groups.
- Adequate long-term financing is essential for the MMO to carry out the full range of its functions.

#### Marine spatial planning (MSP)

- Marine planning must be carefully integrated with land-use planning and coastal zone management.
- There needs to be a coordinated and consistent approach to marine planning between UK administrations.
- MSP should be applied to the whole UK maritime area, prioritising “busy” inshore areas.
- When developing MSP in the UK, stakeholders need to be involved from the earliest stages.
- There is a need for robust leadership and realistic and clear expectations in the stakeholder engagement process. Transparency in the process of MSP is essential.
- MSP should ideally be determined according to marine ecosystems, not administrative boundaries of marine planning bodies.
- A strategic environmental assessment must be undertaken for each plan.
- Each marine plan must aim to deliver ecologically sustainable use.
- The UK government and devolved administrations need to ensure that adequate funding is secured, for development, implementation, evaluation and enforcement.
- A clear and realistic timetable for development and implementation of marine spatial planning across all UK waters is necessary.
- There is the need for a strong strategy and comprehensive guidance clarifying processes, expectations and delivery.

- Effective and regular evaluation is needed, leading to an adaptive approach to marine plans as they are sequentially developed and implemented.

## **8.2 RECOMMENDATIONS FOR AN ECOLOGICALLY COHERENT NETWORK OF MPAS IN THE UK**

- MPAs must be based on the best available science, and networks based on the principles of comprehensiveness, adequacy and representativeness.
- Early development of the network concept and its application across UK waters is essential. This requires a strong strategy and comprehensive guidance clarifying processes, expectations and delivery.
- A bioregional approach should be used to develop the MPA network, irrespective of political boundaries. Where political boundaries overlap, it is important that there are bilateral/multilateral agreements.
- The value of highly protected MPAs must be recognised and highly protected MPAs should be included as a core component in the development of MPA networks.
- Throughout the process of identifying and designating MPAs, the role and remit of stakeholders should be clearly established.
- Financial security is essential for the design and implementation of an ecologically coherent network of MPAs.
- If/where the socio-economic effects of the designation of an MPA are taken into account, consideration should only occur for MPAs that are not being designated for rare or threatened wildlife, there are alternative sites of equal ecological value and to do so would not compromise the ability to achieve an ecologically coherent network of MPAs. (It should be noted that the ability to take into account socio-economic considerations is not a requirement but a discretionary power for MPAs designated under the UK Marine and Coastal Access Act).
- Stakeholder and political processes should promote the economic benefits of MPAs, including highly protected MPAs, where possible.
- Regular monitoring and review of the MPA network is essential to ensure that conservation aims and objectives are being achieved.

## **8.3 RECOMMENDATIONS FOR THE UK WORKING IN THE EU**

- With the development of the Marine and Coastal Access Act the UK has one of the most advanced frameworks for MSP, licensing and delivering an ecologically coherent network of MPAs in Europe. The government should provide leadership for the development of similar systems across Europe, for example in the implementation of the EU Marine Strategy Framework Directive and the achievement of good environmental status.

In the 10 years since MacGarvin (2000) the UK and Europe have made significant progress, while other countries, that were previously seen to be international world leaders in the field, have struggled with the realities of developing MSP. A key lesson that can be taken from the case studies highlighted in this report is that it is critical that there is continued political momentum and consistent political commitment in order to keep MSP moving forward. In the UK, while commitment is strong, the implementation and delivery of the Marine and Coastal Access Act is fundamental to eventual success. The hard work is just beginning, and we cannot afford to ignore the lessons that can be drawn from the experience in other parts of the world.

## 9 References

Ardron, J., Gjerde, K., Pullen, S. & Tilot, V. (2008) Marine spatial planning in the high seas. *Marine Policy*, **32**, 832-839.

Blyth-Skme, R. E., Kaiser, M. J., Hiddink, J. G., Edward-Jones, G., & Hart, P. J. B. (2006) Conservation benefits of temperate marine protected areas: variation among fish species. *Conservation Biology*, **20**, 811-820.

Boyes, S., Elliott, M., Thomson, S. M., Atkins, S. & Gilliland, P. (2007) A proposed multiple zoning scheme for the Irish Sea. An interpretation of current legislation through the use of GIS-based zoning approaches and effectiveness for the protection of nature conservation interests. *Marine Policy*, **31**, 287-298.

De Fontaubert, A. C., Downes, D. R. & Agardy, T. S. (1996) *Biodiversity in the Sea: Implementing the Convention on Biological Diversity in Marine and Coastal Habitats*. IUCN Gland and Cambridge.

Douvere, F. (2008) The importance of marine spatial planning in advancing ecosystem-based sea use management. *Marine Policy*, **32**, 762-771.

Ehler, C. & Douvere, F. (2009) *Marine Spatial Planning: a step-by-step approach toward ecosystem-based management*. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO.

GBRMP Authority (2003) Great Barrier Reef Marine Park Zoning Plan. Available from: [http://www.gbrmpa.gov.au/\\_data/assets/pdf\\_file/0016/10591/Zoning\\_Plan.pdf](http://www.gbrmpa.gov.au/_data/assets/pdf_file/0016/10591/Zoning_Plan.pdf)

Gubbay, S. (2009) *Building an ecologically coherent network of Marine Protected Areas in Northern Ireland*. A briefing for the Northern Ireland Marine Task

Jones, P. J. S. & Carpenter, A. (2009) Crossing the divide: The challenges of deigning an ecologically coherent and representative network of MPAs for the UK. *Marine Policy*, **33**, 737-743.

JNCC (2002) *Irish Sea Pilot: a trial of regional sea management for nature conservation*. Issue 1.

MacGarvin, M. (2000) *A Marine Act for the United Kingdom? A report to the Joint Marine Programme of The Wildlife Trusts and WWF-UK*.

Tyldesley, D. (2004) *Coastal and Marine Spatial Planning Framework for the Irish Sea Pilot Study*. David Tyldesley and Associates.

UNEP (2009) *UNEP launches new online system to view and study the world's marine protected areas*, press release, United Nations Environment Programme, World Conservation Monitoring Centre in Cambridge, UK. Available from: <http://www.unep.org/Documents.Multilingual/Default.Print.asp?DocumentID=589&ArticleID=6212&I=en>

### Australia references

ANZECC TFMPA (Australian and New Zealand Environment and Conservation Council Task Force on Marine Protected Areas) (1998) *Guidelines for establishing the National Representative System of Marine Protected Areas*. Environment Australia, Canberra. Available from: <http://www.environment.gov.au/coasts/mpa/publications/pubs/nrsmpa-establishing-guidelines.pdf>

ANZECC TFMPA (1999) *Strategic Plan of Action for the National Representative System of Marine Protected Areas: A Guide for Action by Australian Governments*. Environment Australia, Canberra. Available from:  
<http://www.environment.gov.au/coasts/mpa/publications/pubs/nrsmpa-strategy.pdf>

Australian Government (2008). Department of the Environment, Water, Heritage and the Arts. Available from <http://www.environment.gov.au/coasts/oceans-policy/index.html>

Australian Government (2002a). *A Discussion Paper for advancing the South-east Regional Marine Plan*. National Oceans Office.

Australian Government (2002b) *A summary paper: a glimpse of the South-east Marine Region*. National Oceans Office

Beaver, D. and Llewellyn, G. (2009) *Designing a comprehensive, adequate and representative (CAR) network of marine protected areas for Australia's Commonwealth waters. Progress report*. WWF-Australia.

Beaver and Llewellyn (in prep) *Performance Analysis of the Commonwealth Network of Marine Protected Areas for the South-east Planning Region*. WWF-Australia

Commonwealth of Australia (1998a) *Australia's Oceans Policy*. Environment Australia, Canberra. Available from: <http://www.environment.gov.au/coasts/oceans-policy/publications/pubs/policyv1.pdf>

Commonwealth of Australia (1998b) *Australia's Oceans Policy – specific sectoral measures*. Environment Australia, Canberra. Available from:  
<http://www.environment.gov.au/coasts/oceans-policy/publications/pubs/policyv2.pdf>

Foster, E., Haward, M. & Coffen-Smout, S. (2005). Implementing integrated oceans management: Australia's south east regional marine plan (SERMP) and Canada's eastern Scotian shelf integrated management (ESSIM) initiative. *Marine Policy*, 29, 391–405.

MARE (2009) *MPA News*. Vol. 11, No. 1. Marine Affairs Research and Education.

SPRP (2006) *Guidance on achieving comprehensiveness, adequacy and representativeness in the Commonwealth waters component of the National Representative System of Marine Protected Areas*. Scientific Peer Review Panel for the National Representative System of Marine Protected Areas.

TFMPA (1999) *Understanding and applying the principles of comprehensiveness, adequacy and representativeness for the NRSMPA, Version 3.1*. Report prepared by the Action Team for the ANZECC Task Force on Marine Protected Areas. Marine Group, Environment Australia, Canberra.

Vince, J. (2006) The South East Regional Marine Plan: Implementing Australia's Oceans Policy. *Marine Policy*, 30, 420–430

WWF-Australia (2004). *Government making progress towards satisfactory South East Regional Marine Plan*. Available from <http://wwf.org.au/news/n75/>

### **Belgium references**

MUMM (2009) *The Territorial Sea and the Economic Exclusive Zone*. Management Unit of the North Sea Mathematical Models. Available from:  
<http://www.mumm.ac.be/EN/Management/Atlas/map.php?TerritorialSeaEEZ> Accessed: September 2009.

Christiansen, S. (2009) *Towards Good Environmental Status - A Network of Marine Protected Areas for the North Sea*. Draft 3. Report to WWF-Germany.

Cliquet, A., Bogaert, D., De Waen, D. & Maes, F. (2007) *Case study: the designation of marine protected areas in Belgium: from Government to Governance?* Maritime Institute, Ghent University. In: *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 IEEP and NRDC.

Douve, F., Maes, F., Vanhulle, A. & Schrijvers, J. (2007) The role of marine spatial planning in sea use management: the Belgian case. *Marine Policy*, **31**, 182-191.

Douve, F. (2008) The importance of marine spatial planning in advancing ecosystem-based sea use management. *Marine Policy*, **32**, 762– 771.

Plasman, C. (2008) Implementing marine spatial planning: A policy perspective. *Marine Policy*, **32**, 811– 815.

### **Canada references**

AOG (2005) *2005 September Report of the Commissioner of the Environment and Sustainable Development*. Chapter 1: Fisheries and Oceans Canada – Canada's Ocean Management Strategy. Office of Auditor General of Canada. Ottawa, Ontario. Available from: [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_200509\\_01\\_e\\_14948.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_200509_01_e_14948.html)

Chao, G. et al (2004) for Oceans & Coastal Management Division, Fisheries & Oceans Canada. *Overview of Federal, Provincial, and International Ocean Regulatory and Policy Frameworks on the Scotian Shelf*. Prepared for the Federal-Provincial Eastern Scotian Shelf Integrated Management (ESSIM) Working Group. Canadian Technical Report of Fisheries & Aquatic Sciences 2513.

Cicin-Sain, B., & Knecht, R. W. (1998). *Integrated Coastal and Ocean Management*. Washington: Island Press.

DFO (2008) *The strategic plan*. Available from: <http://www.mar.dfo-mpo.gc.ca/oceans/e/essim/plan/essim-plan3-e.html>

DFO (2007a). *Canada's Oceans Strategy: Our Oceans, Our Future*. Available from: [http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/ri-rs/cos-soc/index\\_e.asp](http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/ri-rs/cos-soc/index_e.asp)

DFO (2007b) *Oceans Action Plan*. Available from: [http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/oap-pao/index\\_e.asp](http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/oap-pao/index_e.asp)

DFO (2007) *The Eastern Scotian Shelf Integrated Management (ESSIM) Initiative*. Available from: [http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/im-gi/essim-giepne\\_e.asp](http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/im-gi/essim-giepne_e.asp)

DFO (2006) *Sustainable Development Strategy 2007 – 2009: Our waters, our future*. Fisheries and Oceans Canada. Ottawa, Ontario. Available from: [http://www.dfo-mpo.gc.ca/sds-sdd/2007-2009/sds2007-2009\\_e.pdf](http://www.dfo-mpo.gc.ca/sds-sdd/2007-2009/sds2007-2009_e.pdf)

DFO (2005a) *Canada's Federal Marine Protected Areas Strategy*. Fisheries and Oceans Canada. Ottawa, Ontario.

DFO (2005b) *Sustainable Development Strategy 2005 – 2006: Our waters, our future - striking a better balance*. Fisheries and Oceans Canada. Ottawa, Ontario. Available from: <http://www.dfo-mpo.gc.ca/sds-sdd2005-06/index-eng.htm>

DFO (1997). *An Approach to the Establishment and Management of Marine Protected Areas under the Oceans Act: A Discussion Paper*. Fisheries and Oceans Canada. Ottawa, Ontario.

DFO & WWF-Canada (2009). *Guidance and Lessons Learned for Canada's Marine Protected Areas Networks*. Proceedings of a national workshop held in Ottawa in January 2008. Available from: <http://www.dfo-mpo.gc.ca/oceans/publications/ws-at/2008/page01-eng.asp>

Fisheries and Oceans Canada (1987). *Oceans policy for Canada: a strategy to meet the challenges and opportunities on the oceans frontier*. Fisheries and Oceans Canada. Ottawa, Ontario.

Foster, E., Haward, M. & Coffen-Smout, S. (2005). Implementing integrated oceans management: Australia's south east regional marine plan (SERMP) and Canada's eastern Scotian shelf integrated management (ESSIM) initiative. *Marine Policy*, 29, 391–405.

J. G. Bones Consulting (2008) Provincial Government engagement in PNCIMA planning process. Report and recommendations. Prepared for by Canadian Parks and Wilderness Society and WWF-Canada, Brentwood Bay, BC.

Lockwood, M., Worboys, G. L. & Kothari, A. (2006) *Managing Protected Areas – A global guide*. London: Earthscan

Rutherford, R.J., Herbert, G.J. & Coffen-Smout, S.S. (2005). Integrated ocean management and the collaborative planning process: the Eastern Scotian Shelf Integrated Management (ESSIM) Initiative. *Marine Policy*, 29, 75–83.

### **New Zealand references**

DOC (2007) *Marine Protected Areas: Classification, Protection standard and implementation guidelines*. Department of Conservation and Ministry of Fisheries. Wellington, New Zealand. Available from: <http://www.biodiversity.govt.nz/pdfs/seas/MPA-classification-protection-standard.pdf>

DOC (2006) *Marine Protected Areas Policy and Implementation Plan*. Department of Conservation and Ministry of Fisheries. Wellington, New Zealand. Available from: [http://www.biodiversity.govt.nz/seas/biodiversity/protected/mpa\\_policy.html](http://www.biodiversity.govt.nz/seas/biodiversity/protected/mpa_policy.html)

DOC (2005) *Protecting our seas - Tiakina a Tangaroa*. Department of Conservation. Wellington, New Zealand. Available from: <http://www.doc.govt.nz/publications/conservation/marine-and-coastal/marine-protected-areas/protecting-our-seas/>

DOC (2001) *Reviewing the Marine Reserves Act 1971*. Boffa Miskell Limited for the Department of Conservation. Wellington, New Zealand. Available from: <http://www.doc.govt.nz/publications/conservation/marine-and-coastal/marine-protected-areas/review-of-the-marine-reserves-act-1971/>

MFE (2005a) *Getting Our Priorities Right: The role of information in setting priorities for management of New Zealand's ocean*. Ministry for the Environment. Wellington, New Zealand. Available from: <http://www.mfe.govt.nz/publications/oceans/getting-priorities-right-jun05/index.html>

MFE (2005b) *Offshore Options: Managing Environmental Effects in New Zealand's Exclusive Economic Zone*. Ministry for the Environment. Wellington, New Zealand. Available from: <http://www.mfe.govt.nz/publications/oceans/offshore-options-jun05/index.html>

MFE (2000) *The New Zealand Biodiversity Strategy*. Ministry for the Environment. Wellington, New Zealand. Available from: <http://www.biodiversity.govt.nz/picture/doing/nzbs/contents.html>

NIWA & DOC (2005) *Protecting our seas Tiakina a Tangaroa: An overview of New Zealand's marine biodiversity conservation and the role of Marine Protected Areas*. Marine Conservation Unit, Department of Conservation, Wellington, New Zealand.

**California references**

CDFG (2008) *Marine Life Protection Act Master Plan for Marine Protected Areas*. California Department for Fish and Game. Sacramento, California.

NOAA (2005) *Final Evaluation Findings, California Coastal Management Program may 2001 to February 2005*. Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration. U.S. Department of Commerce.



## 10 Acronyms and abbreviations

**ABNJ** - Areas Beyond National Jurisdiction

**AOP** - Australia's Oceans Policy

**BPA** - Benthic Protection Areas

**BPNS** - Belgium Part of the North Sea

**ASSI** - Areas of Special Scientific Interest

**CBD** - Convention on Biological Diversity

**CCAMLR** - Conservation of Antarctic Marine Living Resources

**CCW** - Countryside Council for Wales

**CEFAS** - Centre for Environment, Fisheries and Aquaculture Science

**CFGC** - California Department of Fish and Game

**CFP** – Common Fisheries Policy

**COS** – Canada's Ocean Strategy

**CZMA** – Coastal Zone Management Act

**DOC** - Department for Conservation

**EBM** – Ecosystem-base Management

**EEZ** - Exclusive Economic Zone

**EPBC Act** - Environment Protection and Biodiversity Conservation Act 1999

**ESSIM** - Eastern Scotian Shelf Integrated Management

**ESSOMP** - Eastern Scotian Shelf Ocean Management Plan

**EU** – European Union

**Defra** – Department for the Environment, Food and Rural Affairs

**DFO** - Department for Fisheries & Oceans

**ICES** – International Council for the Exploration of the Sea

**ICM** – Integrated Coastal Management

**ICZM** - Integrated Coastal Zone Management

**IFCA** - Inshore Fisheries and Conservation Authorities

**GIS** - Geographic Information System

**IM** – Integrated Management

**IMP** – Integrated Marine Policy

**IPC** - Infrastructure Planning Commission

**IUCN** - International Union for Conservation of Nature

**IUU** - Unregulated and Unreported fisheries

**JNCC** - Joint Nature Conservancy Committee

**LINK** – Wildlife and Countryside Link

**LOMA** - Large Ocean Management Areas

**MCAB** – Marine and Coastal Access Bill

**MCZ** – Marine Conservation Zone

**MLPA** - Marine Life Protection Act

**MMO** – Marine Management Organisation

**MNR** - Marine Nature Reserve

**MoU** – Memorandum of Understanding

**MSP** – Marine Spatial Planning

**MPA** – Marine protected Area

**MSFD** - Marine Strategy Framework Directive

**MSY** - Maximum Sustainable Yield

**NGO** – Non-Government Organisation

**NOMB** - National Oceans Ministerial Board

**NRMMC** - Natural Resource Management Ministerial Council

**NRSMPA** - National Representative System of Marine Protected Areas

**NSRAC** – North Sea Regional Advisory Council

**OCMD** - Oceans and Coastal Management Division

**OSPAR** - The Convention for the Protection of the Marine Environment of the North-East Atlantic

**RAC** - Regional Advisory Councils

**RBM** - Rights-based Management

**RMP** – Regional Marine Plans

**SAC** – Special Area of Conservation

**SAP** - Science Advisory Panel

**SERMP** - South-east Regional Marine Plan

**SFC** - Sea Fisheries Committees

**SMCA** - State Marine Conservation Areas

**SPA** - Special Protection Areas

**SSSI** - Sites of Special Scientific Interest

**TS** - Territorial Sea

**UNCLOS** – United Nations Law of the Sea Convention

**UNEP** – United Nations Environment Programme

**WSSD** - World Summit on Sustainable Development

## **Appendix 1**

### **Cape Rodney Okahari Marine Reserve, New Zealand**

The Cape Rodney Okahari Marine Reserve, New Zealand economic study was undertaken by measuring the reserve's economic impact on variables such as the level of employment, expenditure and incomes.

The reserve received an estimated 375,000 visits in the year to 28 February 2008, and surveys show that around 60% are day visitors spending an average of NZ\$29 per person, while around 30% are overnight visitors spending an average NZ\$137 per trip. Seven per cent of the visitors lived locally, and 1% owned property locally but lived outside the district. Of day visitors, 54% said that if the marine reserve did not exist then they would not visit, or would be unlikely to visit the district on the day they were interviewed.

The total output in Rodney dependent on the existence of the marine reserve is estimated to be NZ\$18.6 million per year. NZ\$12.1 million of this is direct spend by visitors and the balance is the result of flow-on effect through the district economy. Associated with this output is total value added of NZ\$8.2 million per year and employment for 173 full time equivalents (FTEs) in Rodney, including 10 jobs in marine reserve-related activities.

## Appendix 2

Principles and secondary goals expressed in the guidelines (ANZECC TFMPA, 1998)

---

Principles	Secondary goals
1. Regional framework	1. To promote the development of MPAs within the framework of integrated ecosystem management.
2. Comprehensiveness	2. To provide a formal management framework for a broad spectrum of human activities, including recreation, tourism, shipping and the use or extraction of resources.
3. Adequacy	3. To provide scientific reference sites.
4. Representativeness	4. To provide for the special needs of rare, threatened or depleted species and threatened ecological communities.
5. Highly protected areas	5. To provide for the conservation of special groups of organisms, e.g. species with complex habitat requirement or mobile or migratory species, or species vulnerable to disturbance which may depend on reservation for their conservation.
6. Precautionary principle	6. To protect areas of high conservation value including those containing high species diversity, natural refugia for flora and fauna and centres of endemism.
7. Public consultation	7. To provide for the recreational, aesthetic and cultural needs of indigenous and non-indigenous people.
8. Indigenous involvement	
9. Equitable decision making	

---

The guidelines define comprehensiveness, adequacy and representativeness as:

- **Comprehensiveness:** “*The NRSMPA will include the full range of ecosystems recognised at an appropriate scale within and across each bioregion.*”
- **Adequacy:** “*The NRSMPA will have the required level of reservation to ensure the ecological viability and integrity of populations, species and communities.*”
- **Representativeness:** “*Those marine areas that are selected for inclusion in the MPAs should reasonably reflect the biotic diversity of the marine ecosystems from which they derive.*”

## Appendix 3

### IUCN reserve categories

IUCN Category	Name	Description
IA	Strict nature reserve	Managed mainly for science
IB	Wilderness area	Large area managed for wilderness protection
II	National park	Area managed for conservation and recreation
III	Natural monument	Area managed for conservation of specific natural features
IV	Habitat/species management area	Area managed mainly for conservation through management intervention
V	Protected seascape	Area managed to maintain the traditional interaction between people and nature
VI	Managed resource protected area	Area managed mainly for the sustainable use of natural ecosystems

## Appendix 4

### IUCN categories of South-east MPAs

Zone Name	IUCN category	MPAs that contain this zone	Description
Sanctuary Zone	IA	Murray, Flinders, Freycinet and Tasman Fracture	Highly protected area for the protection of biodiversity.
Benthic Sanctuary Zone	IA	Huon	Protects the benthic/demersal habitats associated with the sea floor, but not the water column between the surface and the depth of 500m.
Recreational Use Zone	VI	Freycinet	Recreational fishing haven – excludes exploitation by mining and commercial fishing (except charter boat operators) interests.
Multiple Use Zone	VI	Murray, East Gippsland, Apollo, Beagle, Zeehan, Boags, Flinders, Franklin, Freycinet, Tasman Fracture, Huon.	Allows exploitation by mining and commercial* and recreational fishers.
Special Purpose Zone	VI	Murray, Nelson, Zeeham, Tasman Fracture, South Tasman Rise	Allows exploitation by mining and charter and recreational fishing interests.

\* Fishing using demersal trawl, Danish seine, gill netting (below 183m) and scallop dredge are not permitted within this zone

## Appendix 5

Additional key findings and conclusions from the Irish Sea pilot final report

- **Data and information.** *The appropriate management of the marine environment is dependent on adequate information and data. The pilot collated geophysical, hydrographical, nature conservation, ecological and human use data and used GIS analysis. The main conclusions:*
  - *A national marine information network should be established to which marine data should be contributed using agreed data standards.*
  - *All marine data collected with public funds should be placed in the public domain.*
  - *Improved coordination of data collection and research activities needs to be achieved.*
  
- **The wider sea.** *The seas make an important contribution to the economy and quality of life of the United Kingdom through their contribution to a wide range of human activities. The main conclusions:*
  - *There is a need to ensure that international and national policy, legislation and financial incentive measures support the achievement of the strategic goals set for the marine environment.*
  - *Human activities should be managed effectively at the national level.*
  - *A national system of coordinated environmental monitoring, together with the monitoring of human activities should be implemented.*
  
- **Regional Sea.** *The boundaries for a series of UK regional seas are proposed in the report, determined initially in terms of biogeography. They provide an appropriate scale at which to map and describe biodiversity and at which to manage human activities within the marine environment. The main conclusions:*
  - *A system of biogeographical regional seas should be developed for the North-east Atlantic.*
  - *These regional seas should be considered as a basis for marine strategic planning and management.*
  - *Consideration should be given to the establishment of fora at the regional seas level.*
  
- **Nationally-important features.** *A draft set of criteria for the identification of nationally important marine landscapes, habitats and species were tested.*
  - *Further work should be undertaken to determine which marine nationally important features would benefit from specific action plans, and a unified process should be operated.*
  
- **Conservation objectives.** *Building on the vision and strategic goals set out in Safeguarding our Seas, a generic series of high level conservation objectives and operational conservation objectives applicable to national waters was formulated. The main conclusions:*
  - *The conservation objectives identified should be integrated into a single, unified set of national strategic goals and objectives for the marine environment and its sustainable development.*
  - *A process should be established to identify and set out appropriate targets for each operational conservation objective which are consistent with the strategic goals and with achieving international and national commitments.*
  
- **Overarching measure required.** *Mechanisms by which the regional seas could be managed to achieve the conservation objectives at the various scales of the proposed framework for marine nature conservation were considered in the report. The main conclusions:*
  - *A statutory process of MSP involving national planning guidelines, strategic plans at the regional sea scale, and more detailed local plans should be introduced.*

- *Additional legislation is needed to ensure that an ecologically coherent network of nationally important areas can be established and conserved.*
- **Enforcement and governance.** *The pilot reviewed existing enforcement measures and governance systems. The main conclusions:*
  - *The responsibility for the enforcement of marine nature conservation should be made explicit.*
  - *The authorities responsible for enforcing marine nature conservation should have, or have access to, the requisite powers to carry out the enforcement effectively.*

Prepared by Dawn Sellers, WWF-UK,  
in conjunction with the Marine Conservation Society,  
RSPB and The Wildlife Trusts

The full report can be downloaded from:

WWF-UK: [www.wwf.org.uk/marineact](http://www.wwf.org.uk/marineact)

The Wildlife Trust: [www.wildlifetrusts.org](http://www.wildlifetrusts.org)

RSPB: [www.rspb.org.uk/ourwork/policy/marine/legislation/planningsystem.asp](http://www.rspb.org.uk/ourwork/policy/marine/legislation/planningsystem.asp)

Marine Conservation Society: [www.mcsuk.org](http://www.mcsuk.org)

The mission of WWF is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- reducing pollution and wasteful consumption



[www.wwf.org.uk/marineact](http://www.wwf.org.uk/marineact)

***for a living planet***<sup>®</sup>

**WWF-UK**

Panda House, Weyside Park  
Godalming, Surrey GU7 1XR  
t: +44 (0)1483 426444  
f: +44 (0)1483 426409