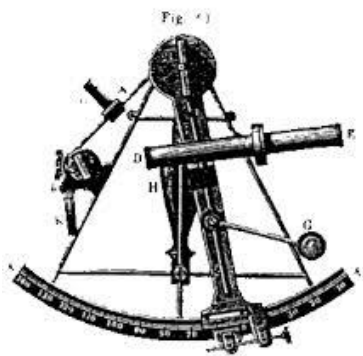
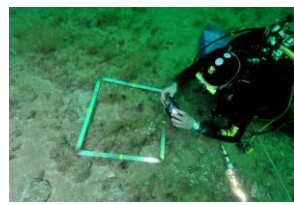


Marine Protected Areas Agencies



A practical Guide



Second Edition
2015



**Marine Protected Area
Agency Partnership**

Preface

The idea of establishing a partnership of marine protected area agencies came up during the second International Marine Protected Area Congress in Washington, suggested by NOAA's Office of National Marine Sanctuaries. It was the occasion to get to know each other better, and eventually to create the opportunity of joining forces to increase our influence on the global scene. It took the practical shape of a light and informal forum, successfully initiated by the NOAA which convened the first summit of the Marine Protected Area Agencies Partnership in San Francisco in 2012.

Following from the IMPAC 3 Congress that France had the chance to host, the second summit of the partnership took place in Bonifacio, Corsica. On this occasion the french agency took up the torch from the NOAA with the task of making the partnership live until the next step in Australia. Rapidly, the project of a document showing and sharing our experiences appeared to be the perfect tool to strenghten our links and get the members to know each other better. But above all, it represents a response to an important objective of the partnership: communicating towards any country or institution willing to establish or reinforce an MPA networks. With this aim in mind, the french agency assumed the role of coordination of a practical guide project, a task entrusted to Maxence Chatelet, that I want to thank for carrying it out.

The 6th IUCN's World Park Congress is the most important international summit dedicated to protected areas. Parks of Australia will take benefit from this great event to host the third international summit of our partnership and to give the opportunity of presenting the first version of the practical guide. Nevertheless, this is just a beginning. The guide is meant to become a living document, completed and enriched years after years by the new achievements of the agencies, and the involvment of new contributors. We already are working on the creation of an online platfrom to make this practical guide grow, and give it the chance to become the reference source about the marine protected areas agencies.

Olivier Laroussinie , Director,

French Marine Protected Areas Agency



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Introduction

The Marine Protected Area Agencies Partnership Background

The MPA Agency partnership is an informal forum of senior officials of government agencies from around the globe, in charge of the designation, management, and operation of marine protected areas in their respective nations. It aims, for the benefit of its members, at:

- Exchanging technical information, experiences, and expertise;
- Coordinating and cooperating on joint solution-based projects designed to build and enhance the ability of each agency to meet its MPA mandates, and make a collective contribution to marine conservation on a global scale;
- Leveraging the identity of the agencies as a cohesive group to raise awareness of MPAs on a global scale;
- Identifying opportunities to expand the scope and leadership role of this collective group to influence and create innovative approaches and results-based tools to help protect marine resources now and into the future

The first summit was held in San Francisco in 2012 at the kind invitation of NOAA –Office of National Marine sanctuaries, and set up the basis of the partnership. The second summit in Bonifacio in 2013 consolidated the links established and enlarged the group of personalities. The meeting was an opportunity to hear about national situations and exchange with observers from CDB secretariat and IUCN. It happened next to the 3rd International Marine Protected Areas Congress and was then an opportunity to share the conclusions of IMPAC3 with respect to the activities of MPA agencies. It looked at contributions to the World Park Congress in 2014 and to the possible involvement of the partnership members toward IMPAC 4 (2017). It is in this context that the project of a practical guide emerged. The guide embodies a concrete action towards the announced objectives. Along its production, the partnership seizes the opportunity to get a perennial tool to foster its internal dynamic, and a potential reference document for its communication and influence strategy.

Working session of the partnership, Bonifacio, 2013.



Progressing towards the international goals

Indeed, the ambition of this practical guide is to support the states in their national policies for MPAs, especially in a context of growing international commitments regarding the marine environment protection, a matter on the United Nations' agenda since 1982¹.

In 1992 the **Agenda 21** was approved in consensus by all the states present at the closure of the United Nations Conference on Environment and Development. Its chapter 17 introduced the elemental objectives and principles for the oceans protection and a rational use of their biological resources. This text stated the good will of the world's nations at getting involved in *"the protection of the oceans, all kinds of seas, including enclosed and semi enclosed seas, and coastal areas and the protection, rational use and development of their living resources"*.

During this same conference the UN adopted the **Convention on Biological Diversity (CBD)**, today signed by 168 governments. This convention, via the **Jakarta mandate**, is the base of the international acknowledgement of the threat on the marine environment and policies needed to face it. Among the five themes making up the Jakarta mandates' working program takes place **the establishment of a global network of MPAs**.

This objective, alike the four others, is to be thought and undertaken in keeping with six cross-disciplinary principles familiar to the agencies: the ecosystem approach; the precautionary principle; the importance of science; the full use that should be made of the roster of experts; the involvement of local and indigenous communities; and the three levels -national, regional and global- of action.

MPAs networks' international legitimacy was at last fully consecrated through the final **declaration of the Johannesburg Summit** and its implementation plan, which directly called for their creation.²

Finally, since the adoption of the **strategic plan for the biological diversity** in 2010 to support the Aichi Targets, the states party to the CBD are bound to the precise target of ensuring that 10% of the waters under their national jurisdiction "are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected [...] and integrated into the wider landscape and seascape."

In order to reach this goal, the CBD secretariat launched the Sustainable Ocean Initiative, which aims at building capacities of the states through information sharing on the techniques of creation and management for MPAs. The practical guide will also contribute to this initiative.

Along with these fertile legal and institutional structures, we must mention the importance of national and international efforts to increase the knowledge about the marine environment, whose tridimensional vastness still

¹ Adoption of the United Nations Convention on the Law of the Sea of which article 145 gives states the responsibility to ensure protection for the marine environment when undertaking activities on the "Area", and above all Part XII, dedicated to the protection and preservation of the marine environment, beginning with the article 192 which contains the general obligation for the states to protect and preserve the marine environment.

² paragraph 32c : Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012 and time/area closures for the protection of nursery grounds and periods, proper coastal land use and watershed planning and the integration of marine and coastal areas management into key sectors

remains mostly unknown. From seabed mapping to the study of water pollution and climate change impacts, a high level of knowledge is a vital prerequisite to establish coherent and efficiently managed MPAs network.

Therefore, the CBD supported the harmonization of research methods and scientific criteria to select the areas to protect in priority, especially through the development of designation process of “Ecologically or Biologically Significant Areas” or the generalization of the ecosystem approach in research works. This harmonization increases the streams of scientific cooperation and data sharing, a highly beneficial trend for the knowledge progresses.

Bilateral projects, but also multilateral ones like the work undertaken by the FAO and CDB secretariat, allow the essential capacities transfers for a quick transition of many developing countries towards a scientific management of the marine environment.

Without this collective work to make science progress, this guide would not be of a great help.

Structure of the practical guide

Falling within the setting of these global objectives and dynamics, the practical guide is directed at the agencies, which are central actors of the marine environment protection policies. Following from the international regime³ set by the conventions, the guide aims at bringing an insight of their concrete work and achievements through the analysis of ten topics.

First we shall explore the general issues carried by each of the ten themes. The themes are divided into three chapters, according to their contribution to the elaboration of the national policy and planning of the areas to protect; the governance and financing of the MPAs; or the implementation of an efficient management.

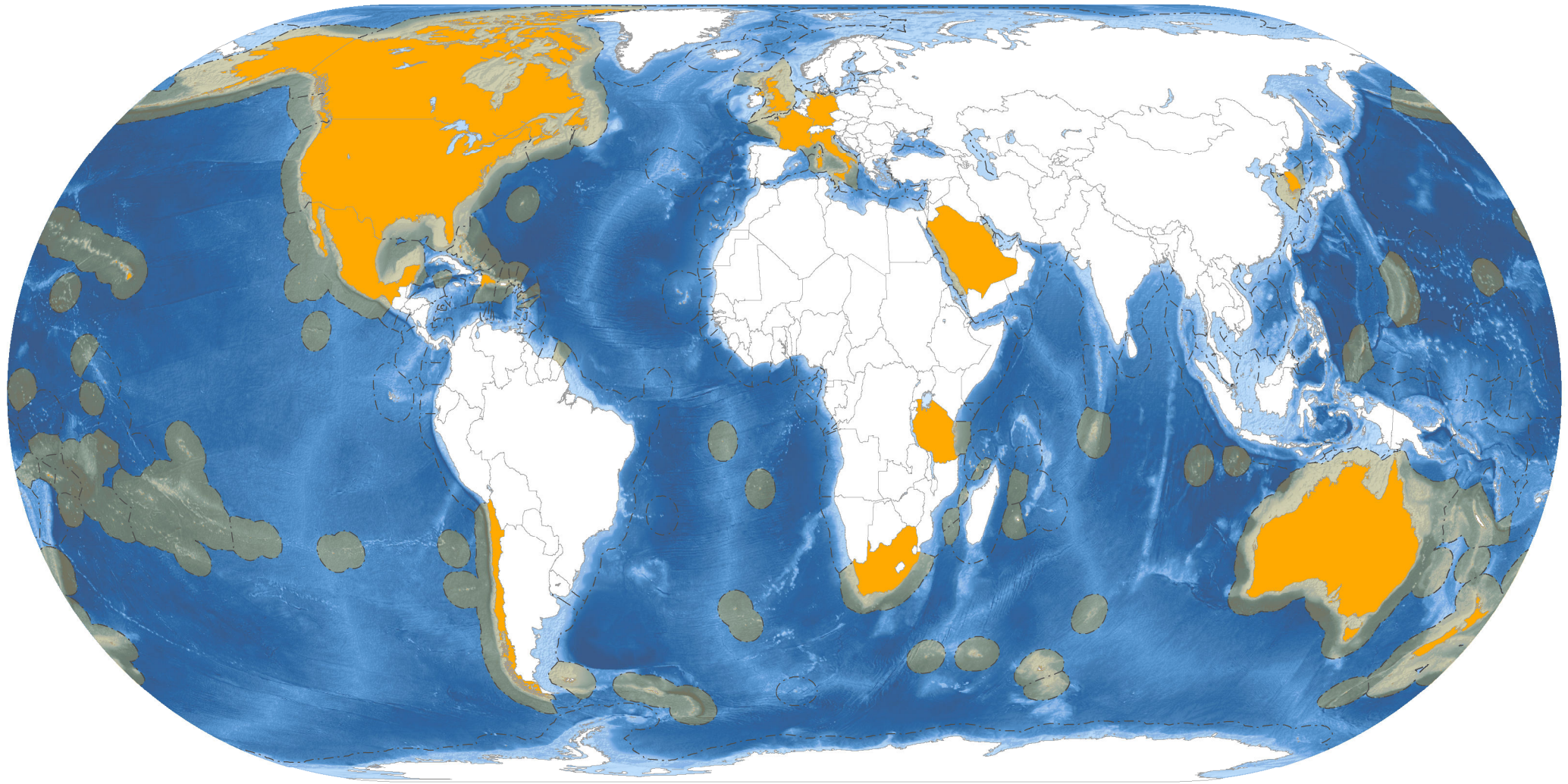
Second, a short overview of the agencies profiles allows getting familiar with the heterogeneous legal and political frames that inevitably shape each agency’s work. The keys provided in these short ID Forms, one for each agency, are very useful for a full understanding of the third part of the guide.



Indeed, thanks to the contributions of the members of the partnership, their experiences regarding each of the themes are presented and analyzed. Meant to be a living document, this repertoire of experiences is meant to be continuously enriched with new contributors and the progress achieved by the agencies. This first version of the guide is only the starting point of for the establishment of the reference document about the agencies work, strategies and achievements.

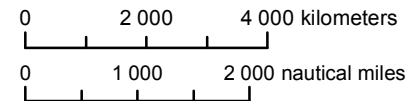
The practical guide falls within a set of multilateral actions of which the aim is to supply the inspiration, tools and techniques which will ensure that shortly, a significant share of the oceans “are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas [...] and integrated into the wider landscape and seascape.”

The guide’s objective and ambition is no different. it is one tool among others, provided by the MPA agencies, to help us build the future that we want.

³ According to Stephen Krasner’s definition, international regimes are “Implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given area of international relations”



-  MPAAP's members
-  Exclusive Economic Zones (EEZ)



Part I. Guidelines from the Agencies

Through an intense cooperation and productive information sharing, the members of the partnership selected a set of practical recommendations covering the whole process of MPA networks building. These guidelines concern ten topics, constituent of the three major steps in the setting-process of MPAs network. They are directly inspired from the concrete experiences of the agencies. A sample of these experiences is presented in the last section of this document.

I. Making the Decision: establishing MPAs and MPA networks

1. Science Information and Tools to support the decision-making

The design of a truly representative, coherent and efficient network must be based on the best and most comprehensive scientific information available. Agencies gather existing knowledge and, when necessary, undertake or finance new research programs. In order to make this sound science available to guide the decision-making properly, the agencies have adopted several techniques and principles.

Guidelines

From strategic planning...

- Develop partnerships with all kinds of institutions and knowledge owners: community members, universities, museums, research organizations, relevant industries.
- Gather and synthesize biological, geological and oceanographic features of the national waters.
- Use this information to subdivide the marine environment into coherent biological regions. These geographic areas will be the planning units for the MPA networks.
- Because new information can complete or inform previous data, keep the process open to allow modification based on new information.
- use theoretical and mathematic models to consider and analyze the whole marine area despite limited knowledge over its ecosystems.
- Develop standardized procedures to perform nationwide surveys and international comparisons.

- develop social sciences analysis on the national and local communities levels to:
 - understand the cultural and social value linked to the marine environment
 - Grasp the social perception of the protection initiatives among the groups of stakeholders

To sites selection

- Gather knowledge about the socio-economic interests at stake, assessing the impacts of each activity on the biodiversity and habitats, and the socio economic impacts of protection, including potential costs and benefits.
- overlay all the information to prepare the mapping.
- Use an ecosystem approach and focus on ecosystem and habitat connectivity to target the propriety areas.
- Seek representativeness in locating the MPAs: prioritize the ecosystems and habitats not represented yet.
- Consider the socio economic data to optimize the impacts of protection.

Related experiences

Marine Conservation on a Continental Scale- Designing Australia's representative System of MPAs p.
The National Marine Conservation Area System p.
California's Ecological Network of MPAs p.
Selecting Sites for New Marine Conservation Area p.
Sentinel Sites for Climate Change National Estuarine Research Reserves

2. Setting Conservation Goals

The sea has traditionally been a space of liberty, used and exploited by humans. Therefore establishing measures – that restrict human activities- requires an open public process, starting with the setting of conservation goals. Developed with local communities and broader stakeholders, these goals must justify the choice of a specific geographic area and the legal and management tools applied there.

Guidelines

- **Building on a solid legal framework, setting precise and ambitious conservation objectives (lists of species and habitats for instance)**
- **involving the stakeholders in the setting of the conservation goals**
- **setting a time frame for the achievement of the goals**

Related experiences could not be presented in time for this first edition of the guide. For more information please refer to the websites of the agencies.



Diplodus Vulgaris/ Gulf of Lion/Emmanuelle Rivas

3. Building Public and Political Support

The agencies need legal and financial means, which both rely on the outbreak of a genuine political will. Beyond the influence of individuals, it is a matter of arguments and communication skills. Besides, it is also in the responsibility of the agencies to foster the cultural awareness of the oceans in the society. Finally, on the local scale, arousing the public's support for MPAs is an essential task for the long term well being of the area.

Guidelines

For a national strategy:

- Agencies should foster transparency, use performance/financial audits and reporting to prove their efficiency, inspire trust and attract the public funding
- Highlighting the work of the agency through outreach and media coverage, beginning with a website.
- Communicating the total economic, social and cultural value of MPAs
- Communicating about the value of marine life, including on its inherent cultural value and beauty and the ecosystem services it provides.
- Addressing different publics: from the political representatives to local communities and consequently adapting the medium and message.
- Pushing for a national commitment to relevant international conventions and the achievement of the global conservation goals.

Targeting a local audience:

- Establishing trust with the local stakeholders through continuous information and exchange
- Identifying the key constituencies to engage
- Establishing councils and committees to facilitate and operationalize dialogue and decision making
- Gaining the support of local political leaders and other opinion leaders
- Be vigilant as for the consistency and uniqueness of the agency's messages to the public : every contradiction is a potential source of mistrust and opposition
- Make sure that the agency's public message remains consistent and unique : every contradiction is a potential source of mistrust and opposition

Building public and political support.... Related Experiences

Building MPA Networks: California's ecological network for MPAs
The Thunder Bay and Florida Keys National Marine Sanctuaries
Spotlight on the Iroise Marine Natural Park
Spotlight on the Subantarctic MPA Process

II. Governance and Financing

4. Setting up Sustainable Financing Mechanisms

As public bodies the agencies rely primarily on public funding, which is subject to political pressures and budget cuts. In a context of establishing and managing MPA networks, agencies should continue to explore new financing sources and mechanisms.

Guidelines

- Understanding and promoting the economic value of MPAs to highlight the value of MPAs and MPA network as part of a broader economic and community development strategy.
- Promoting tourism activities and the creation of tourism services, including entrance and activity fees.
- Creating funds managed transparently to attract institutional and private donors.
- the capacity to attract resources of the most popular/touristic areas should also be used to finance the management of less accessible MPAs and the protection of the more confidential ecosystems.

Related Experiences

*The National Marine Sanctuary Foundation
CONANP's Protected Areas Fund (FANP)*



Eretmochelis Imbricata/Benjamin Guichard/Agence des aires marines protégées

5. MPAs within the wider seascape

As our oceans become increasingly crowded and more intensively used by a wide range of activities, there is a growing need for processes to organize and plan for these uses. MPA agencies, should be directly involved with these planning processes, aiming to influence the planning and management of activities with an impact on the MPA network- whether inside or outside the MPA boundaries. Relevant issues include but are not limited to: shipping, fishing, seabed mining, oil drilling, harbors building and dredging, marine energy development, coastal development, land-based pollutions from the coastal watersheds etc.

Guidelines

- Proposing science based solutions that take into account economic factors.
 - Cooperating and negotiating with coastal and ocean industries and agencies to change behaviors through voluntary and regulatory measures
 - Obtaining the legal authority to regulate activities having a direct and important impact on the health of the protected environments
- Supporting the MPAs' governance bodies at submitting projects of regulation to the authorities
 - Fostering impacts assessments for new project or activities
 - Using the precautionary principle regarding the establishment of new projects

Related Experiences

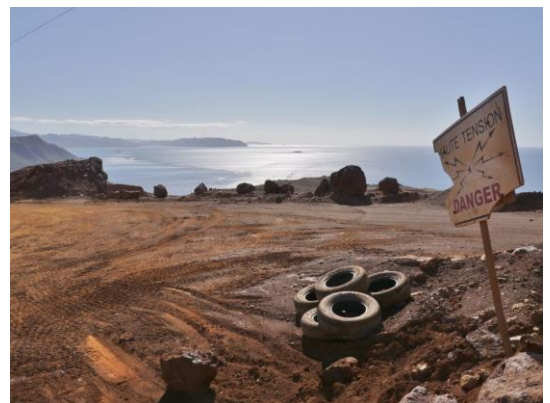
Adapting shipping lanes to conservation in the Stellwagen Bank

Dealing with the shipping sector in the Saguenay-St Lawrence Marine Park

Combining federal and provincial governments cooperation with stakeholders involvement in the Saguenay- St Lawrence Marine Park



Agnès Poiret / Agence des Aires Marines Protégées



Agnès Poiret / Agence des Aires Marines Protégées

6. Implementing the MPA governance

Following the democratic principles of the sustainable development, MPAs are increasingly the result of open decision-making processes. The agencies foster the involvement of the local stakeholders in MPA governance in order to develop voluntary compliance and the stakeholder's sense of responsibility over their respective activities, behaviors and the impact they cause. This can be a delicate task to achieve a process that is viewed as legitimate and effective in achieving genuine protection.

Guidelines

- | | |
|--|--|
| <ul style="list-style-type: none"> - Developing a solid knowledge about the local context - Selecting a limited number of individuals to represent each category of stakeholders in an advisory or management council for the MPA - Giving them a real influence on the decision-making | <ul style="list-style-type: none"> - Providing such councils with the best information available, in a useful and understandable format - When necessary, adapting the approach to the specific situation (creation of a specific project to strengthen the relationship with a group etc.) - Building on the local communities traditional practices and culture |
|--|--|

Related Experiences

*Spotlight on the Iroise Marine Natural Park
The development of a dashboard for French MPAs*

7. Cooperating Internationally for Coherent Networks

This guide illustrates well the will of the agencies to cooperate internationally. This cooperation takes several forms: sharing knowledge, improving the representativeness of MPA networks, and fostering ecosystems connectivity in transboundary MPAs and networks. Moreover, the agencies often use their expertise to support the national representation in the international institutions and meetings.

Guidelines

- | | |
|---|--|
| <ul style="list-style-type: none"> - Developing scientific information sharing through bilateral agreements or multilateral systems (international databases) - Pooling agency capacities through the co-financing of research programs | <ul style="list-style-type: none"> - assisting states in their involvement in international organizations with the authority to establish and manage regional MPA networks (e.g. the regional seas conventions) - jointly planning regional networks to respect the ecosystems connectivity - establishing bi-national or multinational MPAs on transboundary areas |
|---|--|

Related experiences could not be presented in time for this first edition of the guide. For more information please refer to the websites of the agencies.

III. Managing MPAs

8. Developing and Implementing Management Plans

One of the core missions of the agencies is to develop and implement effective MPA management plans. A key challenge is overcoming the status of “paper parks” which do not have sufficient authority and/or resources to effectively conserve the resources they were established to protect.

Guidelines

Developing

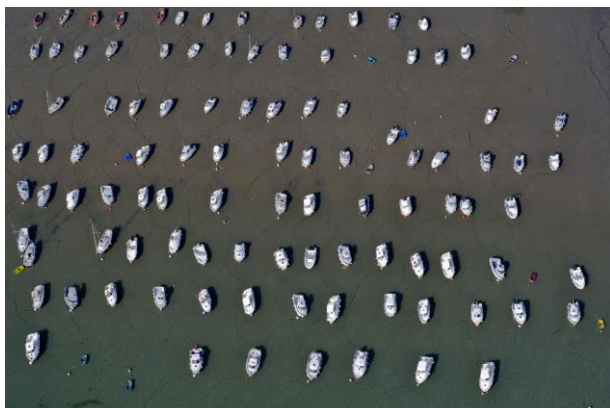
- **Setting deadlines for the governance bodies of MPAs for the adoption of a management plan**
- **Bringing the best information available to inform the governance body and develop a science based management plan**
- **Organizing and ensuring a constructive process (e.g. creation of workshops and specialized committees, setting of regular plenary sessions)**
- **Providing templates and instructions to guide the drafting of the management plan**
- **Providing for review and input by scientific experts and community members**

Implementing

- **Providing the necessary funds, staff and materials**
- **Fostering consensus by working toward common values and shared outcomes**
- **Encouraging voluntary compliance through education and outreach**
- **Developing surveillance programs for effective enforcement of the adopted measures**
- **Where appropriate using electronic surveillance devices to reduce the costs**

Related Experiences....

*Australia’s Marine Reserve Networks
Spotlight on the Iroise Marine Natural Park*



Rodolphe Marics/Les champs photographiques



Emmanuel Donfut/Agence des aires marines protégées

9. Monitoring, assessment and evaluation for an adaptive management

Adaptive management means monitoring and assessing the impacts of the management measures, and using this information to inform and modify the management plans as necessary. It is a permanent cycle that integrates sciences, implementation and monitoring.

Guidelines

- | | |
|--|--|
| <ul style="list-style-type: none"> - Communicating towards managers about the importance of assessment systems - Defining and detailing the assessment measures in the management plan - Evaluating the staff and material needed to perform it properly - Developing MPA indicators (may be site-specific or system-wide) | <ul style="list-style-type: none"> - Providing for sound protocols for data collection - Publishing a public version of monitoring and assessment findings for the governance body and others. - Periodically adapting the management measures based on monitoring results - With the help of common indicators providing national picture of the management of MPAs |
|--|--|

Related Experiences

A System wide Monitoring for the Marine Sanctuaries
The development of a dashboard for French MPAs
Dealing with the shipping sector in the Saguenay-St Laurent Park – the adaptive management process

10. Training and Professionalizing Staff

Effective MPA management requires trained staff. They need expertise to understand and constantly innovate in the scientific aspects of the marine environment management, communication and negotiation skills to deal with diverse ocean users, and conflict management capacities to address law enforcement.

Guidelines

- | | |
|--|--|
| <ul style="list-style-type: none"> - Advocating the establishment of specific training courses, centers and diplomas - Setting in-house training programs for constant updating on scientific progress | <ul style="list-style-type: none"> - Fostering meetings and staff exchanges among MPAs to share experiences - Establishing exchange partnerships with external organizations |
|--|--|

Related experiences could not be presented in time for this first edition of the guide. For more information please refer to the websites of the agencies.

Part II. MPAs' Agencies Profile

The member agencies have very different historic backgrounds, political environment and legal frame.

Consequently, if their missions and goals are similar due to the universal range of science and the influence of the international environmental politics, the features shaping their action sometimes differ highly.

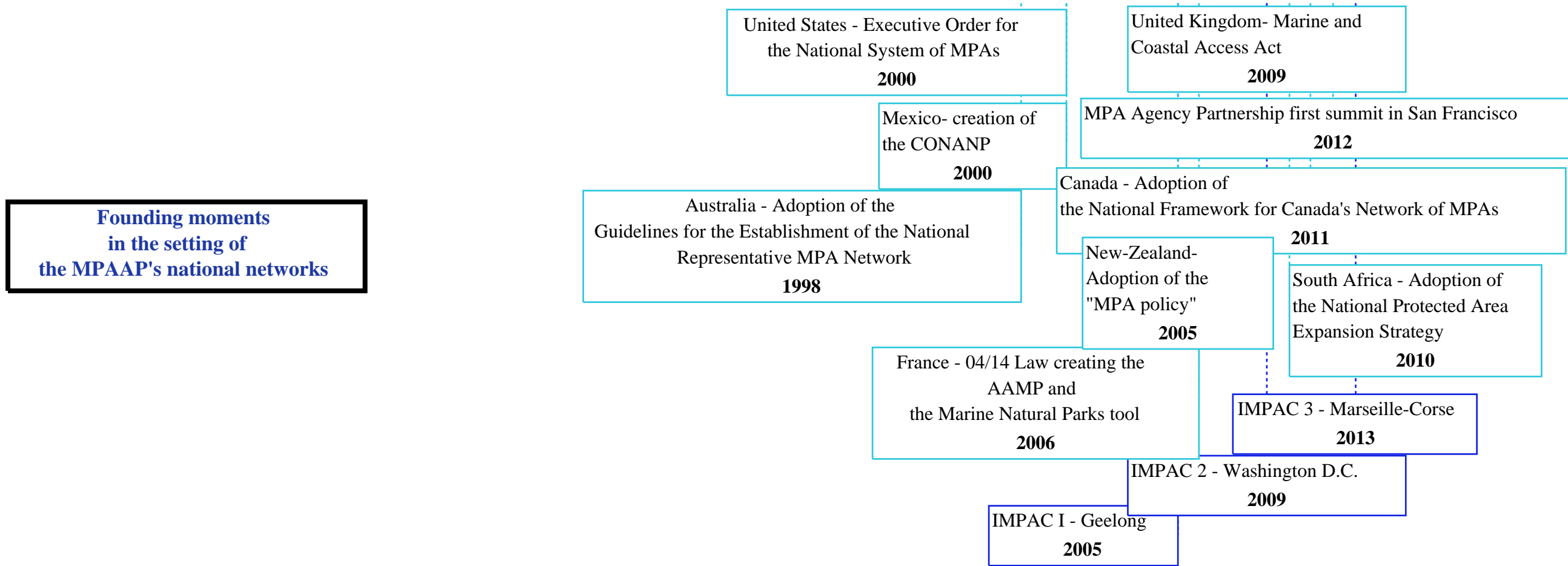
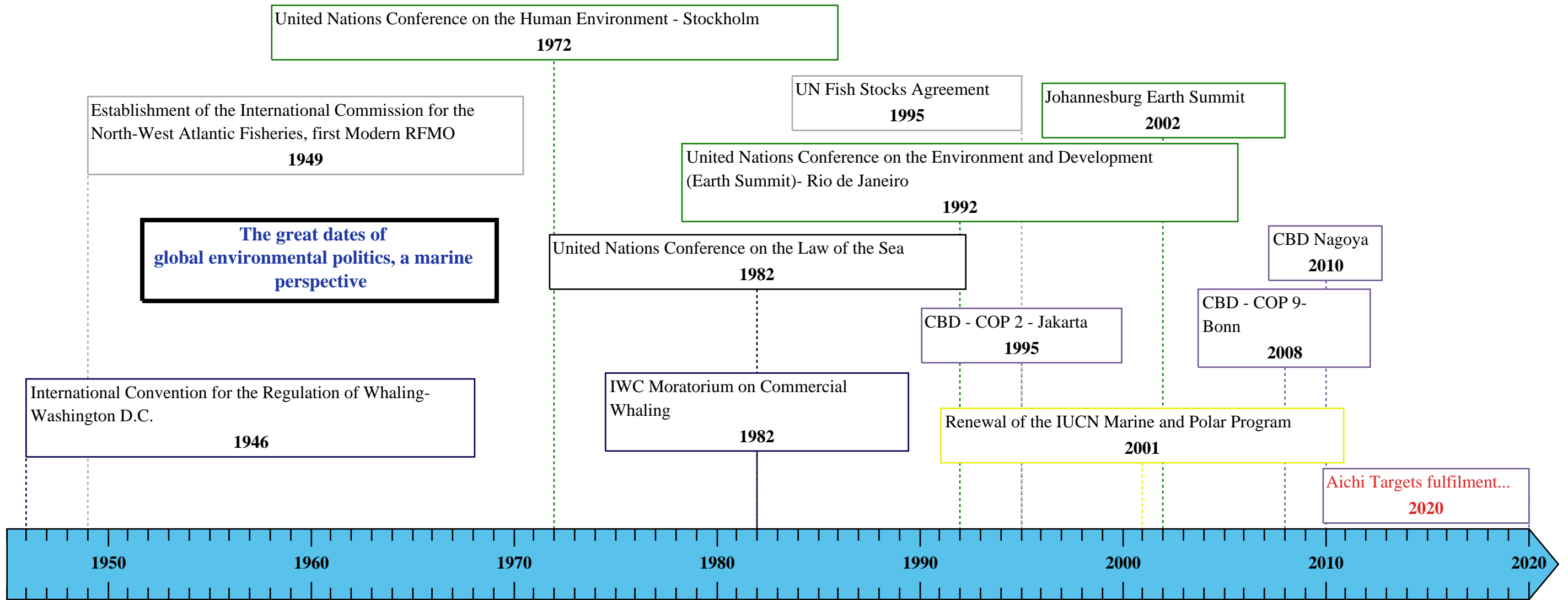
This section aims at giving the reader the main information characterizing each agency, and the context in which they evolve. To do so, individual Identification Forms got filled for each of them. The missions, status, authorities and backgrounds of the agencies can be compared, along with the description of what they consider either as an important asset for their strategy, or a specific project representing their way to do.

The ID Forms are sorted in the alphabetical order of the country of origin.

Apart from fisheries management, the development of genuine national policies for the marine environment protection dates back to 15 years at most. The international regime regarding the marine environment protection also experienced an accelerated growth in the last decade. The following timeframe allows comparing the chronological evolutions of these two levels of analysis which maintain complex and continuing interactions.



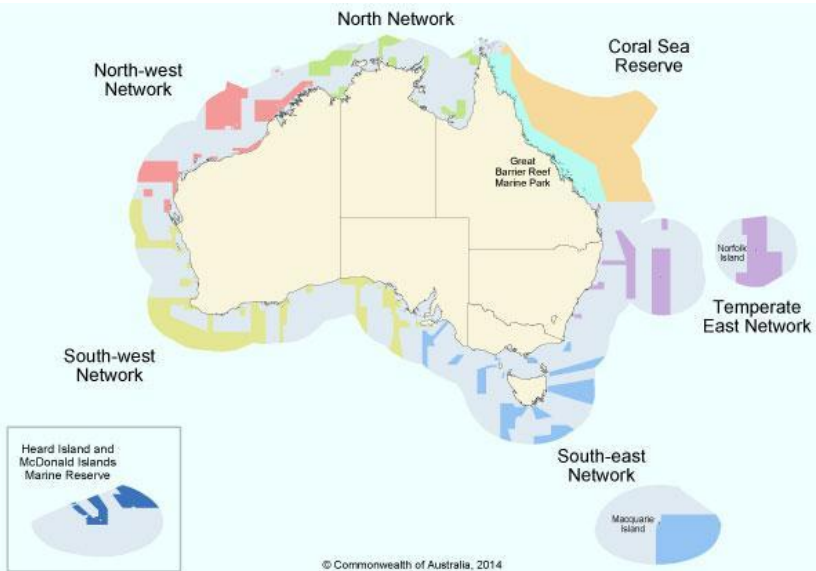
Spermwhale in Guadeloupe/ Agoa Sanctuary/ Frank Mazéas/ Agence des aires marines protégées





Australian Government

Director of National Parks

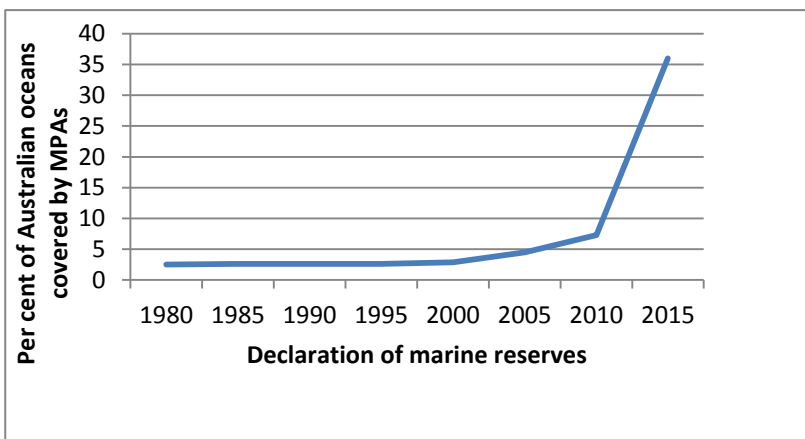


Exclusive Economic Zone = 8.94 million km² (13.74 million km² when including Antarctic Territory EEZ and Extended Continental Shelf)

Authority: The Director of National Parks has jurisdiction for managing Commonwealth Marine Reserves; these are located in Commonwealth waters, which generally start three nautical miles from shore and extend out to the edge of Australia's Exclusive Economic Zone. Alongside Commonwealth Marine Reserves, the Director has responsibility for a number of terrestrial protected areas, including the world-renowned Uluru-Kata Tjuta and Kakadu National Parks.

Status: The Director of National Parks is a corporation established under Australia's national environmental legislation with the function of managing terrestrial and marine Commonwealth reserves. The Parks Australia Division of the Department of the Environment assists the Director in the performance of her duties. The Director manages 58 of the 59 Commonwealth marine reserves, having delegated the management of Heard Island and McDonald Islands Marine Reserve to the Australian Antarctic Division. The Great Barrier Reef Marine Park is managed by the Great Barrier Reef Marine Park Authority.

Stats and figures:



Mission:

“Healthy and resilient parks, gardens and marine reserves that protect nature and culture and are valued and enjoyed by the community now and into the future.”

Background: Australia has the third largest marine jurisdiction in the world. Each of Australia's six states and the Northern Territory are responsible for their inshore environments, such as beaches, estuaries, bays and their coastal waters out to three nautical miles from the baseline. Commonwealth waters (offshore 3 nautical miles to the edge of the EEZ) are under the jurisdiction of the federal government. Work towards Australia's National Representative System of Marine Protected Areas started in 1998. The System aims at contributing to the long-term conservation of marine ecosystems and to protect marine biodiversity. In 2012, the Commonwealth waters component of the national system was completed. It covers 2.8 million square kilometres and consists of the South-east, South-west, North-west, North and Temperate East regional networks and the Coral Sea Commonwealth Marine Reserve. Overall, Australia has exceeded the 10 per cent Aichi Target 11 for coastal and marine waters, with 36 per cent of its continental EEZ (or 23.6% of Australia's entire maritime territory) having been designated for biodiversity protection.

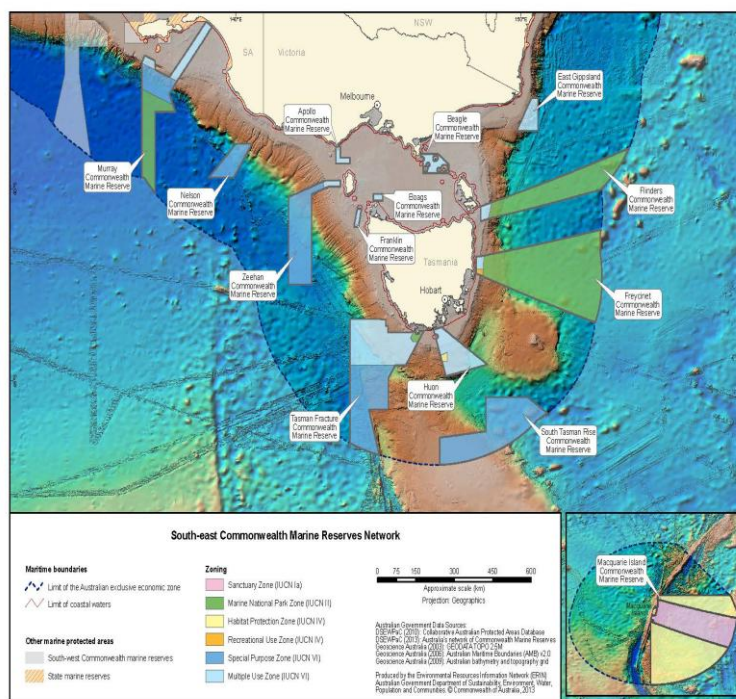
Commonwealth marine reserves are managed through 10-year statutory management plans. The management plan for the South-east Network came into effect in July 2013. The remainder of the management plans will be finalised once a review announced prior to the last federal election and currently underway is completed. The review is considering the science underpinning the marine reserves and provides for further consultation in relation to allowed uses and management arrangements.

MPA categories (59 Commonwealth marine reserves – not including the GBRMP)

Type	IUCN category	number	Total surface (km ²)
Strict nature reserve	Ia	4	72,248
National park	II	10	1,401,120
Habitat/species management area	IV	6	355,346
Managed resource protected area	VI	39	1,005,314
UNESCO World Heritage	-	4	12,556
RAMSAR	-	3	19,750
CCAMLR Convention sites	-	1	6,589
Total area of Commonwealth marine reserves			2,834,028

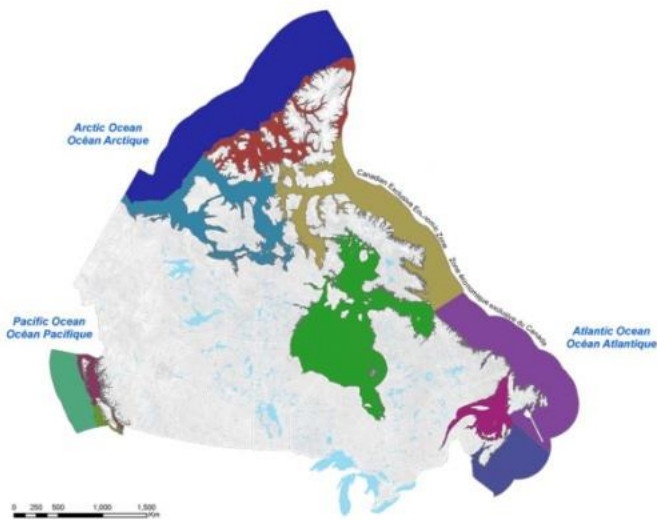
Spotlight on the South-east Commonwealth Marine Reserves Network

The South-east Network was declared in 2007 to protect unique and biologically-diverse marine habitats in Australia's South-east Marine Region. The South-east network covers 406 000 square kilometres and comprises of 14 separate Commonwealth marine reserves that protect a vast range of ecosystems, habitats and biological communities representative of Australia's South-east Marine Region. Depths within the network range from 40m on the continental shelf to greater than 4000m along the abyssal plain. Seafloor features include underwater canyons, seamounts, escarpments, soft sediments and rocky reefs and are inhabited by diverse marine life with a high level of species endemism. The South-east network includes highly protected zones as well as zoning types that allow for a range of recreational and commercial activities. Key uses include: commercial fishing; mining and petroleum; recreational fishing; ports and shipping and scientific research.



The reserves are managed by the Director of National Parks through a management plan that came into effect in July 2013. The plan aims at providing for the protection and conservation of biodiversity and other natural and cultural values and, when compatible with this objective, for the ecologically sustainable use of the natural resources. Parks Australia works in collaboration with a number of Commonwealth and state government maritime agencies in managing activities in the reserves, including surveillance and monitoring.

Stakeholders and community members are recognised as valuable participants in the management of the South-east reserves. A South-east stakeholder forum brings together marine users and community group representatives to discuss and address issues of relevance to the network and its management and contributes to the transparency and accountability of Parks Australia's approach to reserve management. A partnership approach with marine users is resulting in innovative measures to facilitate compliance: for example, the CMR Alert developed by Parks Australia with the fishing industry and the fisheries management agency, came into operation in July 2014 to provide automatic electronic alerts (via emails and text messages) to licence holders and skippers of commercial fishing vessels whenever the vessel enters a reserve zone where the type of fishing gear they operate is prohibited.



Canada : Exclusive Economic Zone, Internal Waters and Territorial Sea = 5.7 million km²

Authority: The Parks Canada Agency manages national parks (mostly terrestrial), national historic sites (mostly terrestrial), a joint federal/provincial marine park and national marine conservation areas (NMCA) in Canada on behalf of Canadians. Parks Canada provides recommendation to Parliament for creation of new NMCAs. Parks Canada is responsible for the administration of NMCAs after establishment, with the collaboration of other federal departments responsible for fishing, navigation and marine safety.

Status: Parks Canada is a separate Agency of the Canadian Government. The agency is funded by the Federal Government and revenue generated by its operations. The Chief Executive Officer reports to the Minister of the Environment.

Mission: Parks Canada protects and presents nationally significant examples of Canada's natural and cultural heritage, and fosters public understanding, appreciation and enjoyment in ways that ensure the ecological and commemorative integrity of these places for present and future generations. National parks, national historic sites and national marine conservation areas offer Canadians the opportunity to visit, meaningfully experience and personally connect with these heritage places.



Parks
Canada

Parcs
Canada

Background :

The Parks Canada Agency was the first national park service in the world (1911). The marine program began in the 1980s with the development of the first policy in 1986 and the first "national marine park" established in 1987. Legislation to support the creation of National Marine Conservation Areas was enacted in 2002. The marine program in Canada covers its inland waters, the territorial sea and exclusive economic zone as well as the freshwater Great Lakes.

The Parks Canada Agency is one of 3 federal departments that are involved in the creation of marine protected areas in Canada. 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. In addition, provincial governments may also create MPAs.

The *National Framework for Canada's Network of Marine Protected Areas (National Framework)* was developed by the provincial, territorial and federal ministers responsible for a fisheries and aquaculture. The *National Framework* outlines the proposed overarching vision and goals of the national network; establishes the network components, design properties, and eligibility criteria for which areas will contribute to the network; describes the proposed network governance structure; and provides the direction necessary to promote national consistency in bioregional network planning.

Canadian MPA categories

Type	IUCN category	number	Total surface (km ²)
National Marine Conservation Areas	II	4	14846
National Parks (marine component)	II, VI	12	8136
Marine Protected Areas (<i>Oceans Act</i>)	Unclassified	8	10407
Migratory Bird Sanctuaries (marine component)	Various	43	13937
National Wildlife Areas	Various	14	5652
Other	Various	647	8610
Total		728 (726*)	61588 (51488*)

Spotlight on ...

Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site

A Marine Wilderness on the Edge

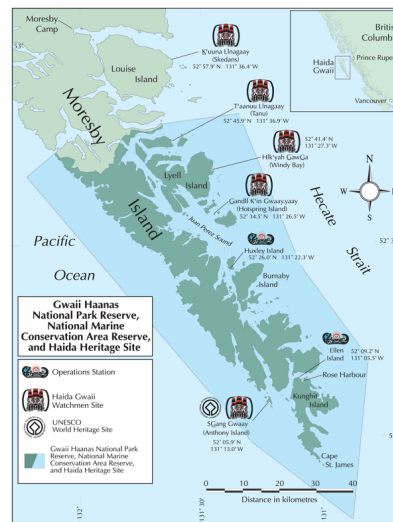
Located 100 kilometres from mainland British Columbia, Gwaii Haanas is the southern third of Haida Gwaii, formally known as the Queen Charlotte Islands. Situated on the very edge of the Pacific continental shelf, this is an area of great biological richness. Nearly 3,500 marine species, including species-at-risk, are found within this archipelago. This richness has supported the Haida's traditional harvest of marine resources, as evidenced by the fact that over 600 coastal archaeological sites have been identified, including S^Gang Gwaay and its iconic totem poles, a UNESCO World Heritage Site.

The Culmination of a Conservation Vision

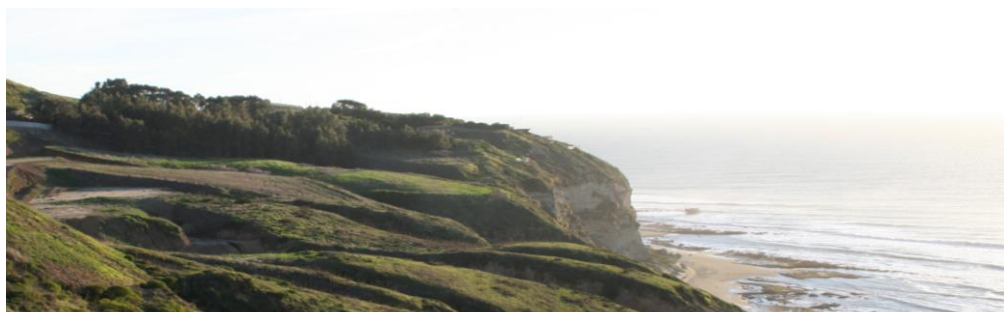
The legal protection of 3,500 square kilometres of Pacific waters in Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site under the Canada National Marine Conservation Areas Act marks the culmination of efforts by the Government of Canada and the Haida Nation to protect the lands and waters of Gwaii Haanas. For thousands of years the ecological richness of this place has sustained the Haida. In 1985, the Haida declared this area a Haida Heritage Site. In 1987, the Prime Minister of Canada and the Premier of British Columbia signed a memorandum of understanding that stopped the logging of Gwaii Haanas and committed to the creation of a national park reserve and the protection of the adjoining marine waters. In 1993, the Government of Canada and the Haida Nation signed the *Gwaii Haanas Agreement* and moved toward cooperative planning, management and operation of Gwaii Haanas National Park Reserve.

The need to conserve the marine waters of Gwaii Haanas was recognized by the petroleum industry. Much of the seabed in Hecate Strait, which forms the eastern part of Gwaii Haanas National Marine Conservation Area Reserve, was subject to existing third-party petroleum rights. However, the four major oil companies who possessed these rights relinquished all of them in 1997 by working with the Nature Conservancy of Canada. This was a significant action on their part because such rights must be extinguished before a national marine conservation area can be established.

Extensive consultations were undertaken during the establishment process over four years. These included communities on and off the islands of Haida Gwaii as well as with a wide range of stakeholders including commercial and recreational fisheries. More than 70 meetings took place with over twenty fishing organizations over in two years.



Chile - MPA Network Fact Sheet



Country : Exclusive Economic Zone = 3.49 million km²

Authority

Ministry of Environment (MMA) is the government agency responsible for collaborate with the President of the Republic of Chile in the design and implementation of environmental policies, plans and programs; protection and conservation of biological diversity and renewable natural and water resources; and promoting sustainable development, the integrity of the environmental policy and environmental regulatory framework. The legal authority of the MMA specifically on protected areas national system derives from the 1994 Article 70 of the Law 19,300, on General Bases of the Environment.

Undersecretariat of Fisheries and Aquaculture (SUBPESCA) of the Ministry of Economy, Development and Tourism is the government agency responsible for propose and execute the national fishery and aquaculture policy, develop regulations, and provide instructions on policy implementation for national fisheries and aquaculture. SUBPESCA also proposes norms on protection, control, and use of the available aquatic living resources. The legal authority of SUBPESCA derives from the 1991 Decree-Law 430, which regulates the fisheries, aquaculture, and their products.

National Fisheries and Aquaculture Service (SERNAPESCA) is the government agency responsible for the enforcement of fisheries and aquaculture regulations, as well as the marine parks and reserves management. The legal authority of SERNAPESCA on MPAs derives from the 1991 Decree-Law 430.

Status

MMA, SUBPESCA and SERNAPESCA are government agencies with their own budgets and administrative hierarchy. The two firsts propose policies and regulations on environment and fisheries. On the other hand SERNAPESCA enforces the law, with collaboration of other public agencies like Maritime Authority (DIRECTEMAR).

Missions: The missions of the three main agencies involved in MPA are:

- Lead the sustainable development through the design and implementation of public policies and efficient regulations, fostering good practices and improving the public environmental awareness. (MMA).
- Regulate and manage fisheries and aquaculture through policies, regulations and management measures science-based, as well as in social and economic criteria, with participatory approach for the sustainable development of national fisheries and aquaculture (SUBPESCA)
- Enforce the laws and regulations of fisheries and aquaculture, as well as provide services and make an efficient sanitary management to facilitate their correct execution aimed to the sustainability of the activity and the hidrobiological resources and its environment (SERNAPESCA)

Background

Chile counts with one of the longest coastlines of the world, along with its global significant biodiversity throughout more than 3.000.000 square kilometers of Exclusive Economic Zone (EEZ) and a large productivity of its marine ecosystems, due to the presence of the Humboldt Current in our seas. Our country therefore regards the ocean as a strategic resource for its social, cultural, economic, and scientific value. On this basis, since 1999 the Government of Chile has been developing a systematic effort to build a legal and institutional framework in order to preserve and use in a sustainable way the natural resources of our maritime heritage.

Legislation such as the General Fisheries and Aquaculture Law(1991), the General Bases of the Environment (1994) and the National Monuments Law (1978) have provided a legal framework to MPA development and management.

On 2005, the National Policy for Protected Areas was approved by the Ministries Council, setting up the main objective of create and strengthen an integrated national protected areas system, public, private, terrestrial and marine.

In this context, to this date the Chilean Government has created 24 marine protected areas, of which maybe one of the most relevant milestones has been the creation of Motu Motiro Hiva Marine Park in 2010, a non-take area of more than 150.000 km² of pristine ecosystems representing the Rapa Nui Marine Ecoregion. Notwithstanding those efforts, the challenge of our country facing protection of its marine ecosystems is still huge.

In order to face this challenge, the Ministry of the Environment has carried out the President Bachelet government's commitment of send a bill to the National Congress that aims to create the Service of Biodiversity and Protected areas (SBAP). The new public service will be focused in managing biodiversity issues as well as the national protected areas system. It will enhance our effectiveness to conserve our natural terrestrial and marine heritage.

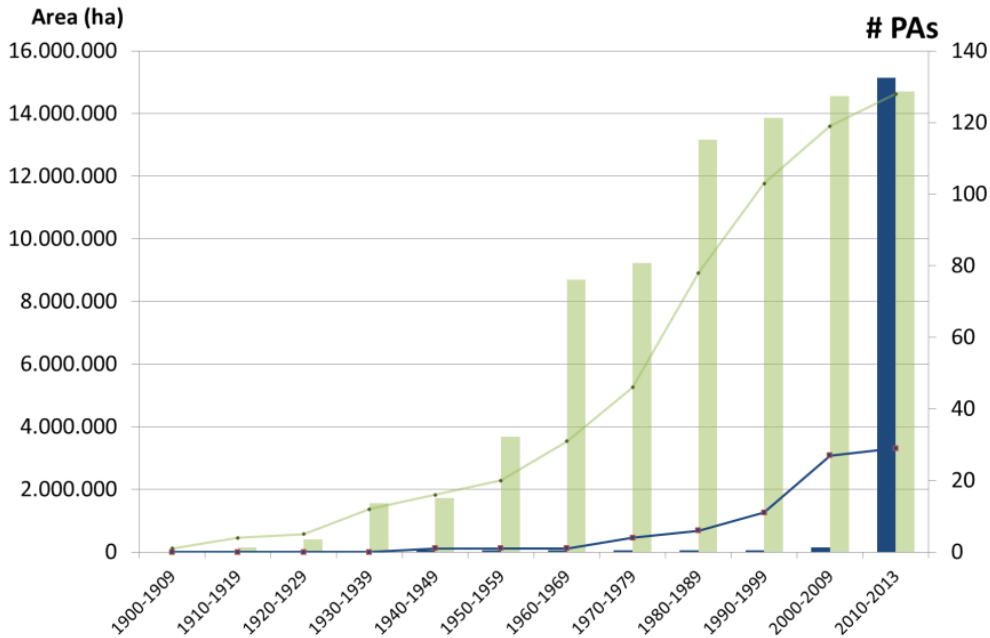
<http://areasprotegidas.mma.gob>

<http://www.subpesca.cl/>

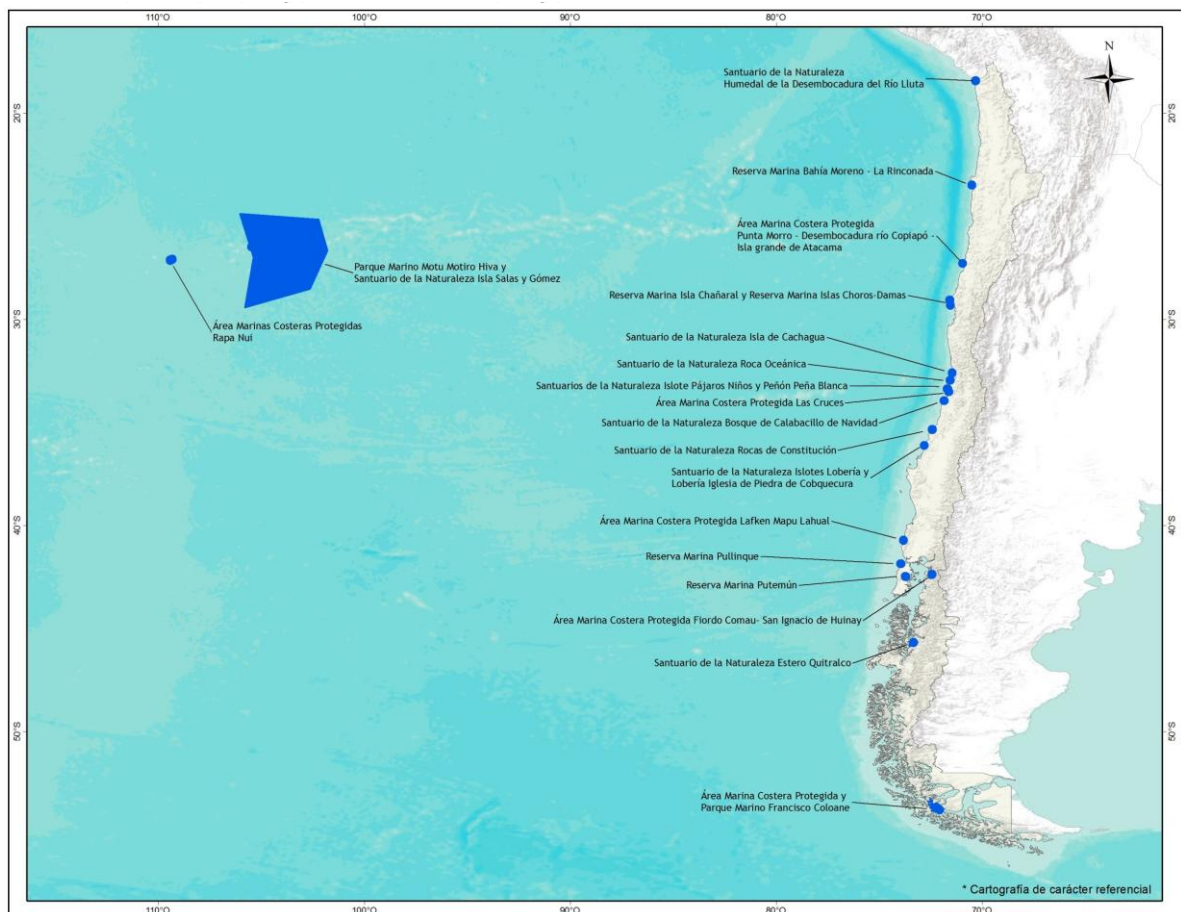
<http://www.sernapesca.cl/>

Chilean MPA categories

Type	IUCN category	number	Total surface (km ²)
Marine Park (MP)	Ia	2	15,001,563.05
Marine Reserve (MR)	IV	5	7,810.56
Multiple Use Marine Protected Area (MUMPA)	VI	8	74,612.98
Nature Sanctuary (NS)	-	9	877.03

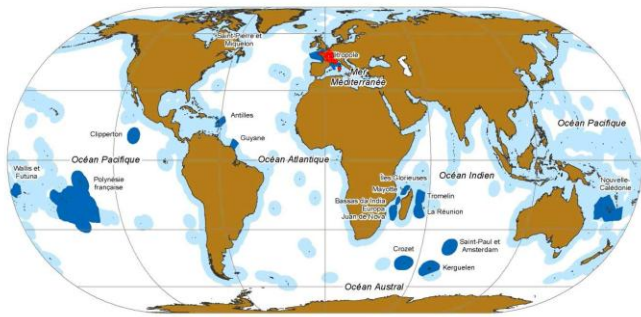


MPA Progress: The number of MPAs will continue to follow an upward trend. Three additional MPAs have been approved by the *Sustainability Ministries Council* on January this year. Those MPAs are: Juan Fernandez Archipelago, Pitipalena and Tictoc-Corcovado. All of them are in progress to be officially created by decree.



Spotlight on Chile's hosting of major international events

Chile will host during 2015 and 2017f two main international events aimed to address and highlight marine sustainability and conservation issues; **Our Oceans Conference (2015)** and **IMPAC4 (2017)**. It is expected these meetings be supportive milestones towards the enhancing and expansion of the MPA Chilean network and its institutionalization.



France : Exclusive Economic Zone = 11 million km²

Authority: The Agency intervenes both in mainland France seas and overseas territories, over the whole EEZ and territorial sea: the local authorities have no jurisdiction on sea. An MPA is created by a ministerial order, on the exclusive proposal of the Agency as regards the Marine Natural Parks. Equally it can only propose regulations to the relevant authorities; but its field agents do have the authority to enforce the existing environmental regulation.

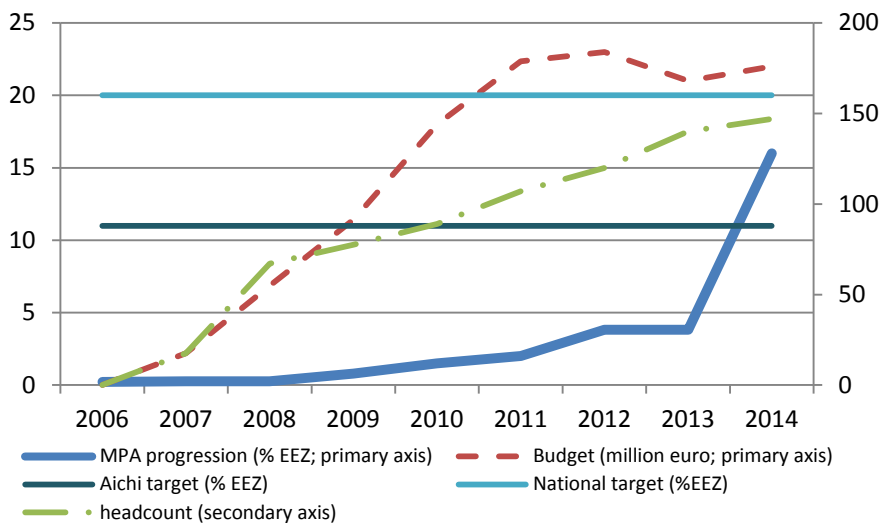
Status: The Agency is an autonomous governmental organization, supplied by the state, but with its own budget and the legal entity (with the ability to sign contracts and go to court). It remains under the administrative supervision of the minister in charge of environmental protection and sea.

Background: France's EEZ is the world second vastest, of which only 0.0001% was protected in the 2000s.

Political awareness regarding the oceans' protection started to rise in 2005. The marine section of the *National Strategy for the Sustainable Development* along with the setting of the first IMPAC in Geelong highlighted the issue. France needed a specific and ambitious tool with a dedicated governmental organization to catch up with the more advanced marine nations and fulfill its international commitments.

In 2006, most of the French protected areas policy got renewed. The "04/14" Law created the Agency and the "Marine Natural Park" legal status, a tool meant to become the main asset for the expansion of the French MPA program. Three years later the "Grenelle de la mer" (a national and inclusive debate) gave birth to the *National Strategy for the Sea*, which included an ambitious strategy for MPAs creation.

In 2013, the still young Agency got fully involved in the international cooperation when organizing the third IMPAC, which gathered 1500 participants from 87 countries, including 20 ministers. On the field, 2014 was the year of completion of the 6th Marine Natural Park, just a few weeks after the creation of the current vastest MPA in the world in the Coral Sea.



Mission: the agency is in charge of three main objectives:

- **Improving the state of the marine environment** through support to MPAs creation and management;
- **Fostering the scientific knowledge** of the marine environment by participating in the collection of data and their good management and use;
- **Strengthening the representation of France in the relevant international forums and meetings.**

The agency creates and manages protected areas, animates and monitors the national network.

<http://www.aires-marines.fr/> or <http://www.aires-marines.com/>

French MPA categories

Type	IUCN category	number	Total surface (km ²)
National Parks	I II V	3	35
Marine Natural Parks	V VI	6	188620
Coral Sea Natural Park	V VI	1	1 291 000
Biotope decrees	VI	16	-
Marine Natural Reserves	I	29	26392
Coastal conservancy marine sites	IV V	11	-
Natura 2000 areas	IV	207	6970
International convention statuses ¹	-	70	-
Other	-	51	-
Total		394	1 513 017

¹RAMSAR convention marine sites (12); UNESCO World heritage (3); Biosphere marine Reserves (5); Barcelona Convention sites (5); OSPAR convention sites (38); Nairobi convention sites (0); Cartagena convention sites (6); CCAMLR convention sites (1).

Spotlight on the Iroise Marine Natural Park (IMNP)

Surface: 3500km²

Location: Brittany, mainland France

Yannis Turpin / Agence des aires marines protégées



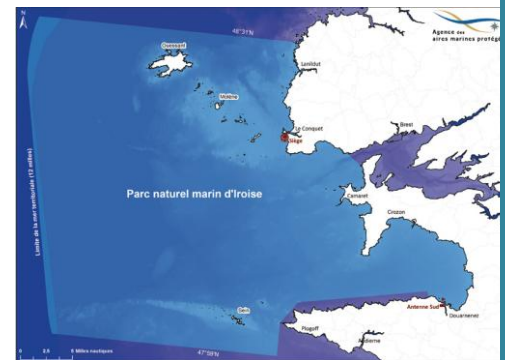
A Pioneer Project

Established in 2007, it is the first Marine Natural Park (MNP). Yet, due to the existence of exceptional habitats and resources, it has a much longer history. The first studies started at the beginning of the 1990s, in line with the creation of a biosphere reserve. As the project of a National Park was taking shape, worries among the sea users grew and the project was abandoned. This failure is at the origin of the conception of the Marine Natural Park solution. The conclusions of the study mission were that a new legal status was needed to manage the human activities at sea. The marine natural park bill was entirely shaped around the principles of consultation and continual involvement of the stakeholders. When it passed in 2006, it was immediately tested in the context that shaped its main features.

The PNMI embodies the choice to associate protection of the marine environment with sustainable development through a continuing discussion and negotiation with and between the stakeholders.

Preparing the Decision

The process begins with the Strategic Regional Analysis. It consists in the gathering of all the relevant existing information and data regarding the functioning of the ecosystems, the human activities in the area and the institutional and legal framework. Experts, public administrations and the sea professionals contribute to this assessment, under the leadership of the agency. The meetings with the stakeholders allow better understanding the issues at stake and confirming the opportunity to continue the project. An official study mission follows up, lead by a reduced team of the agency. Through negotiations with all the stakeholders, a common project emerges and is made public. Thanks to the previous project of national park, the case file of the IMNP reached this step only a few months after the publication of the law. The ministerial decree creating the IMNP was published on the 28th September 2007, stating the precise composition of the management council, the perimeter of the park and the main management orientations.



Planning, deciding: the Central Role of the Management Council

In the PNMI, the stakeholders are not merely consulted, they have the decision power. The legitimacy of the management council comes from its representational power: 49 people make it up, 11 representatives for the local authorities, 12 for the maritime professionals, 8 for the recreational users, 2 for the ENGOs, 9 « qualified personalities », 1 for the nearby Natural Regional Park and 6 for the state administrations. It develops and votes on the management plan, lead by the management orientations. At least twice a year, the council votes on the actions needed to ensure a *good state of the populations of rare, protected or threatened species and of their habitats* while making the development of the maritime activities more sustainable. Its clearance is also required for every new project impacting the marine environment inside the park, including activities on land. Last but not least, the council is able to propose projects of new regulations to the state authorities in charge (for example banning some impacting activities).

Implementing and Assessing : the Agency as the Armed Wing of the IMNP

As well as its role of advisor, the agency is in charge of the implementation of the management plan by providing human, material and financial means. It carries on the interventions on the field, animates the “raising awareness” campaigns and helps out with the law enforcement. Beside these tasks, the agency supports the council in the creation of an assessment system able to monitor the state of the marine environment and evaluate the management. Each MPA is encouraged to develop its own instrument panel, following a common methodology. The PNMI has been using its instrument panel since 2010. Made up of 79 indicators, the agency field agents and the sea users provide the scientific data. The results are presented on an annual basis, in an educational publication. Therefore enlightened, the council is able to keep adapting the management to the actual state of the marine environment.



Italy has not established an Exclusive Economic Zone. "Ecological Protection Zones" are under process.

Background: Italy has a long history of protecting resources onshore as national parks, and more recently began the process to designate and manage marine areas. Italy's system of marine protected areas has its roots in a law passed in 1982 that authorizes designation of up to 50 marine protected areas in Italy's coastal waters.

The original authority was given to the Ministry of Marine and Mercantile Affairs, and another law, passed in 1986, transferred the authority to designate and manage marine protected areas to the newly-created Ministry of Environment and Territorial Protection.

Many sites were initially put on a site evaluation list in 1982, and by 1986 two sites were designated as protected marine areas. The Ministry of Environment moved quickly to designate new marine protected areas, with another five designated by 1991.

Of the current 27 marine protected areas designated in Italian waters, 25 represent "ecosystem" sites, where protection is afforded for all resources within the marine protected area. Two other sites off Naples are strictly submerged cultural resource sites, and there is a very large tri-national "sanctuary" (Pelagos) for marine mammals in the northern Ligurian Sea on Italy's northwest coast.

All but one of the Italian marine protected areas has shorelines, and basically half of them surround islands in whole or in part. More than 400 miles of coastline are part of a marine protected area in Italy, and the surface area protected is more 800 square miles; the marine mammal sanctuary Pelagos if included, protects a huge extent of coast and over 10,000 square miles of coastal waters, much of it in Italy.

Authority of the Italian MPAs management

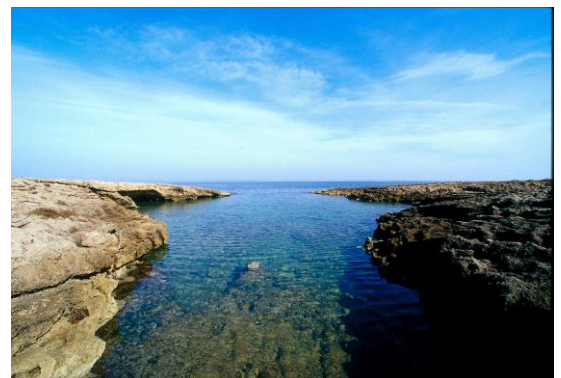
Currently the National Agency in charge for the MPAs management is directly the Italian Ministry for the Environment and Land and Sea, since the MPAs are Protected Areas of national interest. The Ministry has the authority to designate marine protected areas and the Nature Protection Service in the Ministry administers and manages the marine protected areas program in Italy.

Statutes of the managers: Once an Italian marine protected area is designated, the national government delegates management authority to a local entity or consortium of entities to manage the site. In some cases, a city will solely be the managing entity. In other cases, a consortium of one or two local cities and a provincial government (similar to a county) will be formed for management, with one party in the lead.

Several of the sites are wholly managed by a national environmental organization, or the national environmental organization is part of the consortium. A university also sits on at least two managing consortia. Nearly all of the marine protected areas also adjoin terrestrial national, regional or provincial parks, and at least two of the marine protected areas are managed by the terrestrial park's management entity.

Funds are provided by the Italian Ministry of the Environment, for management of the sites, in accordance with an annual management plan that includes a budget and a schedule of projects and deliverables from the site. Local communities that are part of a managing entity often put forward local funds to assist management at a site. This can mean substantial, valuable commitments of staff, and/or land and buildings being provided for office space, visitor centres and other facilities.

Mission: The mission of the Nature conservation in Italy, according to the framework national law on nature protection is the conservation of animal and plant species, plant associations or forestry, unusual geological, paleontological formations, biological communities, biotopes, scenic values and sights, natural and ecological processes of hydraulic and hydrogeological phenomena.



The Torre Guaceto MPA covers over 22 km² of the Adriatic Sea in south-eastern Italy and includes a 1.8 km² marine reserve, although initially the entire MPA was closed to fishing. Effective enforcement began in 2001, 10 years after the MPA was designated.

The Torre Guaceto MPA is located adjacent to an artisanal fishing community. Fishing activities worldwide have dramatically affected marine fish stocks and ecosystems. Marine Protected Areas with no-take zones may enhance fisheries, but empirical evidence of this is scant.



In 2005, scientists and fishermen who collaboratively studied the MPA designed an adaptive co-management plan to allow fishing in a partially protected area of the MPA. This plan was designed to sustain fishermen's income while also limiting fishing impacts.

Scientists and fishermen worked together to select fishing gear that would minimize harm to the underwater habitats and protect functionally important fish predators and young fishes. Fishermen also agreed to fish only one day per week in the MPA.

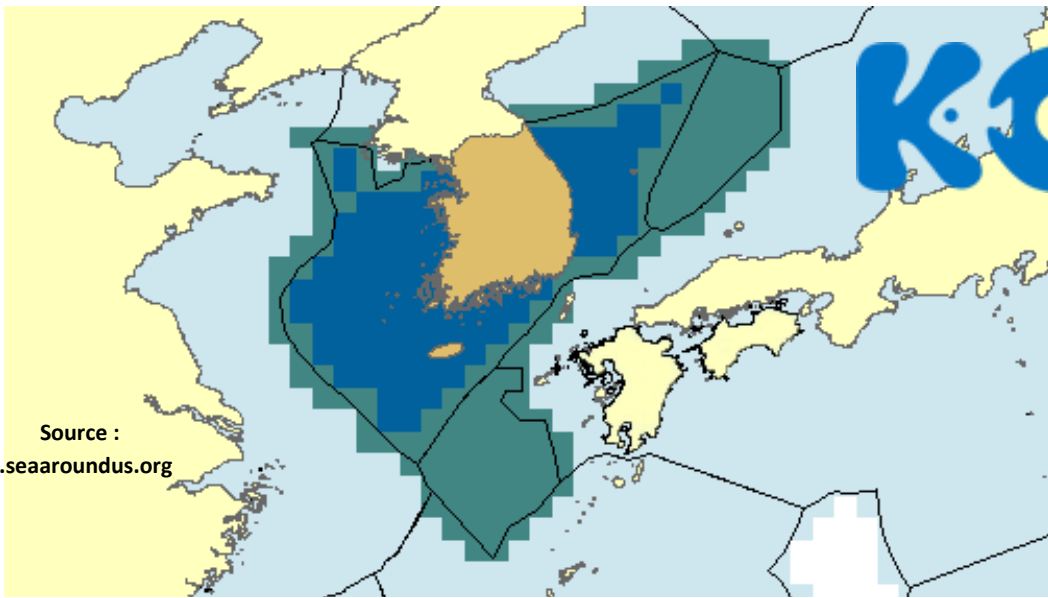
Immediately after fishing was allowed in the partially protected area of the MPA, fishermen saw an increase in their income. Catch rates of commercially fished species including striped red mullet, octopus, and peacock wrasse averaged 4 times higher than catch rates outside of the MPA.

After a few years, catch rates within the partially protected area had stabilized to a level that was greater than double the catch rates outside the MPA.

Collaboration and co-management among fishermen, managers and scientists allowed for the maintenance of sustainable fisheries and the avoidance of overfishing in the partially protected area in Torre Guaceto.

Many fishermen support the MPA, including the marine reserve portion, because of the long-term benefits they receive for their fishery. Increased trust and collaboration between scientists and fishermen is essential to designing marine reserves within MPAs that can benefit both conservation and fisheries.





Source :
www.seaaroundus.org

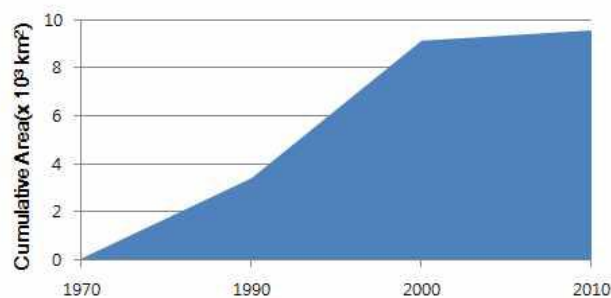
Republic of Korea Exclusive Economic Zone = 475 000 km²

Status: Various government bodies including the MOF, Ministry of Environment, Ministry of Land, Infrastructure and Transport, Cultural heritage Administration and local governments are involved in the designation and management of MPAs. Among government affiliated organizations, KOEM and the Korea National Park Service are working on designation and management of MPAs.

Background: The Republic of Korea first introduced Marine protected area system back in 1968 when Hallyeohaesang National Marine Park was designated as the first national marine park in the nation. Since then, Fisheries Resources Protection Area, Environment Conservation Sea Area, Coastal Wetland Protected Area and Marine Ecosystem Protection Area were also introduced, and the system of MPA designation and management has become advanced with the legislation of applicable acts such as the Fisheries Act (1953), Cultural Heritage Protection Act (1962) Natural Park Act (1967), Act on Planning and Use of National Territory (1972), Wetlands Conservation Act (1999), Act on Conservation and Management of the Marine Ecosystem (2006), Marine Environment Management Act (2007). 568 MPAs have been designated so far, accounting for 13.5% of waters managed by the nation(71,000km²).

Diverse type of protected areas categorized under different acts are designated as MPAs and managed accordingly under the Conservation and Management of the Marine Ecosystem Act. The MOF (Ministry of Oceans and Fisheries), Regional Maritime Affairs and Port Offices and 16 local governments are making consistent and concerted efforts to effectively manage nine Marine Ecosystem Protection Areas and 12 Coastal Wetland Protected Areas, among others. The MOF established the MPA Center under KOEM back in 2010 for the effective management of MAPs, and developed the guideline for MPA management (2013) to enable autonomous management of MPAs.

Growth in total MPA areas. 1968-2014



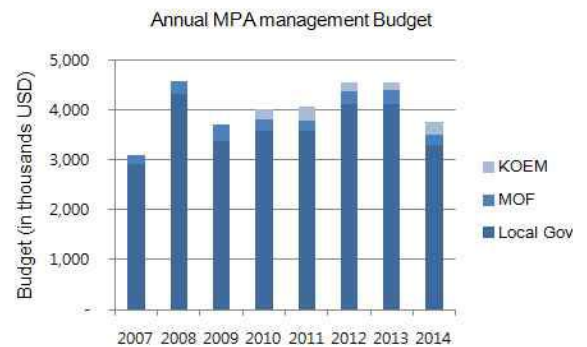
Authority: Aside from some exceptions, the central government has the authority to designate MPAs, while practical management of MPAs is being done by local governments. The central government first select candidates for MPAs after reviewing scientific research data on marine and coastal ecosystem, and then designate one among them as a MPA in consultation with local government and communities. After the designation, the relevant local government and Regional Maritime Affairs and Port Office, which serves as a regional office of the MOF, work together for the practical , management of the MPA. It is the Regional Maritime Affairs and Port Offices that comes up with a basic management plan for each MPA and local governments cooperate with local communities for the effective management. The MPA center works as a coordinator between the central and local government and local communities, dealing with MPA candidates review, evaluation of each MPA management, public awareness, networking as well as running a advisory committee.

Mission: The designation and management of MPAs in the republic of Korea have been improved to be in line with the international standard since it joined the Ramsar Convention in 1997. The nation's MPA management, taking into account the CBD and IUCN recommendations, is currently focusing on two directions: expansion of MPAs; and improvement of management efficiency - Designating more than 25% of the entire tidal flat area in the nation as Coastal Wetland Protected Areas by 2020 - Strengthening scientific research platform for the ecosysetm based designation and management -Raising awareness and instill a sense of ownership into local people for community based management -Improving the ecological, cultural and social value of MPAs and local communities.



Budget: The budget for MPA management is earmarked by the MOF each year, and the execution of the budget is separated into

1. Budget for the national management project;
2. Management and oversight budget for Regional Maritime Affairs and Port Offices;
3. Budget for local governments' management project. Local governments allocate local budget in addition to the budget granted by the central government for local projects.



Spotlight on Suncheon Tidal flat Coastal Wetland Protected Area

The Suncheon tidal flat coastal wetland protected area is located in the center of the Republic of Korea's Southern coastline. Shaped like an hourglass, this area cover both the Yeosu and Goheung Peninsula. As a coastal wetland area, the Suncheon tidal flat consists of river mouth, reeds, salt marshes, and islands. Additionally, the surrounding land possesses various farming areas, salt fields, seaside villages, laver farms, as well hills and mountains. The Suncheon tidal flat costal wetland is an area where rivers and streams converges into an unified ecosystem. The combination of beautiful mountains and the vast openness of the tidal flat area is a truly a sight to remember. Although the total area is relatively small compared to other tidal flats in the world, you are able to see ecosystem and habitat diversity all in one. Suncheon is known as Korea's most beautiful and affluent biodiversity tidal flat where various species are undisturbed from human activities. The efforts of the local community, NGOs, and the Suncheon local government has paid off ever since conservation activities were implemented since the end of the 1990s. This area was designated as a wetland protected area in 2003 and was registered as a Ramsar Site in 2006.



Background Mexico hosts an extraordinary diversity of coastal and marine ecosystems, including wetlands, mangrove forests, coral reefs, seagrass meadows. A diversity which resulted early in environmental conservation programs to protect the marine environment. The first Mexican protected area with a marine component was created in 1922, and the first exclusively marine PA in 1973. But back then, at sea just as on land, the protection measures were mostly paper, deprived of any reality on the field.

The CONANP it is....

- 1600** people
- Including **500** field agents
- 95 million \$** of annual budget

Status The CONANP is a **decentralized agency of the Ministry of Environment and Natural Resources. It has its own budget and alliances to raise funds.**

Authority. The CONANP's mission of protection extends to the ecosystems and biodiversity of all Mexican lands and waters. From the seashore to the limit of the EEZ, it looks for a network of marine protected areas representative of all ecosystems present in the country. As a federal agency, it has the authority to manage all marine and terrestrial protected areas: the Mexican waters fall under the exclusive authority of the federal government.

After a CONANPs' proposal, MPAs are created by a presidential declaration. With regard to law and regulations enforcement, CONANP coordinates the work of several federal administrations:

- Enforcement of the law, including the application of specific rules established in management plans is responsibility of a specialized area of the Ministry of Environment and Natural Resources (SEMARNAT), that is the Attorney called PROFEPA, which receives the assistance of the Navy.
- Regarding to fisheries is the Ministry of Agriculture, Food and Fisheries (SAGARPA) through Fisheries Commission or CONAPESCA, within and outside protected areas.

"CONANPs' mission is to preserve natural heritage of Mexico through Protected Areas, by promoting a culture of conservation and sustainable development of communities living in their own environment."

www.conanp.gob.mx

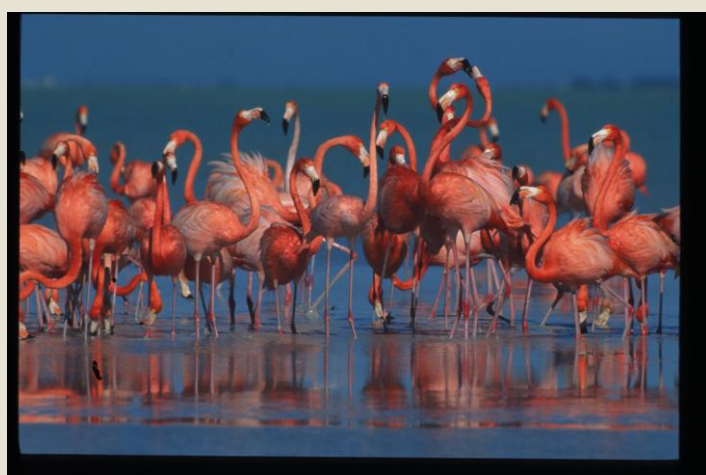
CONANP:

- *creates and manages federal protected areas in Mexico by providing funds and staff, producing and implementing management plans.*
- *Fosters a culture of conservation in Mexican society.*
- *Ensures the participation of Mexico in international cooperation agendas on protected areas*

The Earth Summit in 1992 represented the opportunity for a major shift in Mexico's environmental policy. In the framework of Agenda 21, Mexico assumed important commitments and started enforcing all the PAs decrees passed in the last 75 years. Within this framework, two important institutions were founded. In 1992 is created the National Commission for Knowledge and Use of Biodiversity (CONABIO) and shortly after the Mexican Fund for Conservation of Nature (FMCN). CONABIO has the ability to search, retrieve, organize and use information on biodiversity to support the decision making; FMCN, linked to the private and philanthropic sectors, obtains, strategically manages and distributes financial and technical resources for conservation programs.

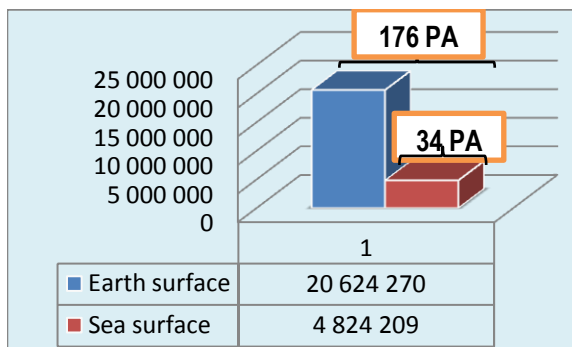
As a direct result of these junctures of the 90's, the PA quickly gained the lost ground for decades. They first became a coordinating unit within the National Institute of Ecology (INE) in 1996, with direct operational capacity, however minimal, over 80% of the area under protection. **Finally, in 2000, the National Commission of Natural Protected Areas (CONANP) is created as a decentralized agency of the Ministry of Environment and Natural Resources (SEMARNAT), with the challenges of consolidation and institutionalization that the rapid growth made necessary.**

In the marine environment, the beauty and richness of the coral reefs allowed the setting of a comprehensive network of MPAs to protect them. Nevertheless, at the same time, the exponential development of a massively subsidized fishing industry considerably exceeded the level of sustainable use of the marine ecosystems. Overfishing, destructive methods, along with multiple other pressures affecting the ecosystems functioning, made of the creation of a national representative MPA network a top priority for the CONANP.



RB Ria Lagartos/ Alberto Vazquez

Mexican Marine Protected Areas: Figures and Typology



Type	IUCN cat.	number	Total marine surface (ha)
Biosphere Reserve (core zone)	Ia		104,516
Biosphere Reserves (Buffer Zone)	VI		3,524,603
Sanctuary	Ia		145,565
National Parks	II		752,889
Flora and Fauna Protection areas	VI		296,635
Federal MPAs			
De Facto State MPAs			
Total		34	4,824,208

Spotlight on ... *The Sian Ka'an Biosphere Reserve*¹

LOCATION: YUCATAN PENINSULA. CREATION: 1986. SIZE: 5280KM². 4080 TERRESTRIAL, 1200 MARINE.

Sian Ka'an Biosphere Reserve was declared in 1986 to protect exceptional diversity of habitats, species and archeological sites. It is acknowledged by UNESCO's Man and Biosphere Program (MAB), by UNESCO's World Heritage (WH) and is part of the MPA Network of the North American Commission for Environmental Cooperation. It obtained remarkable results in the integration of local communities to the conservation and sustainable development initiatives. 14 years older than the CONANP, today is a major asset of its network, Sian Ka'an Reserve illustrates the principles shaping CONANP's vision of environment protection.

Applying the best available knowledge in decision-making.

In the case of Sian Ka'an BR, the State Research Center and the National Autonomous University of Mexico brought scientific support needed to base the decision-making on sound science and incite the political authorities to action. This work, carried out without the governmental support, paved the way for implementation of a genuinely managed protected area. Since the last decade, **the reserve and its people are beneficiaries of the role of CONANP in the coordination and networking of 16 academic and research institutes** plus twelve national and international **environmental NGOs**. The confidence and visibility carried by CONANP attracted funds and research programs towards the reserve.

Building on a strong, suited legal framework

As a result of scientists suggestions, the reserve includes several core zones meaning high level of protection. Additionally local communities benefit this special legal protection that any economic activity must be taken with their participation. This specificity, along with a strict control of land uses translates in the success and growth of tourism activities such as catch and release fish instead of large captures of reef fishes.

Working with the society to head towards sustainability

The sustainability of economic development requires addressing the whole society, and, at a smaller scale, the local community. The conservationist culture we are promoting seeks to achieve a valuation of ecosystems and biodiversity and to highlight the benefits of protection and sustainable practices. It is based on education (formal, non-formal and informal), training, participation and use of strategic communication. A genuine change in the local culture must result **in a change of the behaviors**.

In Sian Ka'an the CONANP got involved in the setting of training programs for the integration of the local communities **into the development of new sustainable economic activities**. This process began in 1995 thanks to the work of NGOs and clearly showed benefits for people living inside the reserve. They were first trained to work as guides in nature based tours. The CONANP also launched a training program in business management and administration. This effort in capacity reinforcement made of tourism a major economic sector for the thousand of inhabitants of the Sian Ka'an reserve.

The purely cultural side of the action began early, in the late 80s, as soon as International NGOs paid attention to the project (WWF-US). They got involved by supporting the establishment of local NGOs, leading them into the development of participatory field projects, education programs and "raising awareness" campaigns.



Sian Ka'an/ Archive CONANP

Changing behaviors and practices: CONANP's support to sustainable practices, the case of shrimp fishing in the Gulf of California.

Shrimp is the most developed fishing industry in Mexico. In the gulf of California this activity threatens critically one of the most endangered species in the country, an endemic porpoise locally called *Vaquita*. The CONANP established protected areas, and set a complete strategy of financial incitement to address this issue:

1.Reducing the fishing effort

→subsidies for fishermen willing to change for another activity

2.Adapting the practices

→subsidies for the suspension of the activities during critical periods of *Vaquita's* lifecycle
 →Subsidies to invest in new, harmless nets
 →Subsidies to accept displacing the fishing areas

¹ Source : *Linking Universal and Local Values: Managing a Sustainable Future for World Heritage*, World Heritage Papers n.13



Exclusive Economic Zone = 4 million km²

Background: New Zealand's (NZ) Exclusive Economic Zone (EEZ) is one of the largest in the world, totalling 4 million km² - an area of the ocean 15 times its land mass. NZ was the first country in the world to create legislation for the establishment of "no-take" marine reserves: designated areas where the removal of marine life is not allowed.

In the territorial sea, the 1971 Marine Reserves Act currently provides a single (high) standard of protection for the marine environment, but the Act does not extend to the EEZ. Traditionally, applications for one-off marine reserves are submitted by community groups, or by the Department of Conservation, leading to localised protection. The NZ government has made a commitment to protecting a full range of marine habitats and ecosystems to effectively conserve marine biodiversity through its ratification of the international Convention on Biological Diversity.

The Fisheries Act 1996 is integral to the development of NZ's Marine Protected Areas (MPA) network as it provides the opportunity to establish MPAs in both the territorial sea and in the EEZ. The Act's purpose is to provide for the sustainable utilisation of fisheries, and this includes: "avoiding, remedying or mitigating any adverse effects of fishing on the aquatic environment".

In 2005, the then government released its MPA Policy and Implementation Plan (MPA Policy) to help guide this work. The policy is aimed at protecting marine biodiversity by establishing a comprehensive network of marine protected areas that is representative of NZ's marine habitats and ecosystems within the territorial sea and the EEZ.

In 2008, the government released *MPAs: Classification, Protection Standard and Implementation Guidelines* (MPA Guidelines). This was a task required by the MPA Policy, and provided for a nationally consistent layered classification for habitat and ecosystem identification. The first layer defines 14 coastal biogeographic regions based on broad scale physical factors. The other layers define additional characteristics such as environment, depth and substrate type.

A core component of the MPA Policy is to introduce a collaborative approach to MPA planning, where stakeholder forums develop proposals for MPAs that are representative of NZ's habitats and ecosystems within each biogeographic region. Two stakeholder-led MPA planning processes have concluded under the MPA Policy – one for the West Coast region and another for the subantarctic region.

Marine protection in the territorial sea, promulgated under the MPA Policy, has been augmented by a fishing industry led initiative to establish Benthic Protection Areas in the EEZ using the Fisheries Act. This process culminated with the establishment of regulations in 2007 that preclude bottom-trawling and dredge fishing over 17 large areas (that together with existing prohibitions on trawling over seamounts), collectively cover about 32% of the EEZ.

The government is exploring options for a "graduated" approach to marine protection in a new legislation, extending jurisdiction to the EEZ. This may complement marine reserves with new MPA categories which allow some extractive resource use where this is consistent with biodiversity protection. The new legislation will also bring NZ in line with international best practise.

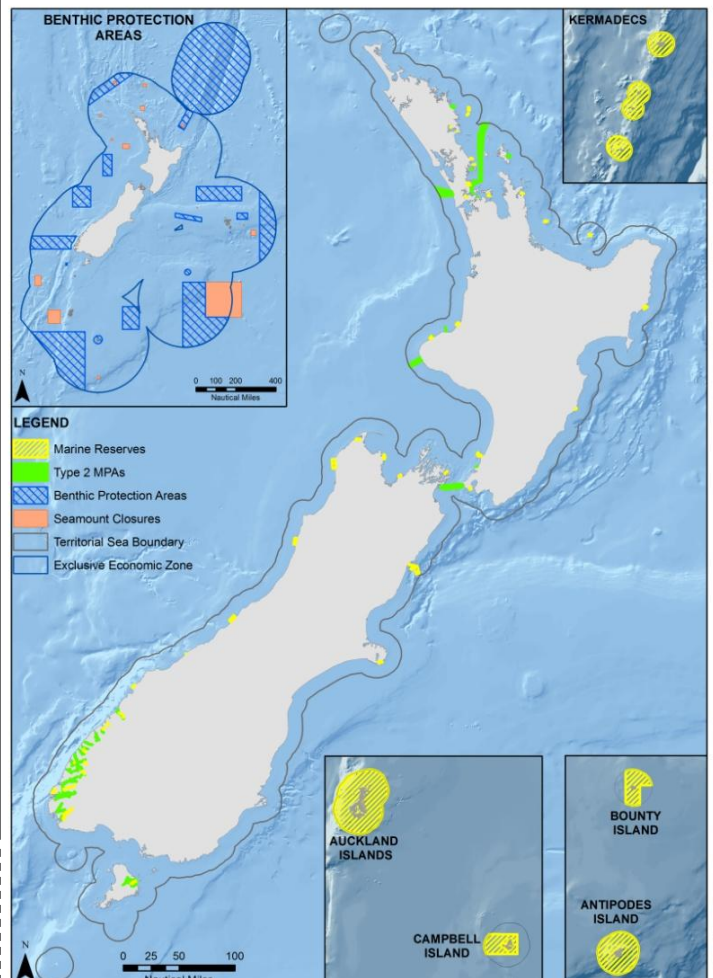
Mission: The objective of the MPA Policy is to establish a network of MPAs that is comprehensive and representative of NZ's marine habitats and ecosystems.

Authority: Department of Conservation (DOC) is the government agency responsible for NZ's conservation land and waters, including national parks and marine reserves. Marine reserves are established under the Marine Reserves Act 1971. Other legislation administered by DOC includes the Marine Mammals Protection Act, the Wildlife Act and the Conservation Act.

Ministry for Primary Industries (MPI) is the government agency responsible for sustainable fisheries management. Fisheries prohibitions established under the Fisheries Act 1996 provide a means to protect marine biodiversity from the adverse effects of fishing.

DOC and MPI are jointly responsible for implementing the MPA Policy, with DOC taking the lead role in the collaboration process. The agencies will assist with interpretation of the classification system and protection standard and will provide information and support to the regional planning forums.

Status: DOC and MPI are politically neutral government agencies. Each agency has its own budgets and administrative hierarchy. The agencies advise their respective Ministers on topics that fall under that Minister's portfolio.



NZ MPA network and other managed marine areas

Type	NZ MPA category	IUCN category	Number	Total surface (km ²)
Marine Reserve	Type 1 MPA*	Ia	44	17,698
Benthic Protection Area	-	VI	17	1,150,741
Seamount Closure	-	VI	17	108,128
Fiordland Marine Area	Type 2 MPA**	-	1	372
Marine Park	Type 2 MPA	-	2	26
Submarine Cable Closure	Type 2 MPA	-	8	1,579
Te Whaka a Te Wera Mataitai Reserve	Type 2 MPA	-	1	77
Fisheries Closure	Type 2 MPA	-	4	2,538
Total			94	1,281,159

* 'Type 1 MPAs' are marine reserves established under the Marine Reserves Act 1971,

** 'Type 2 MPAs' are all other areas that meet NZ's domestic MPA protection standard.

Spotlight on the subantarctic MPA process



The Subantarctic biogeographic region The subantarctic islands are NZ's southernmost islands, situated between 47 and 53 degrees south – the “roaring forties” and “furious fifties”. The islands are important to NZ for a number of reasons: they are ecologically and historically important, but also substantially increase the area of NZ's EEZ. Four island groups make up the NZ subantarctic island archipelago: Bounty Islands, Auckland Islands, Antipodes Islands and Campbell Island. The islands themselves have been national nature reserves since the 1950s, the highest level of protected status under NZ legislation. The United Nations Environment Programme has described the NZ subantarctics as “the most diverse and extensive of all subantarctic archipelagos” and in 1998 the islands and their territorial seas were afforded World Heritage Area status, recognising their global importance. The physical characteristics, location and isolation of the islands has resulted in the development of specific marine ecosystems and endemism, however protection for most of the island's marine environment has been lacking. In 2003 a marine reserve was declared around the Auckland Islands, extending from the shore to the territorial sea boundary and protecting the ecosystem from extractive uses. In 2007 Benthic Protection Areas were established within the territorial sea of the remaining subantarctic islands, prohibiting fishers from contact with the seabed with dredges or trawls.

Implementing the MPA Policy The Department of Conservation's Subantarctic Islands Conservation Management Strategy (1998-2008) was initiated to contribute to managing these islands. Part of that Management Strategy included considering the provision of marine protection to the waters surrounding the Subantarctic Islands. Initial scoping of marine protection within the subantarctic commenced in 2003 and the Government agreed that the process should continue as a regional planning process following release of the MPA Policy.

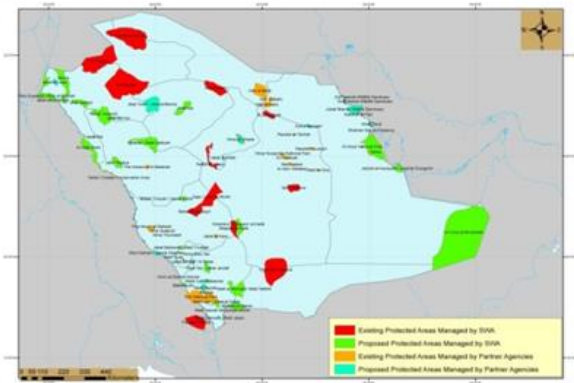
The MPA planning forum A preliminary subantarctic marine protection workshop was held in 2004 for the purpose of initial engagement with stakeholders. A forum of stakeholders for this advanced MPA project was formally convened in 2008, with a view to proposing marine protected areas for the Subantarctic Islands marine biogeographic region. Representatives from fishing industries, Ngai Tahu (indigenous peoples of the south island of NZ), environmental groups, conservation board, research institutes and scientists were endorsed as members of the forum. All members of the forum had collective responsibility for its decisions and had equal status in discussions. The forum was asked to provide recommendations for area-based marine protection within the territorial sea for the full range of habitats and ecosystems present, using appropriate statutory and regulatory tools. Specifically, the objectives of the forum were to:

- Consider the classification and inventory information
- Consult with existing users and interests in the area
- Identify sites and potential tools for area-based protection of biodiversity
- Seek to establish consensus on proposed areas to be set aside as protected areas
- Consult on protection options and make written recommendations to Ministers



Recommendations to Ministers Seven full-day forum meetings were conducted over 12 months, which culminated in two proposed options for each island group. A sub-committee then drafted a consultation document and sought the public's views on the options. After considering submissions the forum was unable to reach consensus on one set of recommendations and therefore presented two options to the Minister of Conservation and the Minister of Fisheries in 2010.

Establishing protection Following Ministers' decisions on the proposed protected areas in 2011, special legislation was drafted to implement three new marine reserves to complement the existing marine reserve around the Auckland Islands. The three new Subantarctic Island marine reserves were officially opened on the 2nd of March 2014. The marine reserves total over 435,000 hectares and boost the area of NZ's territorial sea that is in MPAs to over 10%. A substantial proportion of the territorial sea of each island group has been protected within each marine reserve. The Antipodes Islands/Moutere Mahue Marine Reserve covers all the territorial waters out to 12 nautical miles from shore, and the Bounty Islands/Moutere Hauriri Marine Reserve and Campbell Island/Moutere Ihupuku Marine Reserve cover 58% and 39% respectively. They are the 3rd, 4th and 5th largest marine reserves in NZ waters and protect some of the most biologically diverse marine communities in the world. Protection of the waters around the islands will complement the protection already afforded to the islands themselves, and recognises the important interactions between the land and sea in the subantarctic region.



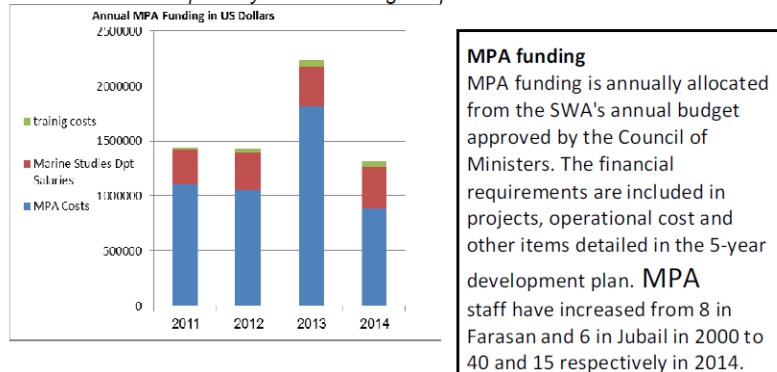
Saudi Arabia Exclusive Economic Zone 228,633 km²

Authority: The Saudi Wildlife Authority (SWA) is the main agency charged with the conservation and restoration of the Kingdom's biological diversity, as well as the main protected area planning and management agency. According to the Royal Decree of its establishment, the SWA is required to "Develop and implement plans to preserve wildlife in its natural ecology, to propose the establishment of proper protected areas and reserves for wildlife in the Kingdom, and to manage such areas..." Saudi Arabia's Protected Area legislation, issued in 1995, sets forth the objective of establishing PAs as the conservation of wild biological diversity and sets out the process for their proclamation, as well as the coordination of their visitation, provisions for enforcement, and sanctions for violations.

Status: The SWA is an autonomous governmental agency, linked administratively to Saudi Arabia's Council of Ministers. The SWA has an independent budget set annually by the Council of Ministers.

Evolution of budget, 2011-2014

Note: 2011 and especially 2013 saw high expenditures on infrastructure.



Background: The SWA was established by Royal Decree in 1986, with a mandate to prepare and implement plans to sustain terrestrial and marine wildlife and to rehabilitate threatened and endemic species in their natural habitats.

Situated at a junction between Africa and Eurasia and including parts of the Red Sea and Arabian Gulf, the Arabian Peninsula is distinguished by an exceptional biological diversity of ecosystems, species, and genetic material. Successive waves of marine invertebrates and fishes invaded and withdrew from the Red Sea and the Arabian Gulf, with the rise and fall of sea levels, leaving unique assemblages of species adapted to the high temperatures and salinities of these waters.

As of October 2014, three MPAs in Saudi Arabia are wildlife protected areas managed by the SWA primarily for the conservation of biological diversity.

Five additional MPAs are proposed to be managed by the SWA for the conservation of biological diversity. The total existing and proposed MPA coverage managed by the SWA is 16,211.67 sq km which represents 19.76% of Saudi Arabia's territorial waters and 7.09% of its Exclusive Economic Zone.

Mission: To protect, conserve, and restore Saudi Arabia's wild biodiversity. The SWA's by-laws state that it shall be concerned primarily with the preservation, protection and development of wildlife, and ecological balance, through:

- Proposing protected areas for the conservation of wild plants and animals in their natural ecology, and management of the protected areas over which it has jurisdiction.
- Developing and implementing plans and projects to preserve and maintain wildlife in the natural ecology as well as proposing legislation and regulations for the conservation of biological diversity.
- Encouraging and conducting scientific research in the life sciences, especially in wildlife ecology.
- Conducting surveys of available data and results of research in the wildlife and ecology of Saudi Arabia.
- Stimulating public interest in ecological aspects of wildlife, and seeking sound solutions to problems through meetings, symposia and conferences.
- Cooperating with government agencies and with national and international scientific institutions and individuals.

MPA Categories

Type	IUCN category	number	Total surface (km ²)
Wildlife Protected Area	VI (Ia, II, IV) + VI (Ia) +Ia	3	6,855.17
National Park	VI	1	898.20
Reserve	IV	1	10.40
Total Designated / Managed	-	5	7,763.77
Proposed Wildlife Protected Area	II + VI + Ia + IV	5	9,356.5
Proposed Reserve / Eco-Park	IV	2	814.69
Total Proposed	-	7	10,171.19
Grand Total	-	12	17,934.96

Spotlight on ... The Farasan Islands Protected Area

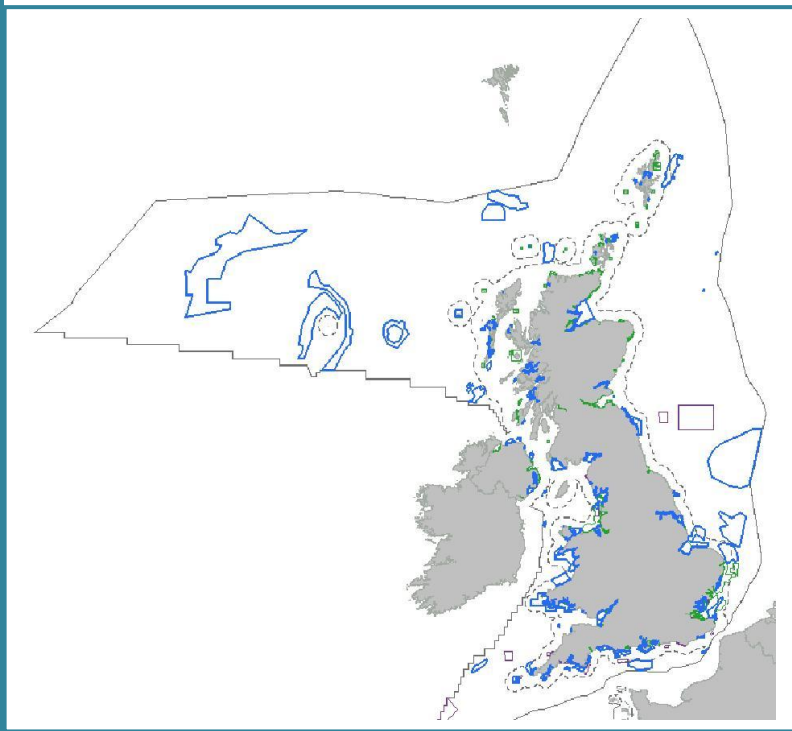


Pink-backed pelicans *Pelecanus rufescens* nesting in red mangrove *Rhizophora mucronata*, Farasan Islands MPA, Red Sea, Saudi Arabia

The Farasan Islands are an archipelago of over 170 islands and islets of uplifted coral reef lying 40-90 km offshore from Jazan. This protected area conserves key representations of the islands and coastal waters of the southern Red Sea and has probably the greatest combined marine and terrestrial biological diversity of any site in Saudi Arabia. Sites of key biological importance include marine islands, mangrove thickets (black mangrove *Avicennia marina* and red mangrove *Rhizophora mucronata*), high quality coral reefs, seagrass beds, algal beds, and saltmarshes. The islands support the largest population of idmi gazelle *Gazella gazella* in Saudi Arabia, and breeding populations of pink-backed pelican, Eurasian spoonbill, osprey, green turtle, and hawksbill turtle. Sooty falcon, crab-plover, greater flamingo, white-eyed gull, lesser crested tern, white-cheeked tern, and Red Sea (brown) noddy are found. Other key taxa include Patrizi's trident leaf-nosed bat and the Sarso island racer *Coluber insulanus*, which is endemic to the islands. These islands are the only places in Saudi Arabia in which the plants *Nothosaerva brachiata*, *Commiphora erythraea*, *Euphorbia* sp. aff. *fractiflexa*, and *Ficus populifolia* are recorded. The surrounding waters harbor a wide diversity of reef fishes and marine invertebrates such as corals, mollusks, and crustaceans, as well as manta ray, dugong, whales, and dolphins.

Major conservation action in the Farasan Islands MPA have included the restoration of mangrove thickets damaged by coastal development, control of alien invasive mesquite *Prosopis Juliflora*, monitoring of coral reefs and fishing boats, monitoring of bird populations, research on the behavioral ecology of gazelles, protection of gazelles from poaching and community outreach.

- Category:** Special Nature Reserve (Ia Strict Nature Reserve, II National Park: ecosystem conservation and recreation), Natural Reserve (1b Wilderness Area), Resource Use Reserve (VI Managed Resource Protected Area: sustainable use of natural ecosystems), Biological Reserve (1a Strict Nature Reserve, IV Habitat / Species Management Area).
- Management authority:** The SWA, in liaison with other government departments.
- Management objectives:** To maintain the biological diversity and productivity of the ecosystems; to conserve and restore the populations of threatened species and other key taxa; to conserve and where necessary restore the habitats of these taxa; to safeguard strategic breeding areas and nurseries of seabirds, marine turtles, fish and invertebrates, to enable the local communities to benefit through sustainable use of renewable natural resources, and provide opportunities for scientific research, environmental education, sustainable nature-based recreation and ecotourism.
 - Area: 5,408 sq. km.
- Central co-ordinates:** Lat. 16° 45' N Long. 41° 55' E
 - Altitude: 0 – 66 m asl.
- Bioregions:** Red Sea Shoreline; Tihamah plain; Southern Red Sea; Central Red Sea
 - Key Sites of Biological Significance (Hotspots), Major:** Marine islands, Mangrove stands, Seagrass beds, Coral reefs. Minor: Saltmarshes, Algal beds.



Marine Protected Areas in the UK/© JNCC

**NATURAL
ENGLAND**

Status: Natural England is an Executive non departmental public body, sponsored by Defra (Department of Environment, Food and Rural Affairs). Its remit (set out in law) is to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development. We work across land as well as water.

In relation to marine, Natural England provides conservation advice, it does not regulate; this is done by other bodies, and we work closely with them to ensure our objectives are achieved.

United Kingdom: Exclusive Economic Zone = 6,800,000 km²

Authority: Natural England is responsible for advising Government and industry on marine conservation and seascape issues in England's territorial waters (from the coast out to 12 nautical miles offshore).

We have a vital role in ensuring that our seas are sustained and that biodiversity is recovered for future generations. We do this through advising on new designations and also ensure that the use and management of the marine environment, outside protected areas, is more sustainable. We work directly with fisheries and other industries, such as renewable energy and extractive industries to secure this objective. We also influence policies and mechanisms, including a marine planning system.



Couch's Goby/ Lin Baldock



Short snouted sea horse/ Steve Trewhella

Background: Until recently the marine environment has not had anything like the same level of protection as we have on land. This started to change in the last decade; our first international marine sites were designated in 2010 and as a result of the Marine Act 2009 the Government is now implementing a very ambitious programme. 22 Marine Conservation Zones have been designated based on our advice, and two large designation programmes are fully in train.

Designation brings with it the need to review our conservation advice and provide effective advice to regulators on management. Within Natural England, a national marine team provides leadership and coordination of all the work, much of which is done in Area Teams, to implement this exciting agenda.

Mission and objectives:

- **Advise the Government on the next stages of designation of the new Marine Conservation Zones (MCZs)** which were established in the 2009 Marine Act;
- **Advise the Government on potential Natural 2000 designations:** about 18 potential Special Protection Areas (SPAs) for birds and possibly Special Area of Conservation (SACs) designations for harbour porpoise;
- **Advise whether any MCZs should be considered instead as Sites of Special Scientific Interest (a national designation that can be applied to sites extending to mean low water and in some cases, sub tidal);**
- **Review all our existing original conservation advice packages** for European Marine (Natura 2000) Sites, **and develop packages for the new MCZs and SPAs;**
- **Through undertaking a risk-based assessment** against the Habitats Regulations of European designated marine sites, **assist the regulatory bodies in reducing the impacts of fisheries and other activities in MPAs.**

<https://www.gov.uk/government/organisations/natural-england>

Main United Kingdom's MPA categories

Type	IUCN category	number	Total surface (km ²)
Marine SACs and SACs with marine components	IV ¹	37	-
Marine SPAs and SPAs with marine components	IV ¹	102	-
Marine Conservation Zones	IV ¹	22	-
Total	-	161	-

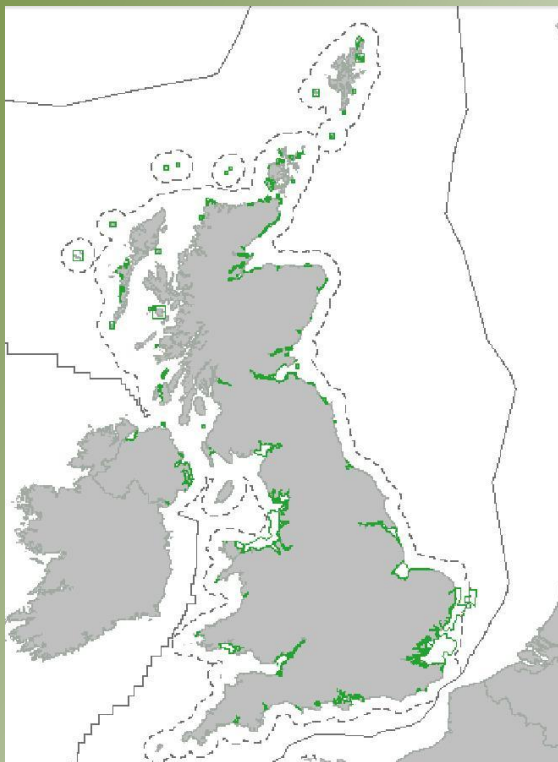
1. This is an estimation made on the occasion of the guide, it does not represent the official position of Natural England

Spotlight on the Establishment of a Network of Marine SPAs

A complex sharing out of the authority

The UK government has committed to identifying a suite of marine SPAs, and classify as many as possible, by 2015, in order to fulfill its obligations under the EU Birds Directive.

In the UK the responsibility to identify inshore sites lies with each of the four countries (England, Wales, Scotland, Northern Ireland) and with the Joint Nature Conservation Committee (JNCC) which has responsibility for identifying sites offshore. The Joint Nature Conservation Committee (JNCC) has also been conducting, on behalf of all four countries, a programme of survey and associated data analysis of important marine areas used by seabirds and waterbirds. On completion, each country is then considering whether to take forward recommendations to extend the seaward boundaries of existing SPAs and/or new marine SPAs.



Marine Protected Areas in the UK/© JNCC

Keeping the approach coherent and readable

There are a number of challenges associated with drawing up the boundaries, not least because we are also aiming to resolve other designation issues associated with the sites at the same time. Solutions to problems that we face must remain consistent with approaches taken by other UK countries, as well meeting the UK SPA site selection guidelines. Another challenge is that we are undertaking another large scale consultation programme at the same time, on Marine Conservation Zones (under national legislation) and the different processes are confusing for stakeholders. Nevertheless we are currently on track to put the majority of our draft SPA boundaries out to formal consultation by the end of 2015, and to have in place a new network of marine SPAs by the end of 2016.

Going from data collection to decision-making

The survey work has been ongoing since 2003 and was finally completed at the end of 2013. Natural England is now at the stage of identifying sites based on the evidence provided by JNCC. Because of the scale of the task, the evidence takes a number of different forms – direct survey, data from partners, and modeling based on this direct data and also environmental variables. JNCC has provided advice on 32 sites within English waters but many of these overlap, and some sites will not be taken forward because the evidence is insufficient. We have now formally consulted on two sites, are discussing a further two with stakeholders, and will have draft boundaries for the remainder in the public domain by the end of the year.

UNITED STATES MARINE PROTECTED AREAS

BACKGROUND

Marine protected areas (MPAs) cover roughly 41% of U.S. waters. These areas are managed by dozens of federal, state, territorial and tribal entities for conservation purposes that include natural heritage, cultural heritage, and sustainable production. Since the establishment of the first federal MPA in 1903, the number of MPAs in the U.S. has expanded to well over 1,700 as of 2013. This ever growing network includes national marine sanctuaries, national parks and wildlife refuges, and the state counterparts to these federal programs. Legislation such as the National Marine Sanctuary Act (1972), the Coastal Zone Management Act (1972), and the California Marine Life Protection Act (1999) have provided a legal framework to support MPA development and management. These advances in marine protection were punctuated by an Executive Order in 2000 that led to the establishment of a National System of MPAs in 2009 – rallying the nation's MPA programs around shared conservation objectives with a focus on enhancing protection of marine resources and building a network that fully represents the nation's diverse coastal, ocean, estuarine, and Great Lakes ecosystems. These efforts are part of an ongoing commitment to the sustainable use of ocean resources, as exemplified with the President's establishment of the 2010 National Ocean Policy and the recent launch of the National Oceanic and Atmospheric Administration's sanctuary nomination process in 2014. For the first time in two decades, communities across the nation can identify and recommend special areas of the marine or Great Lakes environment for possible designation as a national marine sanctuary, a type of MPA.

STATUS

Several federal government agencies administer the primary MPA programs in the U.S. along with their partners. These include the National Oceanic and Atmospheric Administration's (NOAA) [National Marine Sanctuaries](#) and [National Estuarine Research Reserve](#) systems, as well as MPAs managed by NOAA Fisheries, the U.S. Fish and Wildlife Service's [National Wildlife Refuge](#) system, and the U.S. system of [National Parks](#).

MISSION

While the missions of the various agencies managing MPAs may vary, the National Marine Protected Areas Center acts as the nation's hub for building innovative partnerships and tools to protect special ocean places. The Center works with the federal, state, tribal, and local governments, as well as other local stakeholders, to develop and implement a

SPOTLIGHT ON...

Channel Islands National Marine Sanctuary

The waters that swirl around the five islands within the Channel Islands National Marine Sanctuary combine warm and cool currents to create an exceptional breeding ground for many species of plants and animals within a variety of habitats that include kelp forests, sandy bottoms, and open ocean. Local communities rallied to protect the biodiversity and environments in and around these jewels of the southern California coast by nominating the waters for sanctuary designation in 1978, spurred in part by lingering effects of a public backlash against coastal oil drilling following the catastrophic Union Oil platform blowout in the area in 1969. This oil spill came during a time marked by environmental degradation and further highlighted the need for subsequent environmental legislation of the early 1970s, including passage of the National Marine Sanctuaries Act. These efforts resulted in the 1980 designation of the Channel Islands National Park and the Channel Islands National Marine Sanctuary, thereby protecting the waters extending out six nautical miles from the islands' coastlines.

The Channel Islands continued to play a role in groundbreaking conservation partnerships through California's 1999 Marine Life Protection Act. The Act called for a redesign of the state's system of MPAs to increase cohesion and effectiveness in protecting the state's marine life, habitats, and ecosystems. This resulted in the establishment a network of MPAs within the nearshore waters of the Channel Islands National Marine Sanctuary by the State of California in 2003, based on public input, scientific guidance, and socioeconomic considerations. NOAA further expanded the MPA network into the sanctuary's deeper waters in 2006 and 2007. The network now consists of 11 marine reserves where all harvest of marine life is prohibited, and two marine conservation areas that allow limited commercial and/or recreational fishing. Portions of the sanctuary are also zoned to allow for other important recreational and commercial uses, including diving, kayaking, boating, wildlife viewing, shipping transit, and research. Monitoring conducted during the first five years after reserve implementation demonstrated increases in the size and abundance of targeted fish species, as well as increased biodiversity and fish biomass inside the reserves. These results imply the reserves may be contributing to the goals of protecting and promoting healthy ecosystems.



Photo: Claire Fackler, NOAA
National Marine Sanctuaries

national system of MPAs. These collaborative efforts help ensure more efficient, effective use of MPAs to conserve and sustain the nation's vital marine resources. Missions of major MPA programs include:

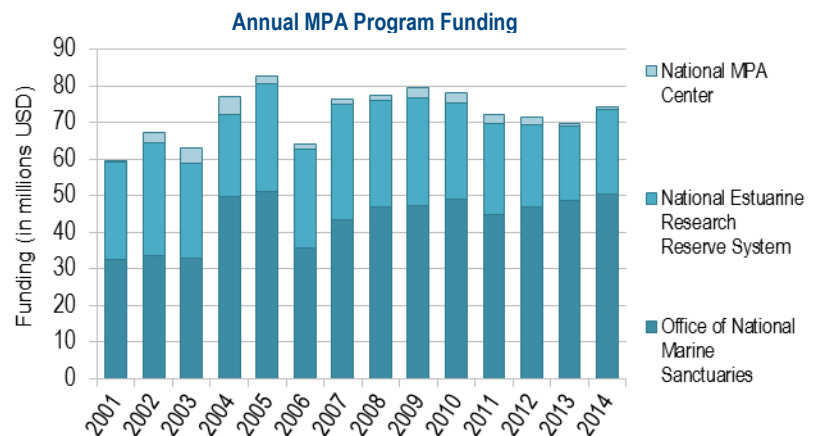
- The National Marine Sanctuary System works to protect special places in America's ocean and Great Lakes, and to enhance these natural and cultural treasures for future generations through scientific research, management and education.
- The National Estuarine Research Reserve System is a partnership of NOAA and coastal states to study and protect vital coastal and estuarine resources.
- The National Park Service preserves, unimpaired, the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.
- The National Wildlife Refuge System administers a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

AUTHORITY

Spanning coastal and ocean areas, MPAs can occur entirely within state jurisdiction, they can extend into federal waters of the U.S. EEZ, and can also be overlapped by several management entities at once. As a result, MPAs in the U.S. are managed according to different authorities and mandates. Marine sanctuaries, for example, are governed according to the National Marine Sanctuaries Act, and the Secretary of Commerce has delegated their management to NOAA's Office of National Marine Sanctuaries in cooperation with site-specific state, local and tribal entities and other federal partners. National Estuarine Research Reserves are authorized under the Coastal Zone Management Act, and are managed by the states in which they are located, in partnership with NOAA. The National Wildlife System Administration Act and the National Park Service Organic Act are administered by the Department of the Interior. Creation of new federal MPAs generally requires an act of Congress, and the President also has authority, under the Antiquities Act of 1906, to proclaim national monuments on lands or in waters already under federal jurisdiction.

BUDGET

MPA program funding is appropriated annually by Congress and funneled through the Department of Commerce (NOAA) or the Department of Interior (FWS and NPS) to their respective agencies.

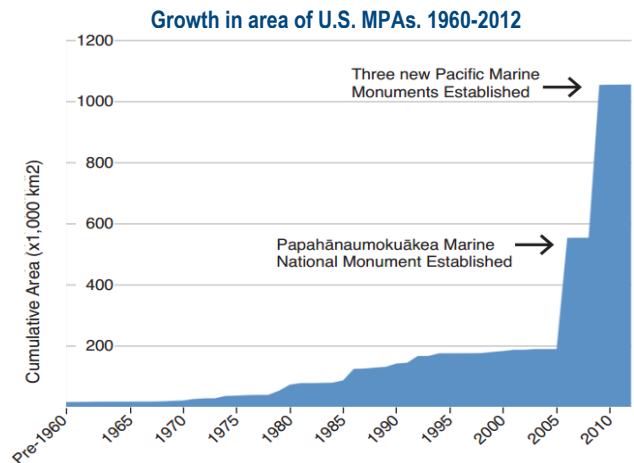


MPA EVOLUTION

The number of MPAs within the National System continues to follow an upward trend. Several existing National Marine Sanctuaries are in the midst of boundary expansions, and NOAA recently opened the process for sanctuary nominations.

MPA Type / Administering Program	Number of MPAs	Marine Area (km ²)
Bureau of Ocean Energy Management	18	3,305
Marine National Monuments	9	861,225
National Estuarine Research Reserves	28	2,917
NOAA Fisheries	41	2,264,323
National Marine Sanctuaries	13	84,944
National Parks	40	9,950
National Wildlife Refuges	114	242,995
States and U.S. Territories	1,069	40,753
Total *	1,332	3,510,410

* Total number for which GIS data are available



Part III. MPAs Agencies in Action: an experiences review

In this third section are exposed the agencies' concrete experiences. Carefully selected, they give a precious insight of the various shapes of the agency's action, implementing step by step the good practices fostered by international organizations and conventions. Their approaches are adapted to national or local contexts, legal and political constraints, whose diversity is quite representative of what one can encounter across the world. Following each experience telling, the reader will find contacts and references to get more information about an experience or a specific tool used.

Making the Decision: Establishing the MPAs

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The techniques, strategies and decisions of the agencies are to be interpreted in their specific legal and political frameworks. Please refer to the ID Forms and Fact Sheets of the previous section for the basics of each national context.

1. Science and tools to support the decision-making...

Parks Australia

Marine conservation on a continental scale – Designing Australia’s representative system of MPAs.



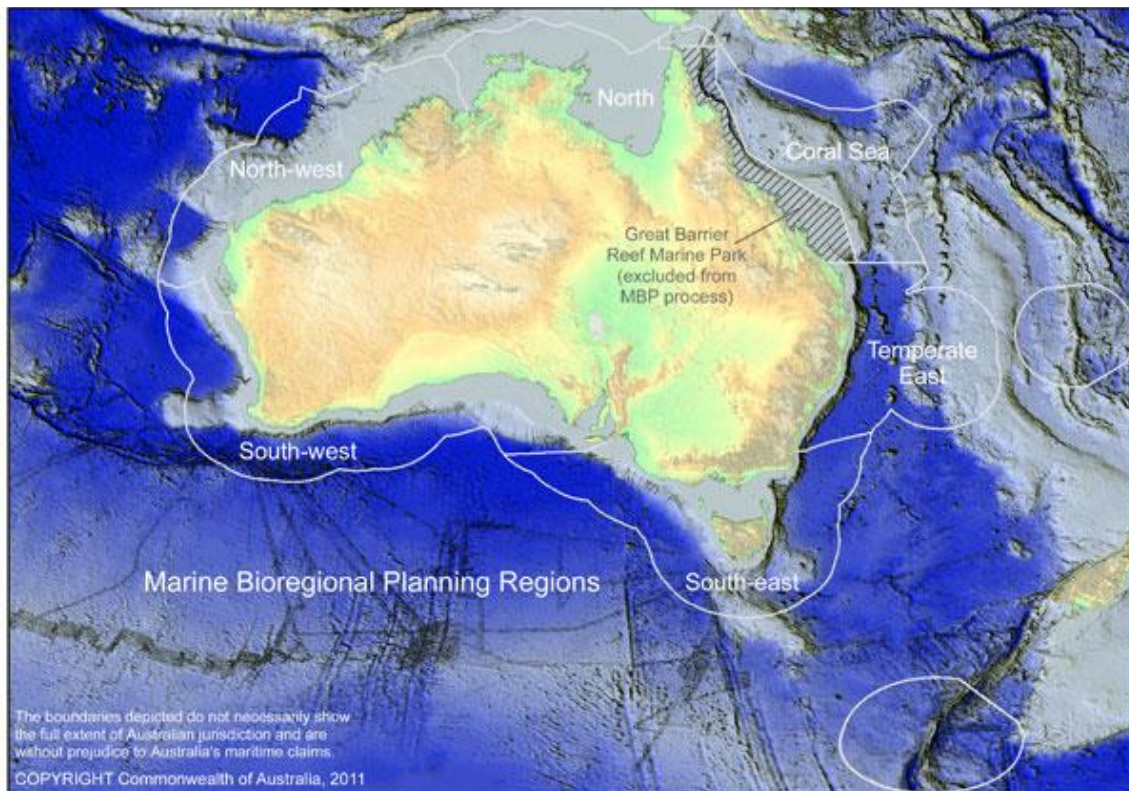
Australian Government
Director of National Parks

Spanning from tropical coral reefs to sub-Antarctic waters and across the waters of the Pacific, Indian and Southern Oceans, Australia’s network of marine protected areas represents the most diverse array of marine communities and habitats in the world. With the exceptions of some intensely studied areas, such as the Great Barrier Reef, Australia’s oceans are poorly known when compared to its terrestrial environments and other marine areas in the world. Establishing the planning framework for the network was a decade-long endeavour involving the synthesis of key biological, geological and oceanographic data across the entire Exclusive Economic Zone.

Australia’s Commonwealth Marine Reserves were established through the marine bioregional planning program, conducted between 2006 and 2012 and aimed at improving the way Australia’s marine environment is managed to ensure the ocean remains healthy and productive. As well as the system of marine reserves, the program also produced marine bioregional plans, statutory documents that support decision-making in relation to marine-related matters of national environmental significance.

Australia’s marine bioregionalisation and the design of the marine reserves

The marine bioregional planning program was implemented at the scale of ‘large marine regions’, which had been identified based on the 2006 Integrated Marine and Coastal Regionalisation of Australia (IMCRA), a significant consolidation of bio-geographic and bio-physical datasets achieved through extensive collaborations with research organizations, universities and museums. The planning regions include: the South-west, North-west, North, Temperate East, Coral Sea and South-east.



The IMCRA brought together information on the spatial distribution of the broad scale physical and biological components of Australia’s marine environment and formed the planning framework underpinning the network design. A

key challenge arose from the need to cross multiple disciplines to build an information base directly relevant to policy and management.

The IMCRA resulted in the delineation of forty-one provinces on the basis of distribution of different assemblages of fish species, sponges and other benthic and demersal species groups, combined with distribution of broad types of oceanic habitats and seafloor sediments.

In each of the planning regions (with the exception of the Coral Sea, which was designated as a marine reserve in its entirety), a network of Commonwealth marine reserves was designed in accordance with a set of rules—embedded in four goals and twenty principles, referred to here as the Goals and principles—that combined socio-economic and scientific considerations, giving effect to the government's policy objectives of establishing a comprehensive, adequate and representative network while minimising socio-economic impacts on marine users and coastal communities.

The Goals and Principles

The Goals and Principles provided guidance about how to design regional networks of marine reserves that meet the Comprehensiveness, Adequacy and Representativeness principles. In general, there is a lack of information on the distribution of biodiversity in Commonwealth waters, mainly due to the vastness, remoteness and general inaccessibility of Australia's deep ocean environment. For this reason, physical characteristics (such as water depth, substrate and seafloor features) often combined with large scale biological patterns, have been used extensively as surrogates for biodiversity to design proposed marine reserves networks that are comprehensive and representative. This approach is supported by scientific evidence that certain physical variables (for example, depth, water characteristics, currents, seafloor types) are key drivers of biodiversity distribution in the ocean. The use of surrogates is central to the four Goals that guided the development of the Commonwealth marine reserves.

- Goal 1 required that regional marine reserves networks include examples of all provincial bioregions occurring in the marine region.
- Goal 2 required that the networks encompass all oceans depths. Significant evidence exists that different biological communities live at different depths. This goal was interpreted as being 'nested' under the first goal, based on an assumption that the same depth ranges occurring in different provinces contain different species and communities.
- Goal 3 required that the networks include examples of all types of marine benthic and demersal biological features known to occur at a sub-provincial scale. Generally, three types of data were used to give effect to this goal:
 - Meso-scale bioregions – i.e. subdivisions of provincial bioregions over the continental shelf;
 - Key Ecological Features – i.e. large scale ecological features that support distinct or important ecological communities at a regional scale (e.g. productivity hotspots);
 - Seascapes – i.e. biologically informed predicted patterns of distribution of marine fauna.
- Goal 4 required that examples of the different types of physical seafloor features also be included in the reserves networks. A national classification of seafloor features conducted under IMCRA identified a total of 14 seafloor features (or geomorphic units), e.g. seamounts, canyons, and plains. By including samples of all different seafloor features in the networks, we ensured that the different ecological communities associated with these features were represented in the reserves network.

The four goals relate to biophysical elements that occur at relatively large spatial scales; in practice, this means that there might be a large number of alternative configurations of locations that, taken together, meet the four goals. The twenty principles were considered in evaluating and selecting configuration options and further refining the design of the marine reserves network.

The Goals and Principles were not intended to provide an exact recipe. The process of implementing them was far from linear and mechanical. While they offered considerable guidance, the reality of designing the networks in a context of

multiple and often conflicting interests called for a flexible and iterative process, through which multiple network options were generated, evaluated and discussed with stakeholders and progressively fine-tuned.

The systematic approach

A systematic approach to the reserve design—articulating clear design objectives and integrating biophysical and socio-economic data—was implemented to explore the implications of alternative network configurations, in terms of their performance against the conservation and socio-economic cost minimisation policy intentions. The program highlighted the critical role of communication and stakeholder engagement in a context characterised by scientific uncertainty, strong economic interests and diverse societal values. The approach involved the following steps:

- setting out the objectives that the network seeks to achieve, including what conservation features should be captured in the reserves and what values should be avoided, e.g. in order to minimise economic and social impacts. The objectives that each regional network sought to achieve were directly derived from the Goals and Principles;
- selecting and using spatial data that best represents those objectives. Spatial data inputs included information about biodiversity, existing spatial management data and socio-economic data. The details of all datasets within each of these three broad categories available and used in each region were published at the time of release of the draft network proposals and were also made available online throughout the process (with the exception of those with confidentiality restrictions);
- generating and evaluating configuration options (number of individual reserves, location, size, shape and zoning) that meet those objectives, including through engagement with stakeholders.

Spatial analysis tools were used from the start of the design process to generate 'optimal' network options by integrating conservation objectives and objectives about socio-economic impact minimisation. The tools provided a fast and powerful way to explore and communicate to stakeholders and decision-makers the implications of different configurations of reserves, in terms of their performance against the program's conservation and socio-economic cost minimisation objectives. It also allowed the ruling out from early stages, of "high impact/high cost" options in socio-economic terms. The approach also led to efficiencies in stakeholder engagement, by focusing consultation activities onto areas and issues where conflicts between competing interests were more likely, and supported a strategic approach to the more detailed assessment of the social and economic impacts of the proposed marine reserves. Over the course of three years, through significant stakeholder consultation (see *Making the Decision* section), the design progressed iteratively, through:

- areas for further assessment - broad locations identified through initial analysis (Figure 1.a and 1.b), which broadly avoided the highest impact areas and included 'unique' features. They were used to test the veracity of coarse data and to gather finer scale information about distribution and value of activities;
- draft network proposal (Figure 1.c) – input from stakeholders in relation to the areas for further assessment assisted in narrowing down options for reserve location, size and shape and in considering zoning options; this step resulted in the design of a draft network proposal, which was then the subject of significant consultation (see below), including a public comments period of 90 days. Results of the performance evaluation of the draft proposal against the Goals and Principles were released online to support input from stakeholders and the broader public.
- final network (Figure 1.d) – this was the network released for a last consultation period to inform the decision about proclamation. It was proclaimed in November 2012.

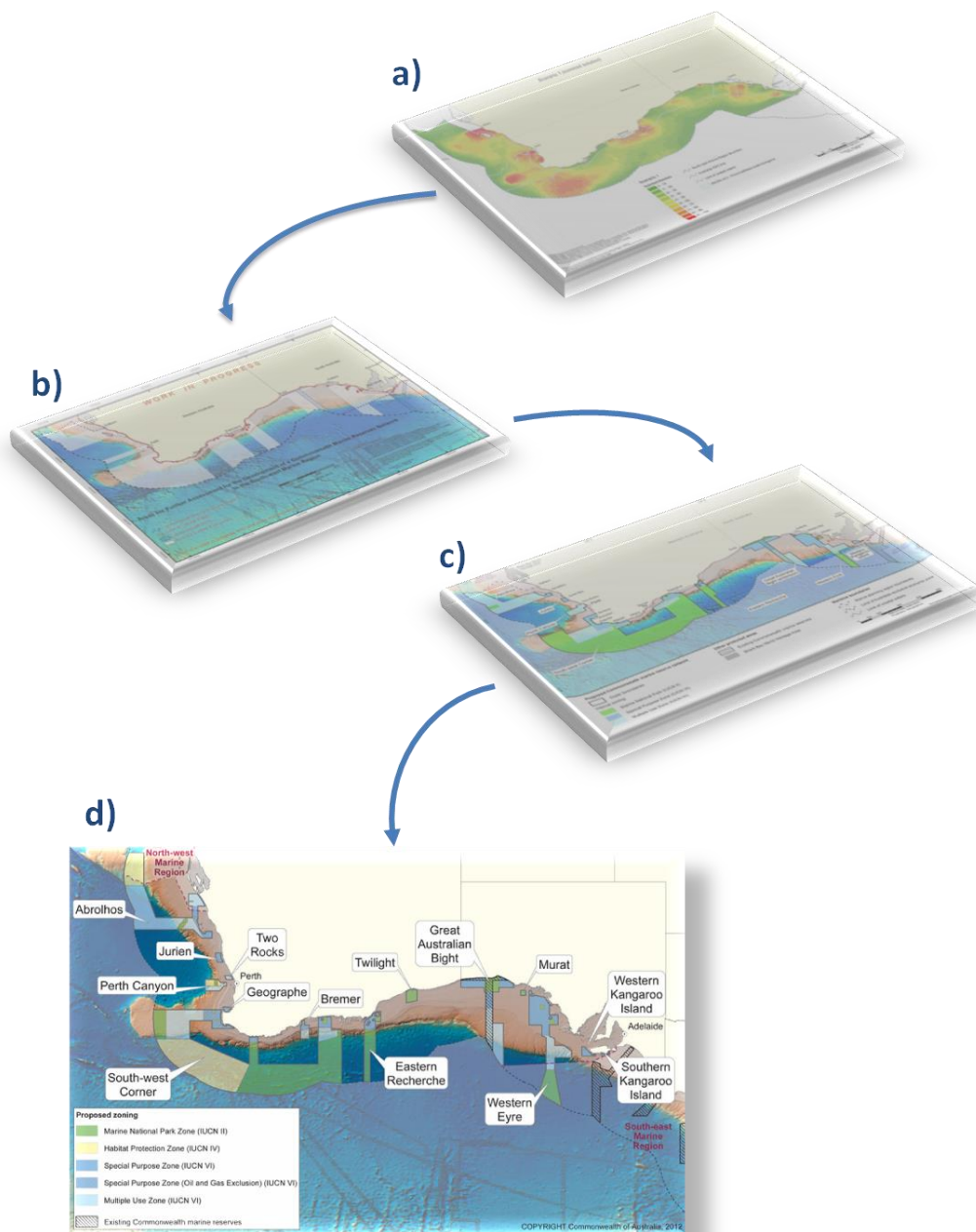


Figure 1. Diagrammatic representation of the key iterations leading to final South-west Commonwealth marine reserves network; a) example of an early output from the marxan tool showing in red areas of the region consistently selected by generating solutions to achieve the conservation objective at the least socio-economic costs; this analysis informed the location of the areas for further assessment; b) areas for further assessment used in the consultation of stage 2; c) draft South-west network proposal, used as the basis for a 90-day public consultation of stage 3; d) final South-west network, proclaimed in November 2012.

Learn more....

- IMCRA <http://www.environment.gov.au/resource/guide-integrated-marine-and-coastal-regionalisation-australia-version-40-june-2006-imcra>
- Commonwealth marine reserves <http://www.environment.gov.au/topics/marine/marine-reserves>
- Parks Australia <http://www.environment.gov.au/topics/national-parks/parks-australia>

1. Science to support the decision-making...



The challenge: creating a system plan

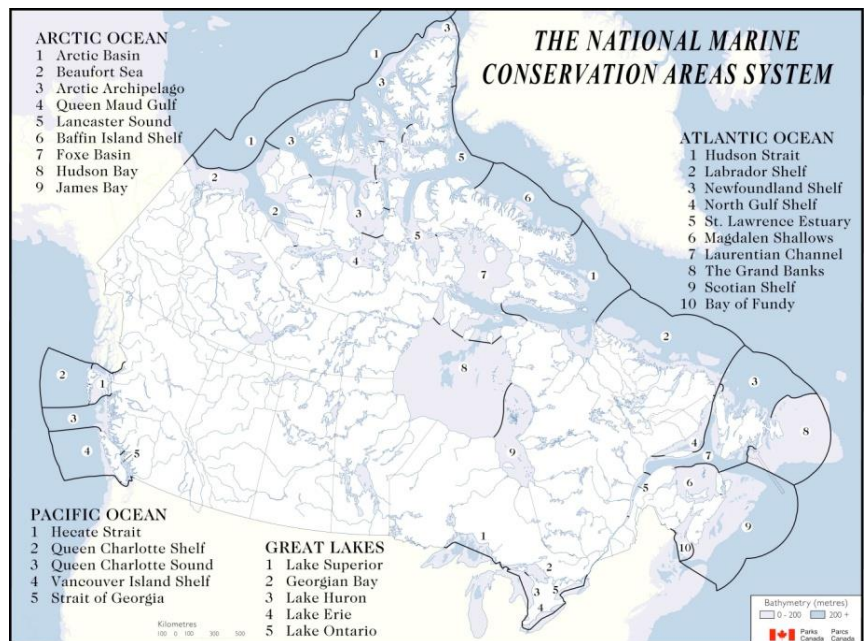
Finding a way to create a finite system of marine protected areas which would adequately represent each of Canada's major marine environments, complement the existing terrestrial framework for national parks and serve the dual mandates of Parks Canada to protect and present Canada's natural heritage.

Parks Canada's National Marine Conservation Areas System:

National marine conservation areas are intended to protect and conserve marine areas that represent the full range of Canada's Atlantic, Arctic and Pacific marine environments and the Great Lakes. In order to achieve this nationally representative system, a regional sampling approach was adopted. This method involved subdividing the marine environment into distinct geographic units or "marine regions" based on oceanographic and biological characteristics and setting aside a representative sample of each region within the NMCA system. The resulting set of NMCAs would therefore provide a representative cross section of the country's marine environments, in the same manner that Canada's national parks system plan divided the country into 39 natural regions to represent each of the major terrestrial environments. The use of this approach for designing protected areas was pioneered by Parks Canada and has since been adopted by other countries.

To guide the development of a finite system of NMCAs, Parks Canada classified Canada's oceans and Great Lakes into 29 marine regions based on their oceanographic and biological characteristics. This framework was arrived at through consensus, following a series of workshops with scientists familiar with Canada's oceans and Great Lakes. The boundaries of the original marine regions developed in 1986 have since been modified from time to time, based on new information, leading to the current map.

Establishment of new marine conservation areas focusses on regions which are not yet represented and is guided by the National Marine Conservation Areas System Plan, which describes each of the marine regions.



Further details...

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1. Science to support the decision-making...



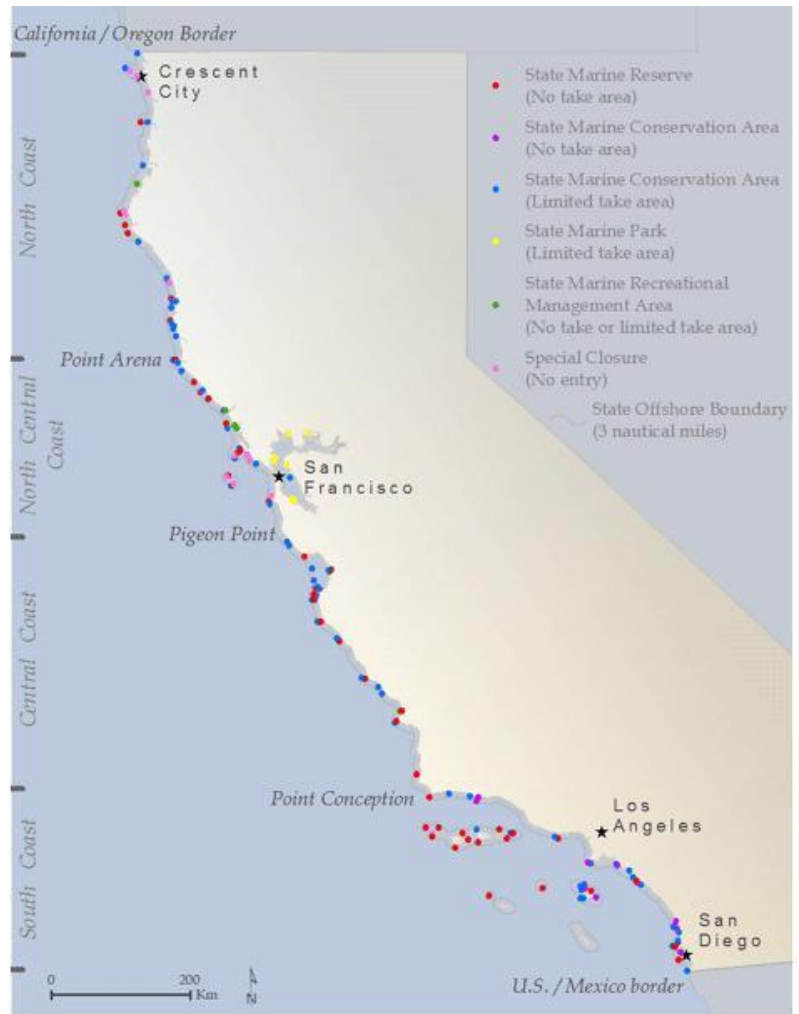
National Oceanic and Atmospheric Administration *Building MPA networks: California's Ecological Network of MPAs*

From the legal incentive to the network planning

California is the national leader in developing ecological networks of MPAs. The state's 1999 Marine Life Protection Act (MLPA) requires the California Department of Fish and Wildlife (formerly the California Department of Fish and Game) to redesign California's system of MPAs to increase its cohesion and effectiveness at protecting the state's marine life, habitats and ecosystems. The goals of the MLPA focus on protecting the state's marine life populations, habitats and ecosystems, as well as the recreational, educational and study opportunities they provide. Moreover, the law clearly states that the state's MPAs should function as a network to the extent possible. An MPA planning process was completed in 2011 for the four coastal regions of the state, resulting in 124 MPAs covering about 16 percent of state waters. Of this MPA area, approximately 58 percent (9 percent of state waters) is in "no-take" MPAs.

Learning lessons from the experience: getting the public support

Much has been learned from California's process creating its MPA network, including the importance of stakeholder engagement, clear science guidelines, financial investment, building broad-based support and ensuring a transparent decision-making process. After two failed attempts to design a statewide MPA network, California launched a public-private partnership to conduct regional planning processes. Regional stakeholder groups developed alternative MPA proposals that were evaluated by a science advisory team and the California Department of Fish and Wildlife for the ability to meet MLPA goals. Potential socioeconomic impacts and other factors were also considered during multiple rounds of review that included government agencies, tribes, industry and the public. A blue ribbon task force, established to oversee the MPA planning process, made recommendations to the California Fish and Game Commission, which made final regional decisions after conducting its own environmental review and regulatory processes.



Screenshot : http://www.dfg.ca.gov/marine/mpa/mpa_summary.asp

Science as the final determinant

Scientific design guidelines and other key design criteria established a framework for developing the regional MPAs. The science guidelines were developed by the science advisory team and recommended habitats to be represented in MPAs, replication of habitats within MPAs, and size and spacing of MPAs, to promote ecological connectivity. The resulting statewide network includes more and larger MPAs, as well as MPAs that capture a broader range of habitats. The MPA Monitoring Enterprise, an independent, non-profit organization, is working with the California Department of Fish and Wildlife and other state, federal, tribal and nongovernmental partners to establish a monitoring benchmark for measuring future MPA performance and develop a strategy for long-term monitoring.

Further Information

<http://www.dfg.ca.gov/marine/mpa/>



1. Science to support the decision-making...

Parks Canada

Selecting sites for new national marine conservation areas



Parks
Canada

Parcs
Canada

The challenge

How to select marine areas which adequately represent a larger geographic region.

Representative marine areas

Parks Canada's *National Marine Conservation Areas Policy* stipulates that new national marine conservation areas will be selected from amongst a list of "representative marine areas" identified during regional analysis studies. In addition, those representative marine areas must meet two main criteria:

- The area must portray the geological, oceanographic, biological and ecosystem diversity that is characteristic of the marine region; and
- The area's ecosystems must be in a healthy, natural state or be capable of being restored to such a state.

To achieve these objectives, the regional analysis study, done by a third party using existing information, identifies the following elements:

- Geological and oceanographic features: such as coastal and submarine geology, geological history, geomorphology, relief, physiography, bathymetry, coastal landforms, marine and coastal habitats, ice regime, tides, currents, wave conditions, upwelling and mixing, temperature, salinity, water masses
- Biological features: such as plankton, marine and coastal plants, invertebrates, fish, marine birds and mammals
- Cultural features: maritime prehistory and history of the marine region.

The study then assesses which features are common within the marine region and thus best define its overall character. This assessment is used to identify areas which include the highest diversity of the regions characteristic features. The study also considers the various uses which occur within the region in order to assess the state of the health of the various proposed representative marine areas.

Selecting candidate national marine conservation areas

Once the representative marine areas are identified, a wide range of factors is considered in comparing them to select a potential new national marine conservation area, including: quality of regional representation, importance of the area in maintaining biodiversity and protecting critical habitats for endangered species; occurrence of exceptional natural and cultural features; adjacent existing or planned protected areas; minimizing conflict with existing or probable marine resource uses; actual and potential threats to the sustainability of the area's marine ecosystems; potential for public understanding, education and enjoyment; and the value of the area for ecological research and monitoring.

Further details...

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1. Science to support the decision-making...

Saudi Wildlife Authority

SWA's criteria for selecting and prioritizing protected area sites



الهيئة السعودية للحياة الفطرية
Saudi Wildlife Authority

In accordance with the principles of Islamic law and ethics embodied in the indigenous hima (protected area), Saudi Arabia's protected area system plan aims to contribute toward the welfare of humankind and all created beings. This aim is to be realized by conserving the country's biological diversity, and by sustainable use of its wild living resources. Criteria to select and prioritize sites are ecological and socio-economic.

Ecological Criteria:

Ecological Representation is defined according to 52 bioregions (including 7 marine and 3 coastal bioregions), which are identified on the basis of physiographic, climatic, edaphic, and biological factors.

Key Biological Sites (Biodiversity "Hotspots"). Saudi Arabia's marine and coastal sites of outstanding biological diversity and productivity include marine islands, mangroves, seagrass beds, and coral reefs. Other biologically significant sites include saltmarshes and algal beds.

Key Plant and Animal Taxa include genera, species, or subspecies that are **threatened** (globally, regionally, or nationally); **endemic** to the Red Sea or the Arabian Gulf; near-endemics and migrants for which Saudi Arabia represents a **critical range**; **Relicts** of global, regional, or national significance, as well as genera, species, or subspecies of **special ecological importance**, e.g., keystone and indicator species, **economic importance**; or that serve an **umbrella or flagship function**. The key taxa include a wide range of plants, algae, invertebrates, and vertebrates.

Additional Pragmatic Criteria. The criteria described above are used to assess a site's intrinsic conservation value. While this prioritization is to be followed as closely as possible in the proclamation of protected areas, **pragmatic criteria are sometimes required to decide the order** in which they are to be proclaimed. These include the presence of **bioregions that are not yet represented** in the country's protected areas; the site's **strategic importance in national programs or international agreements**; the **completeness of socio-economic and biological information** on the site; the **support of local communities** and local authorities for its proclamation; **the ease of managing it**; and **the urgency and irreversibility of the threats** that face it.

Socio-economic Criteria:

Traditional and Local Conservation Practices. Traditional fishing practices and resource tenure are under study.

Sustainable Use of Natural Resources. For coastal and marine sites these include nature-based tourism and recreation and sustainable harvesting (fishing, hunting, and gathering).

Value for Environmental Education, Awareness, and Research. These are easily accessible sites near the Kingdom's major centers of population that are well suited to demonstrate the benefits of traditional and/or modern conservation and restoration techniques, or where outstanding plants, animals, and landforms can easily be studied.



Dugong *Dugong dugon* in the Arabian Gulf, Saudi Arabia

Assessment of the Proposed Marine Protected Area System

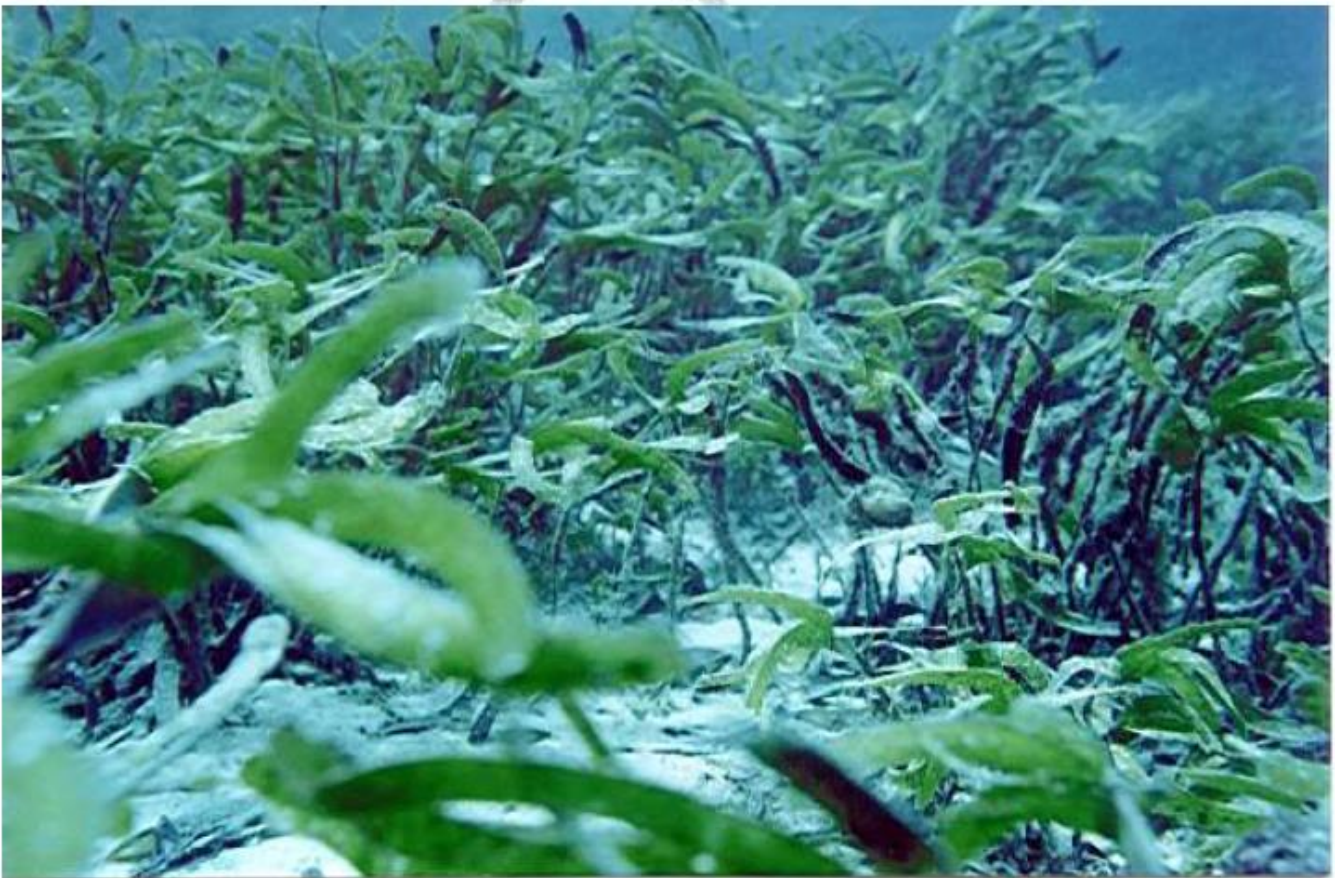
- All of the country's 10 marine and coastal bioregions are represented in the proposed protected areas. All seven marine bioregions are represented, and all of three coastal bioregions are represented. All bioregions are represented significantly, with either 8% of the bioregion or 1,000 sq km under protection, except the Central Red Sea, which is less adequately represented.
- Some 77% of the country's coastal and marine biodiversity hotspots will be protected. 100% of its marine islands of major biological importance, 67% of important coral reefs, 63% of important mangrove stands, 50% of important seagrass beds, and 80% of marine and coastal Important Bird Areas.
- Further research is needed, but viable populations of nearly all key marine taxa appear to be protected.
- The SWA works with the shaykhs of the fishermen in the Farasan Islands, but further research into traditional conservation practices is needed.

- Existing and proposed protected areas include outstandingly scenic sites for ecotourism, as well as most biologically outstanding sites such as nurseries for juvenile fishes and invertebrates, to secure sustainable levels of harvesting.
- Existing and proposed protected areas include sites of high value for environmental education, awareness, and research, within easy reach of all coastal communities.

Remaining Gaps

Connectivity could be improved through interagency coordination and intergovernmental cooperation for bioregional planning, with emphasis on latitudinal and vertical (trench – seabed – shelf – intertidal – terrestrial) corridors.

Management effectiveness: The SWA needs to enhance its capacity to manage and finance marine protected areas, and to improve the participation of local communities in their governance.



Seagrass meadow in the Arabian Gulf, Saudi Arabia

Biological and Socio-economic Research in the Red Sea and the Arabian Gulf

Saudi Arabia is fortunate to have abundant scientific information to support the planning and management of its marine protected areas. Detailed surveys of the country's coastal sites, with management recommendations and recommendations for protected areas were conducted by the Presidency of Meteorology and Environment (PME) in the 1980s, in collaboration with IUCN and PERSGA. These were supplemented by the Coastal / Marine Habitat and Biological Inventories in the northern part of the Red Sea Coast in the Kingdom of Saudi Arabia, conducted by the Saudi Wildlife Authority in collaboration with the Japan International Cooperation Agency (JICA) published in 1999. A collaborative four-year research project between the Khaled bin Sultan Living Oceans Foundation and the SWA, with other government and academic partners, including PERSGA and IUCN, have culminated in publication of the *Atlas of Saudi Arabian Red Sea Marine Habitats* in 2011. The main goals of the project were to map shallow marine habitats off the Saudi Arabian Red Sea coastline and characterize their structure, composition, and condition and providing the resulting information and tools to relevant government agencies in Saudi Arabia as a baseline for future management and conservation initiatives, surveys and research efforts focused on existing and proposed protected areas. The information contained in this Atlas could be used for marine spatial planning and ecosystem management plans for the coral reefs of Saudi Arabia.

This Atlas is available in pdf on the following link: <http://www.livingoceansfoundation.org/assets/2014/01/Red-Sea-Atlas-English.pdf>

Intensive research on the biology, ecology, and wildlife resources of the **Farasan Islands Marine Protected Area** began soon after establishment of the Saudi Wildlife Authority in 1986; the SWA collaborated with academic institutions including University College London, Manchester Metropolitan University, King Abdulaziz University, King Saud University, and IUCN. The planning and subsequent management of the marine protected area was informed by research on the spatial and temporal abundances of marine organisms, from corals and other marine invertebrates to fishes; among these studies were the contributions to an International Symposium on the Extent and Impact of Coral Bleaching in the Arabian Region, held in Riyadh in 2000. The herpetofauna of the islands has been surveyed, and there have been several studies of terrestrial invertebrates. The birds of the Farasan archipelago have been surveyed, and studies of individual species such as the osprey *Pandion haliaetus*, crab plover *Dromas ardeola*, have been conducted, as has been a study of the trapping of spring migrants on Qummah Island.

There have been studies on the taxonomy and the behavioral ecology of the Farasan idmi gazelle *Gazella gazella farasani* and periodic surveys to monitor the status of the largest population of idmi in Saudi Arabia. The vegetation of the islands has been surveyed, and studies of mangrove thickets have been conducted. The Farasan Islands were assessed as an Important Plant Area by the SWA in collaboration with the Centre for Middle Eastern Plants at the Royal Botanic Garden Edinburgh. Socio-economic research in the Farasan Islands has included the social and economic characteristics, the people of the islands and their customs and history, biological resources, conservation values, human uses and impacts, the size and status of the Farasan artisanal fishery, knowledge of the marine environment possessed by fishermen of the Farasan Islands, and assessment of their potential for ecotourism. All of these studies have informed the MPA's highly detailed management plans. In the **Arabian Gulf**, good baseline environmental surveys were carried out by Saudi ARAMCO on the biotopes of the western Arabian Gulf, in addition to the PME surveys described above. Following the devastating oil spill during the Gulf War of 1990-1991, the SWA conducted studies of the ecology of the marine and coastal ecosystems of the Gulf, the environmental impacts on these ecosystems, and the measures required for restoration, in collaboration with the European Commission and the Senckenberg Natural History Museum. This led to publication of *A Marine Sanctuary for the Arabian Gulf: Environmental Research and Conservation following the 1991 Gulf War Oil Spill* in 1996. The area includes two Important Bird Areas and the avifauna is periodically monitored. These studies led to recommendations for a protected area, which, although not officially proclaimed, has been managed by the SWA since 1995. The Environmental Protection Department of Saudi Aramco, in collaboration with experts from Saudi Arabia, the Gulf region and around the world, has produced the *Marine Atlas of the Western Arabian Gulf*. Designed to protect natural resources in the marine and coastal areas of the Gulf and to increase public environmental awareness, it provides detailed information on marine and coastal habitats in the Saudi waters of the Arabian Gulf, and is a useful baseline to monitor changes in marine habitats. The Atlas is an important tool for sustainable development in the Arabian Gulf, especially in light of the escalating development pressures on the Gulf environment. The SWA and SCTA have collaborated on tourism plans for the Farasan Islands Protected Area and for the coast and both inshore and offshore islands of the Jubail Marine Wildlife Sanctuary.

1. Tools to support the decision-making...



National Oceanic and Atmospheric Administration *Sentinel Sites for Climate Change- National Estuarine Research Reserves*

The National Estuarine Research Reserve System (NERRS) is a network of 28 areas representing different biogeographic regions of the United States that are protected for long-term research, water-quality monitoring, education and coastal stewardship. A partnership between the National Oceanic and Atmospheric Administration and coastal states, NERRS protects more than 1.3 million acres of coastal and estuarine habitats. **NERRS serve as living laboratories for on-site staff, visiting scientists and graduate students who study coastal ecosystems. In this capacity, the reserves serve as platforms for long-term research and monitoring, as sentinel sites to better understand the effects of climate change, and as reference sites for comparative studies. In 1995, NERRS established a System-Wide Monitoring Program (SWMP) to measure short-term variability and long-term changes** in the water quality, biological systems, and land-use / land-cover characteristics of estuaries and estuarine ecosystems to inform coastal management decisions. Abiotic parameters include nutrients, temperature, salinity, pH, dissolved oxygen, and in some cases, contaminants. Biological monitoring includes measures of biodiversity, habitat, and population characteristics. Watershed and land use classifications provide information on types of land use by humans and changes in land cover associated with each reserve. By using standard operating procedures for each component across all 28 reserves, SWMP data help establish the NERRS as a system of national reference sites, as well a network of sentinel sites for detecting and understanding the effects of climate change in coastal regions."

By understanding how estuaries function and change over time, scientists hope to predict how coastal systems respond to changes in climate and human-induced disturbances. The Reserve System's monitoring program, coupled with supported research programs, provides a foundation for developing solutions to coastal management problems by determining how estuarine ecosystems change, and why these changes occur.



Picture: the Elkhorn Slough National Estuarine Marine Reserve, source NOAA's website

The NERRS Sentinel Sites Program will build upon SWMP by focusing data collection and measurements on specific climate related issues, and by leveraging resources and partnerships to provide the necessary support. The ultimate goal of the program is to help determine reserve vulnerabilities to climate change, and to translate our understanding to coastal communities and coastal managers. The initial focus of the program will be on changes in marsh, mangrove, and submerged aquatic vegetation responses to changes in sea level and inundation. In the future, the program aims to provide guidance for NERRS on the effects of other climate-related stressors on coastal habitat.

3. Building Public and Political Support...



NOAAs' Office of Marine Sanctuary The Thunder Bay and Florida Keys National Marine Sanctuaries

Despite their well-documented impacts on local economies and the environment, new National Marine Sanctuaries are not always well received by local communities. The communities of Alpena, Michigan and the Florida Keys responded to proposed sanctuaries with overwhelming opposition and even threats. With open communication and community engagement, NOAA's Office of National Marine Sanctuary was able to build public and political support and transform these areas that were originally resented as sites of government control into beloved sanctuaries for conservation, recreation, tourism, and economic growth.

Florida Keys National Marine Sanctuary

In 1990, similar negative attitudes and bad blood swirled around the creation of Florida Keys National Marine Sanctuary, which combined two existing sanctuaries — Looe Key and Key Largo — into a much larger protected area that encompassed the entirety of Florida Keys waters. Opponents of the sanctuary called it a federal “power grab” and said NOAA had no intention of keeping its promises. Sanctuary advocates shot back, alleging that the anti-NOAA activists in the Keys were funded and staffed by outside interests. The first superintendent of the sanctuary was even hung in effigy by a group of irate protestors who called themselves the “Conch Coalition.”

Interactions with sanctuary staff quickly erased the concerns of lifelong fishermen who had initial doubts about the motives behind the Florida Keys sanctuary. Those communities came to sanctuary staff as see like-minded individuals working toward a goal they shared in common: ensuring the future health of Florida's ocean ecosystems. And indeed, over the past two decades the Florida Keys have seen major strides in ocean management and conservation that benefit both local communities and the marine environment.

Thunder Bay National Marine Sanctuary

Just 17 years ago, the small Michigan town of Alpena was the battleground for one of the fiercest disputes in the 44-year history of the National Marine Sanctuaries. Opposition to the designation of Thunder Bay National Marine Sanctuary was strong in 1997, with 70 percent of local residents polling against it. The executive director of the Alpena Convention and Visitors Bureau, and lone advocate for the sanctuary, began receiving threatening calls from her fellow citizens in response to her support for the designation. Angry divers, fishermen, and savage operators wore t-shirts and buttons with anti-NOAA slogans and filled public meetings to voice their objections, concerned that a new sanctuary would overregulate their operations and stifle their livelihoods.

After Thunder Bay's establishment, the sanctuary advisory council, which was created to give divers, fishermen, boaters, and other user groups a voice in the sanctuary's management, facilitated a process of open communication and compromise that helped the sanctuary earn the trust of the local community. Twelve years after designation, one the sanctuary's strongest opponents at the outset testified in front of Congress in support of a proposal to expand the sanctuary's boundaries tenfold, stating that “the sanctuary has proven itself as a trusted partner, not just with the state of Michigan, but also with the local community.” The sanctuary allowed people along the coast to reconnect with their maritime heritage roots. In Alpena, the Thunder Bay sanctuary is now a hub of education, science, and tourism for an area that has suffered decades of economic downturn. The sanctuary is a valued partner in the community, working to not only protect Thunder Bay's marine resources but also to link local residents with their heritage and restore a sense of pride in the community.

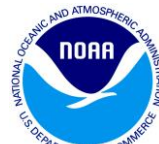
Building a Better Future

Visit either of these communities today and you will see a very different relationship between the sanctuaries and local residents than in the early days of their designation. Gone are the anti-NOAA signs. The dialogue at public meetings is civil rather than confrontational. Sanctuary staff are treated as peers instead of pariahs.

Gaining the support of the public is a positive step for these sanctuaries and others that have experienced similar turnarounds, but it is only one step. Going forward, the sanctuaries have a responsibility to work with their stakeholders to achieve their mutual goals. With former opponents of the sanctuaries now some of their most fervent supporters, places like Alpena and the Florida Keys are now among our nation's best hopes in turning the tide of ocean conservation for the better.

4. Innovating to Increase Funding...

United States – NOAAs' Office of Marine Sanctuary The National Marine Sanctuary Foundation



In 2000, a **partnership between NOAA's Office of National Marine Sanctuaries and engaged citizens resulted in the establishment of the National Marine Sanctuary Foundation**, which was created to inspire all people to preserve, protect and promote our nationwide network of marine sanctuaries. The parties solidified the partnership through a Memorandum of Understanding. The Foundation was established to support the work the Sanctuary System in all arenas – financial, political, educational and developmental. While unique to the marine environment, the concept of the Foundation was not new to the federal government, with similar foundations supporting the work of other natural resource agencies, including the National Park Service and U.S. Forest Service. Like these other private, non-profit organizations, **the National Marine Sanctuary Foundation exists to provide a focal point for public support and visibility for its associated government program**, the National Marine Sanctuary Program. The Foundation seeks to create meaningful opportunities for public interaction with the nation's marine sanctuaries, which unlike terrestrial parks are not experienced first-hand by the general public unless they dive, snorkel, swim, or sail in these special waters.

A screenshot of the National Marine Sanctuary Foundation website. The main heading is "Ways to Donate" with the subtext "You Can Give the Ocean a Voice". There are two images of underwater coral reefs. Text on the page includes: "One of the best and easiest ways you can help protect the natural and cultural resources found in national marine sanctuaries is by making a donation to the National Marine Sanctuary Foundation." "The National Marine Sanctuary Foundation is a non-profit, 501(c)(3), tax-exempt organization (Tax ID # 94-3370994)." "You can make a donation online via GiveDirect by clicking below, by mailing a check, or via text on your cellphone." A large blue fish-shaped button says "DONATE NOW" with "GiveDirect" below it. A link says "Leaving a Legacy - Click here for information on planned giving". Another link says "Learn about some of the major projects that NMSF supports" or "make an online donation now".

NMSF's Official website Screenshot <http://nmsfocean.org/ways-donate>

The **National Marine Sanctuary Foundation works diligently to increase federal resources** for national marine sanctuaries and to focus attention on key pieces of legislation affecting sanctuaries. Through **public and private sector partnerships**, the Foundation creates conservation-based research, education, and outreach programs designed to connect the public with these underwater treasures. **The Foundation's financial resources support the Sanctuary System's objectives through:**

- **Advocacy** – The Foundation highlights the importance of a healthy ocean to coastal economies and the need to fund critical ocean programs through its outreach on Capitol Hill. It also hosts educational and policy-focused symposia that bring a variety of constituents together to discuss marine issues.
- **Education** – The Foundation spearheads efforts to construct and operate sanctuary visitor centers throughout the nation, allowing the public to experience the marine sanctuaries. The Foundation also connects this network of visitor centers with 'telepresence' technology, including the ability to project live, real-time images from sanctuary waters.
- **Community** – The Foundation coordinates the nationwide network of Friends Groups that support sanctuaries locally, recognizing that individuals in the community shape the way sanctuaries are managed and are proud of their role in promoting our national heritage
- **Conservation** – The Foundation funds a wide array of expeditions, supporting critical research, monitoring, and restoration efforts within National Marine Sanctuaries to expand our understanding of ocean wildlife and habitats and the threats affecting them.

Their programmatic efforts help to ensure the public understands the need to preserve and protect the unique ecological and cultural resources found in the National Marine Sanctuary System. **The Foundation is a valuable asset to the Sanctuary System, providing a sustainable and innovative financing mechanism for essential research and outreach initiatives.**

4. Innovating to Increase Funding...

CONANP

The Protected Areas Fund (FANP)



The Protected Areas Fund (FANP) is a public-private partnership between the National Commission for Protected Areas and the Mexican Fund for the Conservation of Nature. Its creation is linked to an exceptional endowment of 25 million dollar for the conservation of biodiversity in Mexico. This unexpected godsend highlighted the need for a smart and sustainable tool to invest such amounts of money on the long term. Thanks to a tight cooperation between the Mexican government and the World Bank, a permanent fund dedicated to the management of protected areas within the Mexican Fund for the Conservation of Nature was set up.

The Fund began with an endowment of 16.48 million dollars. **The use of external evaluators, the efficiency of the Mexican Fund as a financial controller and of the CONANP for the submission of the Protected Areas cases made the donations converge.** Thanks to this trust the FANP hosts today around 90 million dollars, which allows an annual funding flow of 4 million

The interest emitted by the fund allows financing the management and reconstitution of 25 protected areas, among which several marine protected areas. It is a relief both for CONANP's annual budget and the managers themselves. Indeed the network of protected areas is currently underfinanced with regard to the ambitious objectives generally set in the management plans of the PAs. **Joining the FANP is a guarantee for the managers to get the financial means necessary for a proper management.**

Nevertheless, the intense concurrence existing between protected areas to gain the support of the FANP revealed the weaknesses of this financing system. Donators have they word in the selection, what creates a bias towards protected areas hosting the most attractive species, while they might not be the most threatened, nor the most important to conserve in terms of biodiversity of ecosystem services. This problematic raises the issue of funds redistribution to fit the true needs and emergencies of the network.

Further Information...

<http://www.conanp.gob.mx/acciones/fanp.php>

5. MPAs within the broader context...

NOAAs' Office of Marine Sanctuary

Adapting shipping lanes to conservation in the Stellwagen Bank



Years of effort by NOAA and the U.S. Coast Guard paid off in July 2007 when, **for the first time in the United States, ship traffic lanes were shifted to reduce the risk of collisions between large ships and whales.**

Stellwagen Bank National Marine Sanctuary is one of the top locations in the world for whale watching due to its high density of whales. However, the sanctuary also contains shipping lanes that ships use to transit in and out of Boston Harbor, which pose a threat to the sanctuary's whale population. Shipping vessels can fatally injure whales during accidental collisions. Of particular concern is the endangered North Atlantic right whale, which is particularly susceptible to ship strikes.

NOAA researchers calculated the spatial density of whales in Stellwagen Bank National Marine Sanctuary to determine if collision risks in the area could be reduced by moving the shipping lanes. **The Coast Guard assessed safety and navigational effects** of the shift on commercial ship traffic. **This cooperative effort resulted in a lane shift that adds less than 4 nautical miles to shipping distances, but is reducing strikes** by avoiding waters with the highest concentrations of whales. It also improves safety by moving large ship traffic further away from areas frequently transited by smaller fishing boats and by reducing chances of damage to large ships owing to collisions with whales or with other ships while attempting to avoid whales.

Parks Canada

Dealing with the shipping sector in the Saguenay-St Lawrence Marine Park



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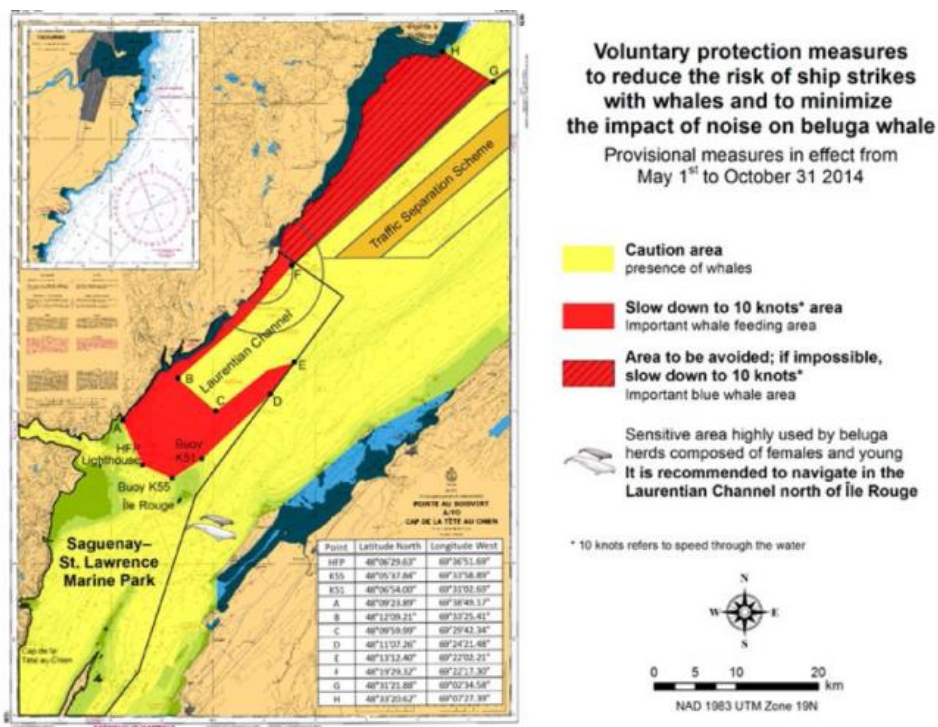
The Saguenay St. Lawrence Marine Park is a protected area that is jointly managed by Parks Canada and Parcs Québec. The marine park protects and presents unique ecosystems at the confluence of waters of the St. Lawrence Estuary and the Saguenay Fjord. **These waters are vital calving and rearing areas for the threatened St. Lawrence beluga whale as well as feeding grounds for five other species of whales and three species of seals.** It is thus not surprising that the area has become known as one of the best places in the world for whale watching.

The St. Lawrence River is also a major shipping route linking the ports of the Great Lakes to the rest of the world, with an average of 7 500 trips of commercial ships travelling through every year. Added to that is marine traffic from tourism, with approximately **13 000 commercial whale watching trips and over 9 000 recreational boat trips.** In the marine park area, the width of the St. Lawrence diminishes and whale feeding areas overlap with navigational routes (see *Figure 1*). This can lead to some very close encounters between ships and whales which can not only disturb the animals, but can also result in whale/ship collisions. Since 1992, Parks Canada has documented over 45 incidents of collisions and injured whales in the marine park and surrounding waters. However the number of collisions that actually occur is thought to be much higher. For species at risk such as the endangered blue whales and belugas, even a low number of collisions can have a significant effect on the population.

The adaptive management process

In 2011, **the Working Group on Marine Mammal Protection and Shipping was created.** Co-chaired by Parks Canada and Fisheries and Oceans Canada, It **consists of members of the shipping industry, economic development groups, academia, as well as a whale research group.** The working group's mandate is to **explore and recommend solutions to reduce the risks** of vessel/mammal collisions without compromising shipping activity or navigational safety.

The output of that process was a set of voluntary protective measures which are presented through the Canadian Coast Guard *Notice to Mariners*. In 2013, following the first year of protective measures, the Working Group asked Parks Canada to assess the levels of compliance. The results showed some good news. When comparing the months of August 2012 and 2013, which was the first year of implementation of these measures, the average speeds had dropped significantly from 12.3 knots to 10.3 knots in the slowdown area. Already in the first year, the average speed of ships passing through whale feeding grounds was very close to the 10 knot recommended speed. However, the analysis also showed that there had been an increase in traffic south of the marine park, in an area frequented by female beluga whales and their young. A science advisory report on the effects of increasing traffic in this area for the beluga whale population was requested by the working group. The findings were reported back to the working group and the Notice to Mariners was adapted in 2014 to take into consideration the scientific advice. Testing of the voluntary protective measures is underway for the second year.



Further details...

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Saguenay-St. Lawrence Marine Park on Parks Canada website:
<http://www.pc.gc.ca/fra/amnc-nmca/qc/saguenay/index.aspx>
Saguenay-St. Lawrence Marine Park website:
www.marinepark.gc.ca
Notice to Mariners:
<http://www.notmar.gc.ca/go.php?doc=eng/services/annual/default-eng> and
<http://www.notmar.gc.ca/alleg.php?doc=fra/services/notmar/index>
Department of Fisheries and Oceans Canada Science Advisory Report:
http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2014/2014_004-eng.html

6. Implementing the Governance...

French Marine Protected Areas Agency

The Marine Natural Parks: opening the decision, debating the future



In the years before the creation of the Marine Natural Park status, several projects of MPAs failed. The main legal tool (National Parks), because of its large authority over the activities taking place in the protected areas, provoked reluctance both from the public administrations willing to keep their prerogatives and the various groups of users worried about the future of their activities. From these failures, the redactors of the 2006 law designed a pioneering legal tool. Deprived of real regulation authority, it is based on the consultation and inclusive management of marine areas. This approach is institutionalized through the management council of the Park, whose members are very neatly selected. **The expected outcome is the adoption of enlightened and accepted decisions.** The Agency is legally in charge of its setting. Besides, it also implemented the governance through complementary tools, able to tackle the unexpected difficulties it met with a specific group of actors: the MPA managers. Indeed the governance process sometimes requires adopting very specific approaches towards the different kinds of stakeholders.

Institutionalizing the governance: the management council of the MNPs

The management council is the decision-making instance of the MNP. With the assistance of the Agency, it develops and adopts the management plan, i.e. the conservation and development goals of the park along with all the measures undertaken to reach them.

The composition of the management council represents all the interests at stake. The national law sets the guidelines by listing the required colleges of representatives: local administrations of the state, the local authorities, the adjacent protected areas, syndicates of professionals and recreational users, environmental NGOs and experts. The number of each college is detailed in the creation decree of the MNP, on proposal of the Agency and validation by the prefect and the Ministry of the Environment. **Finding the right equilibrium, and selecting the right people is one of the most sensitive tasks of the Agency.** The staff of the study mission seeks to represent the political, social and economic ratios of power in the area while favoring the truly involved individuals. To increase the efficiency of the council they try to keep it under a total of 50 members, the existing councils illustrate how hard it is. Among the six existing MNPs, five already have a management council: the Iroise MNP (49 members since the December 2007), the Mayotte MNP (41 members since June 2010), the Gulf of Lion (60 members since July 2012), the Glorieuses Islands MNP (20 members since February 2013), the Picard Estuaries and Opal Coast (60 members, since December 2013).

The chairmanship of the council is usually proposed to **an influential local politician** showing a real interest towards the project. It is fundamental to increase the regional political weight of the park and increase the visibility of the marine environment protection in general.

Adapting the approach to the actors: the PN-PANAMA project

Despite their seats on the management councils of the MNPs, the experience showed **an unexpected opposition to the MNPs from the MPAs managers external from the agency.** The Agency didn't fully anticipate the unease feeling provoked by such large MPAs, and by the large extent of its own authority. Indeed the Agency is legally allowed to manage every legal type of MPA, a capacity that **raised the uncertainty among the managers** about their professional perspectives. In order to appease the situation and gain the trust of these natural allies, **the Agency set up a specific program of collective prospective building.** To do so, the team in charge of the program identified two specific areas very affected by the problem. The idea was to **set up debate groups, working as think-tanks, i.e. completely outside the decision-taking processes, to prepare a common vision of the future** of MPAs, especially MNPs. Local and national seminars alternated, gathering neatly selected participants. Debating allowed qualifying the actors' opinions about each other, and the approach proved its capacity to arouse free speech and lift the taboos. The mobilization was satisfying and finally allowed to adopt a shared vision for the future of the marine environment protection. The project definitely prepared the alliances around the future ecosystem protection initiatives.

The Agency is intending to make this project a normal step of its MNP creation process. A guide is under process.

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6. Implementing the Governance...

Parks Canada

Building on the local communities culture and will: Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site



Parks
Canada

Parcs
Canada

Located 100 kilometres from mainland British Columbia, Gwaii Haanas occupies the waters adjacent to the southern third of Haida Gwaii, formally known as the Queen Charlotte Islands. Situated on the very edge of the Pacific continental shelf, this is an area of great biological richness.

For thousands of years the ecological richness of this place has sustained the Haida. In 1985, the Haida declared this area a Haida Heritage Site and brought international attention to the need to preserve these islands when 72 Haida including elders were arrested defending their homeland against logging. In 1987, the Prime Minister of Canada and the Premier of British Columbia signed a memorandum of understanding that committed to the creation of a national park reserve and the protection of the adjoining marine waters. This intent was formalized in 1988 with the signing of the federal – provincial South Moresby Agreement. In 1993, the Government of Canada and the Haida Nation signed the *Gwaii Haanas Agreement*, which committed to parties to move toward cooperative planning, management and operation of Gwaii Haanas National Park Reserve and Haida Heritage Site. The agreement was unique in that, although the Haida Nation and the Government of Canada have differing views on ownership of the area, the parties agree to set aside these differences in order to focus on shared objectives concerning the care, protection and enjoyment of Gwaii Haanas.

In the Gwaii Haanas Agreement, the Government of Canada and the Council of the Haida Nation agree to share the management of Gwaii Haanas through the Archipelago Management Board (AMB). The mandate of the AMB is defined by the commitments in the Agreement and the existing laws and policies of the parties. Under the terms of the Agreement, the AMB examines all initiatives and undertakings relating to the planning, management and operation of Gwaii Haanas. The AMB consists of an equal number of representatives from the two parties and decisions are made by consensus.

“Long-term protective measures are essential to safeguard Gwaii Haanas as one of the world’s great natural and cultural treasures, and that the highest standards of protection and preservation should be applied.”

“Gwaii Haanas will be maintained and made use of so as to leave it unimpaired for the benefit, education and enjoyment of future generations. More specifically, all actions related to the planning, operation and management of Gwaii Haanas will respect the protection and preservation of the environment, the Haida culture, and the maintenance of a benchmark for science and understanding.”

Finally, in January 2010, both parties signed the Gwaii Haanas Marine Agreement to work collaboratively to manage, protect, and sustainably use the marine ecosystems of the Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site. This agreement is based on the previous agreement and expanded to the marine area. Legal protection of 3,500 square kilometres under the Canada National Marine Conservation Areas Act occurred in the same year.

The realization of this vision is due in large measure to the willingness of the Haida people to share these lands and waters with the people of Canada and the world, and to work collaboratively over the last several decades in a growing partnership exemplified by the signing of two agreements (1993 and 2010) and cooperative management of this area through the Archipelago Management Board.

Further details...

Links to key agreements and management plans: <http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/plan/plan1.aspx>

Establishment process: http://www.pc.gc.ca/APPS/CP-NR/release_e.asp?bgid=1352&andor1=bg

6. Implementing the Governance...

Parks Canada

Combining federal and provincial governments cooperation with stakeholders involvement: the Saguenay-St Lawrence Marine Park



Parks
Canada

Parcs
Canada

The purpose of the Saguenay-St. Lawrence Marine Park is to increase, for the benefit of the present and future generations, the level of protection of the ecosystems of a representative portion of the Saguenay River and the St. Lawrence Estuary for conservation purposes, while encouraging its use for educational, recreational and scientific purposes. The marine park was created after many years of local community interest. The local community's desire to protect the beluga and its habitat was a determining factor in its creation. Federal and provincial mirror legislations officially creating the marine park and governing its management took effect in 1998.

The establishment of the Saguenay–St. Lawrence Marine Park is considered to be an important event in marine conservation in Canada. Its establishment and management was innovative in several respects. It was the first time the governments of Canada and the Province of Quebec collaborated in creating a marine protected area with each government acting within the scope of its jurisdiction. It is the first park in Quebec and Canada dedicated entirely to protecting a marine environment. It is part of a region flourishing in several respects, particularly in tourism.

The local community's interests and support strongly influenced the governance structure of the Marine Park. Accordingly, the governments chose to establish close ties with regional stakeholders to achieve the marine park's objectives. Twenty years of experience at the Marine Park has shown that strong regional support is a key to successful management.

The marine park is thus co-managed by the governments of Quebec and Canada. This co-management is exercised by the Harmonization Committee, an authoritative body created pursuant to the two Acts which established the marine park. Also, participatory management is namely ensured by the Coordinating Committee composed of representatives from the regional communities in various areas of activity. The Coordinating Committee was mandated to provide input in the management plan and recommend to the ministers responsible for the Saguenay-St. Lawrence marine park the strategies and means needed to achieve the general and specific objectives defined in this plan. It allows for consensus-building and fosters the complementarity of the actions taken by the numerous stakeholders.

In particular, the committee acts in the following areas:

- Resource and marine ecosystem protection;
- Education and interpretation;
- Visitor reception and orientation;
- Presentation of the marine park and its resources;
- Marketing and promotion of the marine Park;
- Integration in the regional environment;
- Studies and research projects associated with the marine park's management;
- Park management orientations and strategies;

To ensure the representation of the municipalities, First Nations and many partners of the coordination zone, the committee is composed of representatives from the municipalities, a First Nation, the scientific community, interpretation and education, Parks Canada and the provincial agencies responsible for Parcs Quebec. Moreover, in accordance with the constituent mirror legislation, the concerned ministers can modify the composition of the committee.

It is understood that the Coordinating Committee establishes its own terms of operation. Members work in collegiality as regards all activities and all topics of interest for the marine park including planning, promotion, and the schedule of activities. All recommendations from the Committee are subject to the consensus of all members present. An executive secretary assumes the responsibility of carrying out all secretarial work and tasks associated with the Committee's operation.

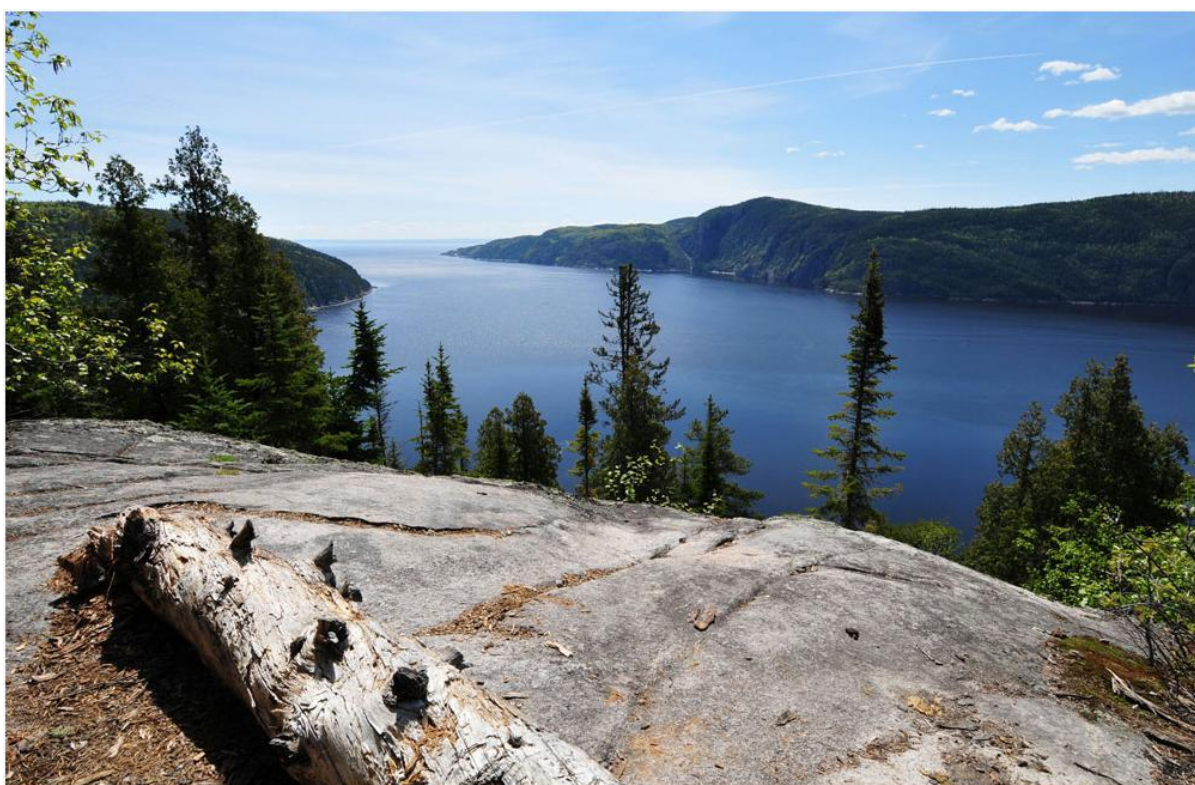


The Coordinating Committee discusses various proposals regarding the conservation and development of the marine park and recommends the latter provided they correspond to the objectives of the management plan. Subsequently, the marine park's co-managers must make a decision and follow up on the latter based on the human and financial resources available and the objectives and priorities of their respective organizations.

Furthermore, prior to their implementation, the projects considered by the committee that have or may have an impact on First Nations will be the subject of a notice drafted by representatives of the native community concerned. The Coordinating Committee has set up four advisory committees (ecosystem management and research; reception, marketing and signage; developments and infrastructure; themes, education and interpretation) bringing together close to one hundred people from the municipal, environmental, governmental and private sectors, among others. These advisory committees were established to provide guidance and advice as required in the identification and review of the various issues on which the coordination committee is called to make recommendations to the ministers responsible for the Marine Park.

To complement the work undertaken by the harmonization committees, the coordinating committee and its four advisory committees, specialized groups have been set up over the years to address specific issues pertaining to whale-watching activities, shipping in whale feeding areas and fisheries management in the Marine Park by the Fisheries and Oceans Canada.

For more information see: <http://www.pc.gc.ca/eng/amnc-nmca/qc/saguenay/index.aspx>



Parks Canada / J.-L. Provencher

6. Implementing the Governance...

Saudi Wildlife Authority

The intergovernmental committee for development of the Farasan Islands



The SWA is a member of the intergovernmental committee for development of the Farasan Islands, which brings together the main governmental stakeholders, including :

- the Governor of the Jazan Region, the Farasan District,
- the Ministry of Defense, the Ministry of Municipal and Rural Affairs,
- the Ministry of Agriculture,
- the Coast Guard,
- the Saudi Commission for Tourism and Antiquities,
- the Presidency of Meteorology and Environment,
- and the Saudi Arabian Fisheries Company.



Red mangrove *Rhizophora mucronata*, with a few black mangrove *Avicennia marina*, Farasan Islands MPA, Red Sea, Saudi Arabia

7. Cooperating Internationally...

CONANP

Participating in regional cooperation organizations: the Commission for Environmental Cooperation.

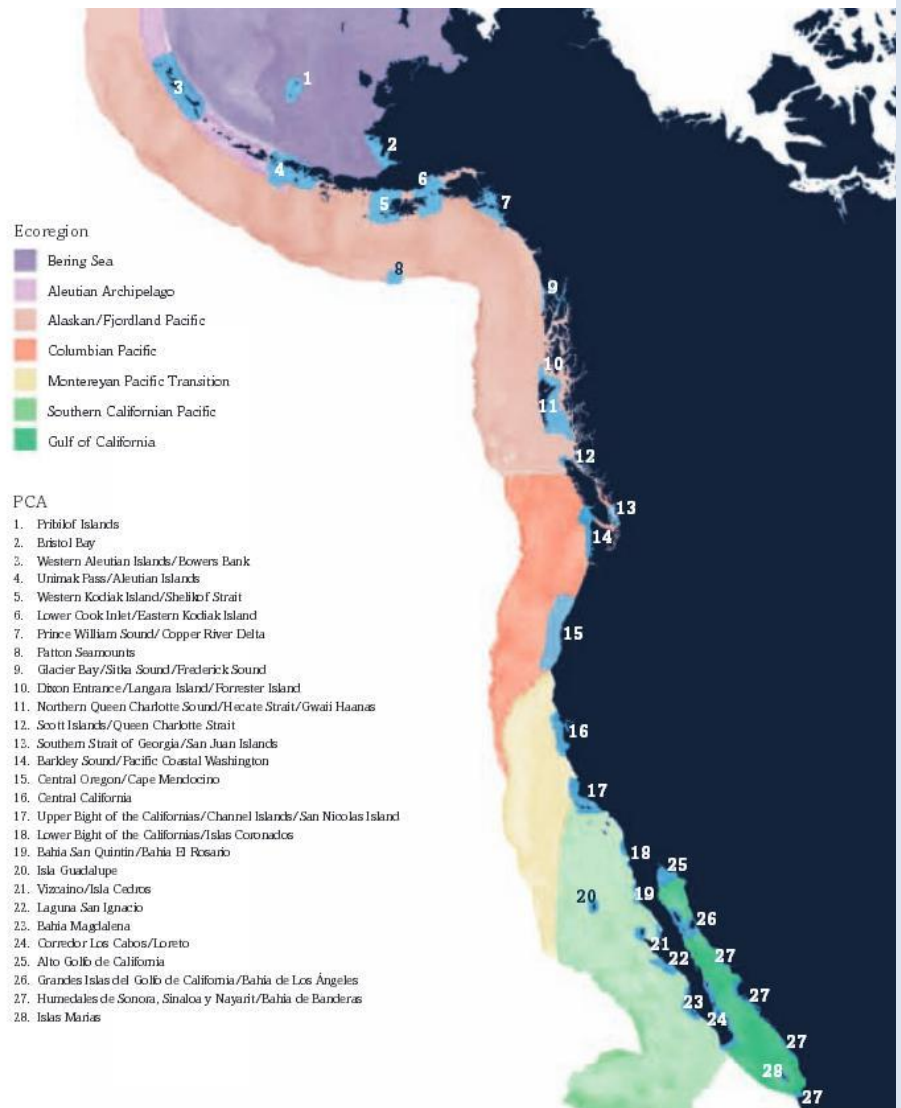


The CEC was created in 1994 under the term of the North American Agreement on Environmental Cooperation signed by Canada, Mexico and the United States. In 2002 a strategic plan was adopted by the secretariat, expanding the trilateral cooperation and consolidating concrete projects such as the conservation of species of common interest, mapping of marine and estuarine regions, creation of a network of MPAs, control of invasive species and information networks.

CONANP, other areas of SEMARNAT and their counterparts in Canada and the US have achieved considerable progresses in adopting long-term strategies to protect the endangered species and habitats in the region. In the marine environment the North American Marine Protected Areas Network is the most advanced project.

Since 1999 the CEC has constantly encouraged the setting of this continental-scale network, grouping representatives of the three governments, organizing meetings between NGOs, academics, citizens and interested sector. It is an extraordinary tool to implement a necessary large scale ecosystem approach.

Among several streamlines and projects within the NAMPAN, one of the most interesting is the integration of a common point of view to monitor the ecological health of the MPAs, using pilot sites in a region covering most of the West Coast of the subcontinent, from Baja California to the Bering Sea. Four Mexican MPAs are part of the project. Thanks to the setting of thematic workshops, regarding biophysical, socioeconomic and administrative issues, sets of indicators and protocols for a common methodology were identified, for the common use of the PAs Network. They are now formalized into scorecards templates and guides available to the MPAs managers and already used in ten pilot MPAs split among the three countries. When filled, these scorecards provide harmonized information on how individual MPAs composing the network are doing, and consequently of how the network in a whole is doing. They allow the comparison necessary to identify the best management practices. It is an outstanding progress towards regional scale environment protection and management.



The network of 27 Marine Priority Conservation Areas in Morgan, Lance, Sara Maxwell, Fan Tsao, Tara A.C. Wilkinson, and Peter Etnoyer. Marine Priority Conservation Areas: Baja California to the Bering Sea. Commission for Environmental Cooperation of North America and the Marine Conservation Biology Institute. Montreal.

Since its confirmation in 2008 by the councils of ministers of the CEC, and even its growth in scope and ambition, the NAMPAN's programs of cooperation cover all the matters concerning the MPAs creation and management. The next objective is to expand its strategic point of view and cover the coasts of North America on the Atlantic and Arctic Oceans.

7. Cooperating Internationally...

Saudi Wildlife Authority

Participating in regional cooperation organizations: the Regional Organization for the Conservation of the Environment in the Red Sea and Gulf of Aden (PERSGA) and the Regional Organization for the Protection of the Marine Environment (ROPME)



Saudi Arabia's marine protected area system is designed to fulfill Saudi Arabia's responsibilities in the frameworks of the Regional Organization for the Conservation of the Environment in the Red Sea and Gulf of Aden – PERSGA) and of the Gulf (Regional Organization for the Protection of the Marine Environment – ROPME). The SWA participates actively with both regional organizations and PERSGA has contributed to the training programs shown below.

Saudi Arabia hosts the Regional Organization for the Conservation of the Environment in the Red Sea and Gulf of Aden (**PERSGA**), with its headquarters in Jeddah. Its legal basis was established in 1982 and it was formally announced in 1995 as an intergovernmental body dedicated to the conservation of the coastal and marine environments found in the Red Sea, Gulf of Aqaba, Gulf of Suez, Suez Canal, and Gulf of Aden surrounding the Socotra Archipelago and nearby waters. **PERSGA's member states include Djibouti, Egypt, Jordan, the Kingdom of Saudi Arabia, Somalia, Sudan and Yemen. PERSGA's mission aims at "rational use of living and non-living marine and coastal resources in a manner ensuring optimum benefit for the present generation while maintaining the potential of that environment to satisfy the needs and aspirations of future generations."** Its objectives are to improve the sustainable management and use of the RSGA's coastal and marine resources. Sustainable management and use will be reflected in reduced threats to the environment, improved livelihoods of participating coastal communities and improved institutional, legal and financial arrangements. **PERSGA's Strategic Action Plan, developed in 1997, provides operational mandates governing its conservation activities and programs.** The SAP is implemented in phases, each with its own set of priorities and areas of focus. The first phase of the SAP was implemented during 1999-2005 with the support of GEF. As of 2006, PERSGA has been conducting its work under SAP Phase 2, which concentrates primarily on sustainable development and institutional strengthening.

Saudi Arabia also participates actively in the Regional Organization for the Protection of the Marine Environment (**ROPME**), set up in 1979 under the **UNEP Regional Seas Program**. Based in Kuwait, the ROPME Sea Area covers **Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates**. The ROPME Sea Area suffers from the impacts of haphazard coastal development, physical alteration, destruction of habitats, sedimentation, high salinity, extremes of temperature, and land-based and sea-based pollution. The impacts of land-based activities on the coastal waters include municipal sewage and industrial effluents from such industries such as petroleum refineries, power, desalination and petrochemical plants, as well as dredging and landfilling. Military conflicts have seriously affected the northern part of the ROPME Sea Area. The draining of the Marshlands of Mesopotamia has posed serious threats to the wildlife and to the ecological balance, affecting water quality and the spawning grounds of shrimp and migratory species of fish. Operational and accidental oil pollution is another major challenge in the Gulf. The impacts of offshore oil installations and operational pollution from ships and dumping of ballast water are also among the main causes of chronic oil pollution in the region. Fish and corals are susceptible to both anthropogenic and climatic stresses and coral bleaching and fish mortality episodes are now familiar phenomena in the ROPME Sea Area.

The ROPME Action Plan covers activities relating to oil pollution, industrial wastes, sewage, and marine resources. Projects range from coastal management, fisheries, public health, land-based activities, sea-based pollution, biodiversity, oceanography, marine emergencies, GIS and remote sensing, to environmental awareness and capacity building.

Saudi Arabia's protected area system is also designed to meet the **Aichi MPA 2020 targets** for coastal and marine protected areas, particularly Aichi Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved, through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

8. Implementing the management plans...

Parks Australia

Australia's Marine Reserve Networks – multi-jurisdictional and multi-agency partnerships for better management outcomes through effective compliance awareness and surveillance programs



Australian Government
Director of National Parks

Australia has the third largest marine estate of any nation in the world. It is a massive area larger than our landmass and extends from the tropical seas of the north to the sub-Antarctic waters of the Southern Ocean.

Australia's system of Commonwealth marine reserves covers a total area of 3.1 million square kilometres. **A significant challenge** for Parks Australia in managing such a large multi-use marine reserve **estate is ensuring reserve users comply with management prescriptions and the intent of IUCN categories across vast areas.**

A critical element of Parks Australia's management toolkit is a partnership approach in relation to compliance activities. **Parks Australia has established partnerships both with other Australian Government agencies and with agencies of state (provincial) governments** within Australia with a field operational capability. These include fisheries management agencies, environment agencies, police services and border protection (Customs and Defence).

Under these partnerships **a range of compliance measures are employed from awareness programs delivered through training, communication and education activities to information exchange and surveillance programs.** While traditionally, the surveillance programs have relied primarily on aerial and vessel surveillance, emerging technologies are supplementing these with remote surveillance through vessel tracking systems. This is proving particularly promising in relation to the commercial fishing sector.

Commercial fishing is undertaken in many zones within the Commonwealth marine reserves estate and while some commercial fishing methods are permitted under management arrangements others are not. While the incidence of significant non-compliance by commercial fishers is low, anecdotal evidence suggests that a high percentage of these are a result of lack of awareness of the location of reserves or the management arrangements for that reserve (or zone).

One initiative to address this is the Commonwealth Marine Reserve Alert Service, designed to raise awareness of Commonwealth marine reserves and their management arrangements.

The Alert Service is currently being used across Australia's Commonwealth marine reserve estate and acts as a 'virtual sign post' by sending an alert message when a Commonwealth commercial fishing vessel enters a Commonwealth marine reserve where their type of fishing method is not allowed. The alert message is sent to the vessel and to the fishing concession holder's nominated mobile phone or to a satellite phone.

The Alert Service is free, comes at no cost to the industry and is available to all licensed Commonwealth commercial fishers through technology already fitted to their vessels.

By raising awareness and promoting voluntary compliance and self regulation, the Alert Service initiative is expected to deliver significant cost savings to government and industry resulting from a reduction in inadvertent non-compliance. Importantly, by warning vessels before they begin fishing in a reserve, the Alert Service will improve protection of the biodiversity and other values of marine reserves.

The Alert Service is only made possible by the cooperative and complementary partnership arrangements with fisheries management agencies and provides ongoing benefits to marine reserve management, fisheries management and to marine reserve users. The Alert service is one of several actions being initiated by Parks Australia through key partnerships to support the overall protection of marine reserves through effective management.

These services provide the foundation for an ongoing strategic approach to our compliance effort as Parks Australia positions itself for the expansion of the Commonwealth marine reserves program with the active management of the significantly larger Commonwealth marine reserves estate to come on line in the near future.

Further details...

For more information about the Commonwealth Marine Reserves alert service head to:

<http://www.environment.gov.au/Commonwealth marine reserves -alert-service>

A legitimate and complex demand for reporting on results

The Agency is accountable of the good use of the public funds it receives. In the context of generalization of public policies evaluation, assessment and reporting have become mandatory to get more means. Also, to expand the network, the Agency must respond to the legitimate interrogations of the sea users about the real efficiency of the existing MPAs. The ministry asked for a national assessment process of the MPAs management, quite logically the Agency inherited of this task.

It developed the French MPAs dashboard, which aims at reporting the capacity of MPAs to achieve long term goals at the local, national or regional scales. The objective is to paint a national picture without erasing the local specificities. The MPAs dashboards must contribute to an overview of the French seas, and fit to the different scales of the policy-making: they need to be useable on the European and international scenes just as they must allow a site-specific adaptive management.

Convincing the managers and coordinating the approach

The Agency obtained the leadership on the assessment process for every kind of MPA, regardless of their management authority or creation purposes. It appeared to be necessary for several reasons.

- First the MPA managers themselves showed little enthusiasm at getting involved in such assessment of their results and management methods, often considering it as bureaucratic and useless with regard to their mission, sometimes perceiving it as a sanction.
- Second the experience showed the need for a supervisor: many management plans and existing processes often happen to be inadequate. The objectives are too vague and impossible to assess, their project and priorities for the MPA do not take into account the broader context, far from the required network approach. In fact management plans are more often action-plans focused on the short term and on the means involved when the real assessment needs concern long-term goals, results and targets.

Therefore, since 2008 the Agency tackled this task, **developing common methods and tools**, remaining always in the limits of its own authority, and respecting the specificities of each area. The first step was to **discuss the project and the concepts at stake with the managers**. The Agency makes contacts with them through the forum for MPAs, which is an **informal network of MPA managers for information and experience sharing**, subsidized by the Agency. Besides, the Agency gathered the existing experience in the scorecards building (some French experiences and the IUCN document "How is your MPA doing?") and started pilot projects in different MPAs. Using these projects, **the Agency is now progressively expanding the implementation of a common pattern of scorecards**.

Developing methodological standards for scientific relevance

By producing several guides and patterns about the scorecards creation, and their integration in management plans, the Agency spreads its methodology for a genuine assessment of MPAs results.

The assessment process model is made of seven interdependent steps, whose key point is the definition of the indicators which will inform the level of achievement of the expected results, always linked to long-term goals. **An indicator is a measurable quantity allowing the establishment of a diagnosis. A good indicator must fill scientific requirements** (precision, objectivity etc.), but its choice **is also a political decision from the management authority**. It represents their common perception of the issues at stake in the MPA and sets the level of ambition endorsed by the manager.

The Agency is currently developing a national indicator catalog. Through a web platform, it aims at making available to managers a common choice of indicators adapted to the specificities of their protected area. Given that indicators measure the efficiency and performance of the management, they are directly linked to the goals and targets of MPAs, and therefore depend of the status and reason for being of each site. **This tight relation between goals and indicators will eventually allow a real network analysis among MPAs with common goals** (protection of one specific habitat or species...).

Concretely, when completed, the catalog will consist of a list of indicators sorted according to their purpose. They all have a file attached, which includes a critical analysis, criteria to refine searches, elements of protocol and diagnosis. Moreover, because it is the result of a collaborative effort involving many stakeholders (managers, scientists...), the catalog of indicators will remain a living document, gradually enriched by the feedbacks from their implementation the field.

The online platform to facilitate the building and updating of the dashboards should be available by the end of 2014. The whole process is a major step towards the standardization of the data collection and MPA monitoring at the national level. The obligation for each MPA to assess its level management efficiency and level of achievement of its goals (such data nourish the national reporting ordered by the ministry) is a strong incite to resort to the agency's catalog.

A common pitfall lies in the natural trend towards the multiplication of indicators, slowing down and eventually blocking the process. The solution is first to lead a cautious analyze of their feasibility. Then, the agency makes a list of the priorities, it allows efficiency to prevail: the indicators cannot all be informed in the first years of implementation of the assessment process. The managers should begin with the most important ones, and complete their approach over years.

Making of the results accessibility a priority

Finally, a major aspect of the agency's support to the assessment system is the creation of a precise template for the public reporting of the scorecards. **Because they also target non specialist public (members of the management council, but also the sea users, state representatives and any interested citizen), the dashboards need to be presented in a public version.** Greatly appreciated by the managers, this work for a better accessibility of the information mustn't go too far and oversimplify the issues. In order to avoid such pitfalls, the *public version* of the dashboard is entirely based on the solid, sound science produced by the agency and its partners, whose results are extensively developed in the technical version of the dashboard (used by the manager). [The reader is invited to discover the selected format for the public version by following the link below.]

A Dashboard for the Iroise Sea Marine Natural Park

2012, First edition of the annual educational dashboard: 30 indicators informed

2014, two years of major progresses: 59 indicators informed over 79 (75%)

Further Information....

The IMNP dashboard (French version only)

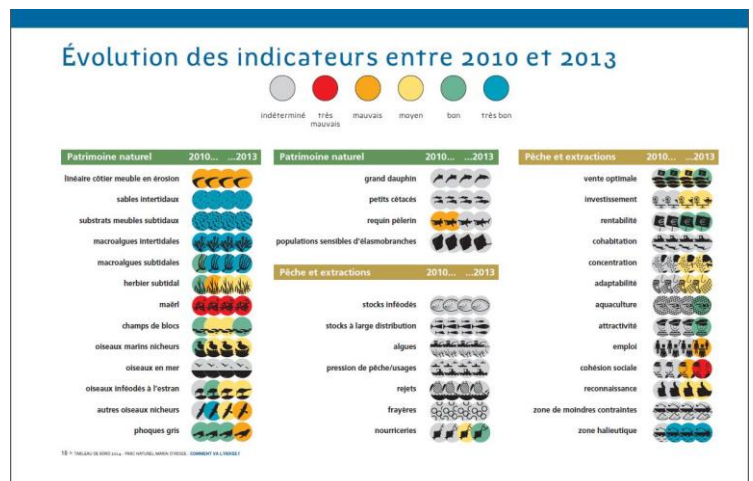
<http://www.parc-marin-iroise.fr/Media/Parcs/Iroise/Fichiers/Tableau-de-bord/Tableau-de-bord-2014>

Anne-Sophie Barnay

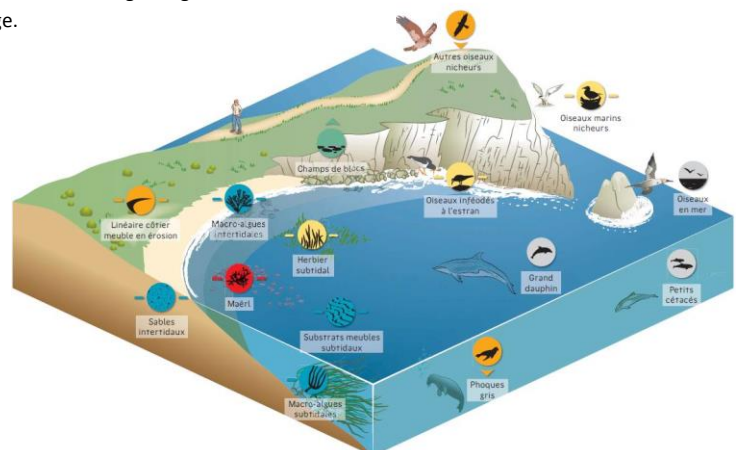
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Two screenshots of the IMNP dashboard; top: "Evolution of the indicators between 2010 and 2013"; bottom: evolution of the indicators regarding the state of the natural heritage.



9. Monitoring and Assessment for an adaptive management...

United States – NOAAs' Office of Marine Sanctuary A System-wide Monitoring for the Marine Sanctuaries



Unique sites with common needs

Every marine protected area in the National Marine Sanctuary System has its own concerns and unique requirements for environmental monitoring, but ecosystem structure and function in all areas have many similar components that interact in comparable ways. Water quality, habitat, living resources, and archaeological resources represent four common areas of interest, regardless of geography or ecosystem. Each of these can be assessed based on resource quantity and quality and resource production and loss. Furthermore, the human influences that affect the structure and function of these areas are similar and need to be considered with respect to each component of the framework.

Proposing assessment standards and methodology

For these reasons, in 2001 NOAA's **Office of National Marine Sanctuaries (ONMS)** developed a **Monitoring Framework for the National Marine Sanctuary System** (system), a document that proposes an approach to **system-wide monitoring (SWiM)**. The implementation includes a design phase where existing and emerging issues are assessed with respect to current management and monitoring programs. From this, monitoring program design and implementation requirements are identified. Numerous sanctuaries have monitoring efforts underway; however, no sanctuaries have in place a comprehensive SWiM program.

Despite the lack of a comprehensive monitoring program, ONMS has developed an approach for consistent reporting of resource conditions across sanctuaries. This includes the four primary components of the SWiM framework: water, habitats, living resources and maritime archaeological resources. For these resource types, specific questions are posed about their condition and the human activities that affect them. Each condition report addresses these questions and answers those that are relevant to the sanctuary. The questions allow for a consistent reporting method and help ONMS assess performance in relation to its resource protection mandates.



A manta ray in Flower Garden Banks National Marine Sanctuary off the coast of Florida

In 2013, ONMS completed its first round of **sanctuary condition reports for the system**, with 14 individual condition reports now published, and continues periodically evaluate progress toward protecting and restoring resource quality and ecological integrity. In these condition reports, the status and trends of resource condition are evaluated across the system, revealing general trends in resource condition, pressures and concerns, ways of addressing each, and accomplishments and gaps in conservation science for each sanctuary. Among the many pressures on the natural and archaeological resources in the system, a number stand out: marine debris, loss of biodiversity, wildlife disturbance, ship strikes, and water quality. Sanctuaries report changes in key species, which warrant special attention because of their integral role in a balanced ecosystem.

Individually and collectively, sanctuary condition reports are used to direct the course of development and support for conservation science across the national system, as well as guide sanctuary-level conservation science programming, investment and decision making. By tracking the emergence of new pressures, the evolution of responses to existing pressures and successful mitigation efforts, ONMS can effectively prioritize and manage investments in science to support resource protection and management requirements.

All the condition reports can be found at:
<http://sanctuaries.noaa.gov/science/condition>

10. Training and professionalizing staff...

The Saudi Wildlife Authority The training center for natural resources conservation



The following courses relating to marine protected area management have been conducted by the Saudi Wildlife Authority during the past five years, most of them through its Training Center for Natural Resources Conservation:

Training Courses held in the Farasan Islands Marine Protected Area

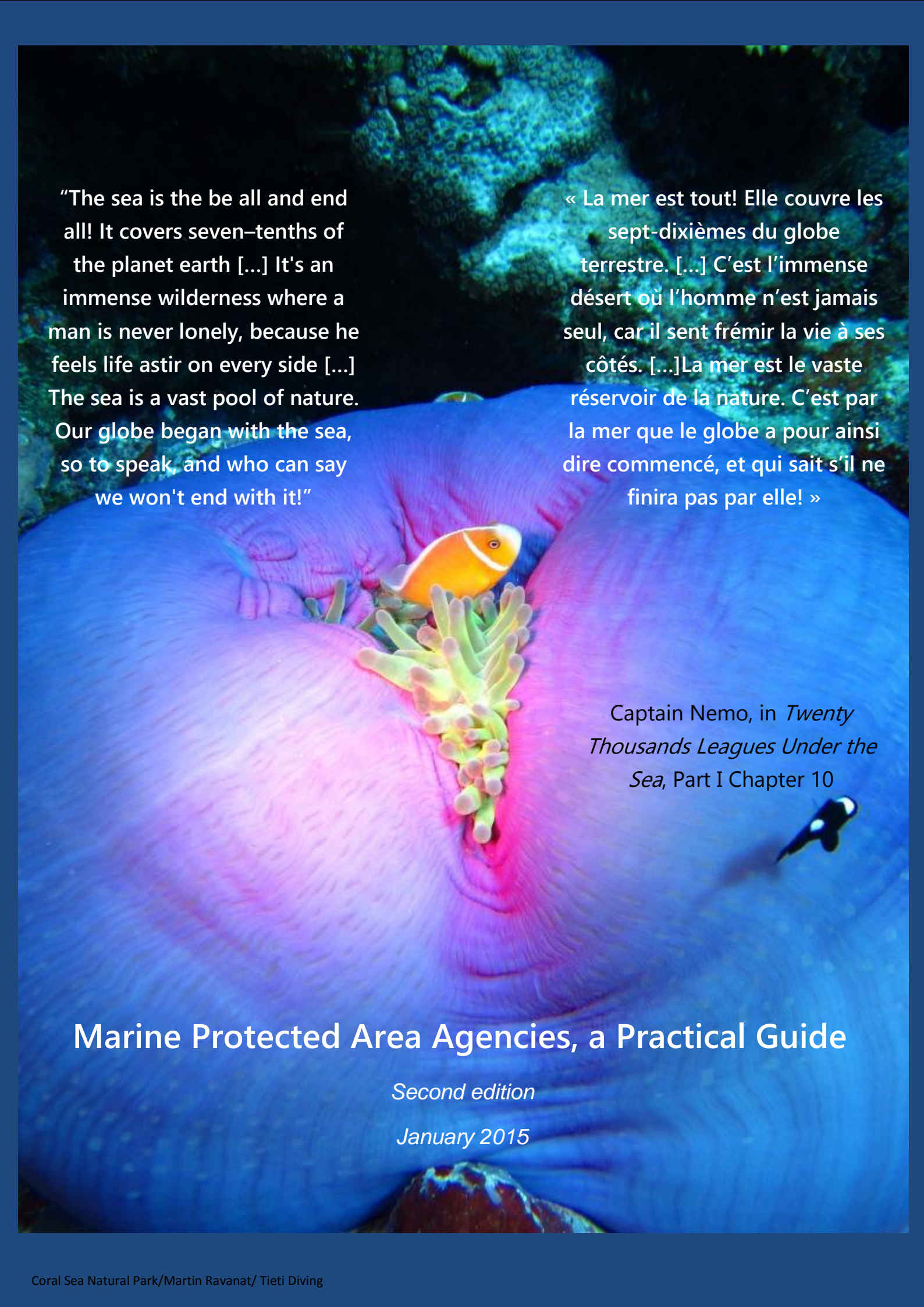
- 2009 Management Planning Training Workshop in the Farasan Islands MPA, for four newly appointed SWA protected area managers with the participation of the MPA rangers, with representatives of local communities and local government stakeholders.
- 2009 Protected Area Managers' Study Tour of the Farasan Islands MPA (in collaboration with SWA Conservation Department) 5 days. Designed for four newly appointed SWA protected area managers.
- 2009 Basic Ranger Training for the Rangers of the Farasan Islands Marine Protected Area (in collaboration with Saudi Coast Guard Training Institute and Saudi Red Crescent) 24 days. The forty rangers of the MPA were trained, covering ecology, protected areas, visitor management, dealing with violators, monitoring of violations, ecotourism, environmental awareness, interactions with local communities, occupational safety, emergencies, first aid, wireless communications, and weapons training.
- 2009 Bird monitoring, censusing, and ringing (in collaboration with At-Ta'if University) 10 days. Fifteen SWA researchers, PA managers, and rangers received practical field training in bird monitoring and censusing.
- 2010 Invasive Plant Species Management in the Farasan Islands Marine Protected Area (in collaboration with Kapi Africa – Kenya) 5 days. Fifteen SWA researchers, protected area managers, and rangers received training in control of alien invasive plants, with emphasis on North American mesquite *Prosopis juliflora*.
- 2011 Communication with Tourists (in collaboration with the Saudi Commission for Tourism and Antiquities) 2 days. All forty-four rangers of the Farasan Islands Marine Protected Area received training in skills and etiquette of interaction with tourists and other visitors.
- 2013 Training Workshop in Sustainable Financing of Protected Areas (in collaboration with Mentefactura, Ecuador) 14 days. Twenty protected area managers, heads of departments, planners, and researchers received training in financial planning for protected areas.

Training Courses held in the Jubail Marine Wildlife Sanctuary

- 2010 Restoration of Mangrove Ecosystems (in collaboration with the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden PERSGA) 5 days. Six researchers and four marine rangers were trained in mangrove ecology and methods of restoring degraded mangrove ecosystems.
- 2014 Effective Management of Marine Protected Areas (in collaboration with the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden PERSGA) 5 days. Fourteen SWA protected area managers, rangers, and researchers received training in effective management of MPAs.

Other Training Courses related to Marine Protected areas

- 2009 Study Tour of the Protected Areas of Jordan (in collaboration with Royal Society for Conservation of Nature – Jordan) 14 days. Ten trainees including SWA protected area managers, head rangers, and researchers received field training in planning and management of protected areas, within Jordanian World Heritage Sites and other protected areas, including the Aqaba Marine Protected Area.
- 2009 Study Tour of the Protected Areas and Conservation Agencies in the USA, in collaboration with the US Department of the Interior and the American Embassy. Four SWA protected area managers and four head rangers visited selected protected areas and conservation institutions, including the Monterey Bay National Marine Sanctuary and Monterey Bay Aquarium.
- 2010 Diving and Marine Ecosystems Management – Sharm el Sheikh, Egypt (in collaboration with the Training Center for Nature Conservation, Nature Conservation Sector, Egyptian Environmental Affairs Agency and the Saudi British Bank) 14 days. One marine protected area manager, one head ranger, three marine rangers, and two researchers received training in basic SCUBA diving, environmental monitoring, assessing recreational damage to coral reefs, engagement with local communities, and impacts of oil spills and tourism development.
- 2012 Protected Area Planning and Management (in collaboration with the US Fish and Wildlife Service and the American Embassy in Riyadh) 10 days. Twenty SWA protected area managers, rangers, and researchers were trained in planning and management of protected areas, including MPAs, at the SWA Training Center.
- 2012 Geographic Information Systems and Remote Sensing and their Applications in Nature Conservation (in collaboration with Nature Conservation Sector – Egypt) 10 days. Ten SWA protected area managers and researchers received training at the SWA Training Center in Riyadh.
- 2013 Integrated Coastal Zone Management (in collaboration with the UNESCO Institute for Water Education) 14 days. One marine protected area manager and one researcher in the SWA Department of Marine Studies received training in sustainable management of coastal zones at the UNESCO Institute for Water Education, Delft, The Netherlands.
- 2013 Environmental Media (in collaboration with Matthews Group and the American Embassy in Riyadh) 5 days. Twenty trainees including protected area managers, researchers, and personnel in the SWA Department of Environmental Awareness received training in strategies to raise public environmental awareness.
- 2014 Protected Areas and Ecotourism Management in Jordan (in collaboration with the Royal Society for Conservation of Nature – Jordan) 10 days. Eleven trainees, including SWA protected area managers, heads of departments, rangers, and researchers, received field training in planning and management of ecotourism in protected areas, within Jordanian World Heritage Sites and other protected areas, including the Aqaba MPA.

An underwater photograph of a coral reef. In the center, a bright orange clownfish with white stripes is perched on a yellow and green sea anemone. To the right, a diver in a black and white wetsuit is swimming away from the camera. The background is filled with various coral structures and blue water.

“The sea is the be all and end all! It covers seven-tenths of the planet earth [...] It's an immense wilderness where a man is never lonely, because he feels life astir on every side [...] The sea is a vast pool of nature. Our globe began with the sea, so to speak, and who can say we won't end with it!”

« La mer est tout! Elle couvre les sept-dixièmes du globe terrestre. [...] C'est l'immense désert où l'homme n'est jamais seul, car il sent frémir la vie à ses côtés. [...] La mer est le vaste réservoir de la nature. C'est par la mer que le globe a pour ainsi dire commencé, et qui sait s'il ne finira pas par elle! »

Captain Nemo, in *Twenty Thousands Leagues Under the Sea*, Part I Chapter 10

Marine Protected Area Agencies, a Practical Guide

Second edition

January 2015

This document was realized thanks to the participation of tenth of people from all the agencies represented. We would like to thank everyone who contributed. Particular thanks go to Lauren Wenzel of the NOAA for her time and precious advises.

As secretary of the Marine Protected Area Agency Partnership, the French Marine Protected Areas Agency assumed the leadership and coordination on this project. We would like to acknowledge the work of Maxence Chatelet who carried it out just in time for the 2014 IUCN's World Park Congress in Sydney. We would like to thank Christophe Lefebvre for providing guidance and decisive support at all stages of the guide's creation.

Finally we shall notice that given the reduced time frame, all members of the partnership could not contribute to this second edition, or not as much as they wished too.

Fortunately, this first edition is meant to be the starting point of a living process, a reference tool for the agencies to communicate about their work and progresses, so that any project of MPA network may benefit from their experiences. With this objective in mind, it is online that the near future of the MPAAP practical guide will be taking place...



**Marine Protected Area
Agency Partnership**

Front page credits

Top : *Calidris Alba* flying / Mission Golfe Normand Breton/ Laëtitia Beauverger/ Agence des Aires Marines Protégées. Bottom left : Management council of the Iroise MNP/ Maïna Besnier-Maugard/ Agence des aires marines protégées. Center: biologist working in the Ridens by 22 meters depth/ Picard Estuaries and Opale Sea MNP/Emmanuelle Donfut/ Agence des aires marines protégées. Right: demonstration of the use of a monitoring acoustic buoy/ Iroise MNP/ Julie Gourvès/ Agence des aires marines protégées

p.3 *Synodus Variegatus*/ Benjamain Guichard/ Agence des aires marines protégées

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