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ARE WE ON TRACK?

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MARINE PROTECTED AREAS FOR ANTARCTICA AND THE SOUTHERN OCEAN

The waters of Antarctica are possibly the world's most harsh yet beautiful environment. In the summer months as light reaches deeper into the icy waters of the Southern Ocean, phytoplankton and shrimp-like krill become phenomenally abundant, forming dense clouds. The foundation of the Antarctic food chain, these tiny

crustaceans are feasted upon by squids, penguins, crabeater seals and baleen whales. In turn, the prey of many larger predators such as Antarctic toothfishes, leopard seals, sperm whales and killer whales depend on these small animals. Few places in the world, if any, support greater numbers of large animals.

The ecological integrity of the Southern Ocean is at risk with the expansion of commercial fisheries, including the krill fishery. This is happening in a time of growing dangers from climate change, which could alter the ecosystem in several ways but perhaps most critically reduce the sea ice cover that krill rely on.

**It is essential that governments
act now to protect this global jewel.**

CCAMLR ACTION ON MPAS

The Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) is recognized as one of the most effective marine conservation institutions in the world. Science informed by the 'precautionary' approach and ecosystem based management is at the heart of its actions. As such, it has recognized that MPAs are a valuable tool for marine conservation.

CCAMLR has taken the following steps in recent years towards the development and implementation of MPAs in the Southern Ocean:

2005

- Scientific Committee agreed to work toward developing a system of protected areas according to certain parameters with this work being endorsed by the Commission
- It was recognized that an MPA regime for the protection of the Antarctic marine environment should be harmonized across the Antarctic Treaty System;

- Brussels Workshop on Bioregionalisation led to identification of two approaches for designating representative areas including systematic conservation planning and site selection based on broad scale bioregionalisation;
- CCAMLR XXVI endorsed the Scientific Committee's recommendation that a procedure should be established for identifying areas for protection and to further the conservation objectives of CCAMLR

In 2005, the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) recommended that these networks cover at least 10% of the world's oceans and coasts. The World Parks Congress went even further, recommending an MPA network protecting 20-30% of each marine habitat type. According to MPA Global, just 0.6% of the marine environment has been designated as MPAs. Clearly then, an enormous effort is required to meet the 2012 targets.¹⁰

2006

- Independent expert consultation identified bioregionalisation of the Southern Ocean as an important first step in the process³;

Ambitious promises...

World leaders have recognized that our oceans need urgent protection. At the World Summit for Sustainable Development (WSSD) in 2002, world leaders agreed to create representative Marine Protected Area (MPA) networks by 2012. They endorsed this in 2003 at the 5th World Parks Congress (WPC) and again in 2004 at the 7th Conference of the Parties to the Convention on Biological Diversity (CBD).

...But are they being kept?

If governments were committed to meeting the 2012 target, there would have been an unprecedented increase in MPAs designated since 2002. As of 2008, just four short years out from this target, the numbers are disturbingly low.¹⁰

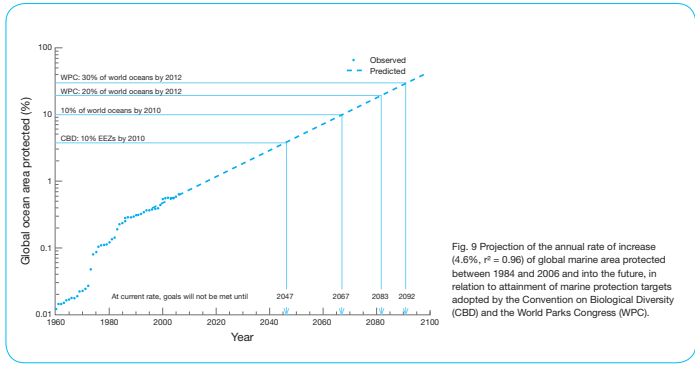
We are only on track to achieve 0.8% protection by 2012, not the 10% protection signatories agreed to.¹⁰

2007

- Brussels Workshop on Bioregionalisation⁴ demonstrated "feasibility" of a broad-scale analysis towards identifying suitable areas for MPA designation;



Governments must ACT NOW or the 2012 MPA Targets will not be met for decades¹⁰



“We will intensify our research and enhance our cooperation regarding the high seas in order to identify those habitats that merit protection and to ensure their protection.”

**G8 leaders
March 2007**

Top 10 MPAs in World and Top 10 Antarctic MPAs by size^{5,6}

Site	Designation	Total Marine Area (103 km ²)	Year Designated
Great Barrier Reef (Australia)	Marine Park	344.4	1975
Northwestern Hawaiian Islands (USA)	Marine National Monument	363.0	2006
Phoenix Islands (Kiribati)	Protected Area	184.7	2006
Macquarie Island (Australia)	Marine Park	162.0	
Galapagos (Ecuador)	Marine Reserve	133.0	1996
Greenalnd (Denmark)	National Park	110.6	1974
Seaflower (Colombia)	Marine Protected Area	65.1	2005
Heard Island and McDonald Islands (Australia)	Marine Reserve	64.6	2002
Komandorsky (Russia)	Zapovednik (Strictly Protected Nature Reserve)	55.8	1993
Wrangel Island	Zapovednik (Strictly Protected Nature Reserve)	46.7	1976
Crozet and Kerguelen Islands (France)	Nature Reserve	15.7	2006
Eastern Dallman Bay	Antarctic Specially Protected Area	.710	1991
Western Shore of Admiralty Bay	Antarctic Specially Protected Area	.175	1979
Northwestern White Island	Antarctic Specially Protected Area	.170	1985
Northern Coronation Island	Antarctic Specially Protected Area	.089	1985
Byers Peninsula	Antarctic Specially Protected Area	.066	1975
Bouvetoya (Norway)	Nature Reserve	.058	1971
Cierva Point	Antarctic Specially Protected Area	.052	1985
Marine Plain	Antarctic Specially Protected Area	.021	1996

ARE WE ON TRACK?

Worldwide Progress towards High Seas MPAs

Although designating areas for protection in the high seas is a relatively new practice, recent developments show that it is not impossible or unprecedented.

Covering an area of approximately 87,000 km², the Pelagos Sanctuary for Marine Mammals in the Mediterranean is a great example that the challenge of high seas protection and international cooperation can be met. This MPA was established in 1999 and includes national waters of Italy, France and Monaco as well as high seas waters.

At the 9th Convention for Biological Diversity in May 2008 broad scale steps essential to protect habitats and biodiversity in marine areas beyond national jurisdiction were taken when the CBD:

1) adopted a set of *scientific criteria for identifying areas in need of protection in open ocean waters and deep sea habitats*;

2) adopted *scientific guidance on designing representative networks of marine protected areas in areas beyond national jurisdiction*; and

3) urged Parties and invited other governments to *apply the criteria and guidance to implement conservation and management measures, including representative networks of MPAs in areas beyond national jurisdiction*. The CBD has also agreed to convene an expert workshop to give guidance to Parties and the UN on identifying those areas.⁷

Most recently, WWF applauded the commitment by international governments to protect a critical part of the vulnerable, highly productive and largely unexplored waters of the Mid-Atlantic Ridge, the vast underwater mountain chain in the Atlantic Ocean⁸.

Senior officials from 15 countries and the EC attending the 2008 meeting of the

Convention for the Protection of the Marine Environment in the North-East Atlantic (OSPAR) announced their agreement on a proposal for a 300,000km² area of the Mid-Atlantic Ridge and overlaying ocean to be classified as a Marine Protected Area (MPA).

For the Mid-Atlantic MPA to come into full effect, OSPAR will now work out the management with other international authorities. Notably, the North East Atlantic Fisheries Commission (NEAFC) is the management body responsible for regulating fisheries operating within the new MPA area. OSPAR and NEAFC will work together to ensure responsible management of all fishing activities within and beyond the Mid-Atlantic Ridge protected area. Within the area, NEAFC has already prohibited bottom fishing in part of the Ridge to the north and around two seamounts on a temporary basis.





High Latitude MPAs¹⁰

Summary statistics for marine protected areas (MPA) by number and area in high latitudes (>50°)

Latitude	% of world ocean	% of world MPA area	Mean MPA size (km ²)	Median MPA size (km ²)	No of MPAs	% of MPAs	No. of top 10 largest MPAs
World	100	100	544	5	4,435	100	10
>50°	33	31	699	4	1,169	26	5
>60°	21	17	1,521	7	263	6	2
>70°	11	14	7,629	398	43	1	2

Southern Ocean MPAs

Some countries – including developed and developing countries from all areas of the world – have made a good start in safeguarding the marine environment. Notable examples include Australia’s Great Barrier Reef Marine Park, Ecuador’s Galapagos Marine Reserve and the U.S. Northwestern Hawaiian Islands National Monument (362,599 km²). Most recently in August 2008 the US proposed a National Monument designation of a large area (nearly 2,331,000 km²) of the US Pacific including sites in remote Central Pacific Islands and their surrounding waters, and the world’s smallest atoll in American Samoa.⁹ If protected as proposed, this would comprise the world’s largest marine protected area.

However, of the MPAs that have been designated globally, very few are located in the southern temperate and polar latitudes.¹⁰ It has been suggested that, based on larval dispersal distances, MPA size should increase with the increase in latitude.¹¹ This has not been the trend in the global designation of MPAs. Currently, only 0.2% of Antarctic waters are identified as protected areas. Although under the jurisdiction of ATS and CCAMLR, the other 99.8% remains without adequate protection.

In the CCAMLR Area of the Southern Ocean, Australia’s Heard and Macdonald Islands (65000 km²) is the largest MPAs covering 64,598 km². Although it is in the CCAMLR Area, it is under Australian national jurisdiction and not under the Commission’s governance.

The majority of the world’s MPAs lie in temperate and tropical oceans. Polar waters are clearly lacking protection.



CCAMLR, in conjunction with the Madrid Protocol to the Antarctic Treaty, is uniquely positioned to develop high seas MPAs. In order to adequately protect the Antarctic marine environment, additional MPAs will need to be created in the high seas of the Southern Ocean

Time to get on Track

The world's leaders have repeatedly stated their intention to establish ecologically representative networks of well-managed MPAs by 2012. But they are falling way behind in reaching this target. The pieces are in place. It's time to get moving!

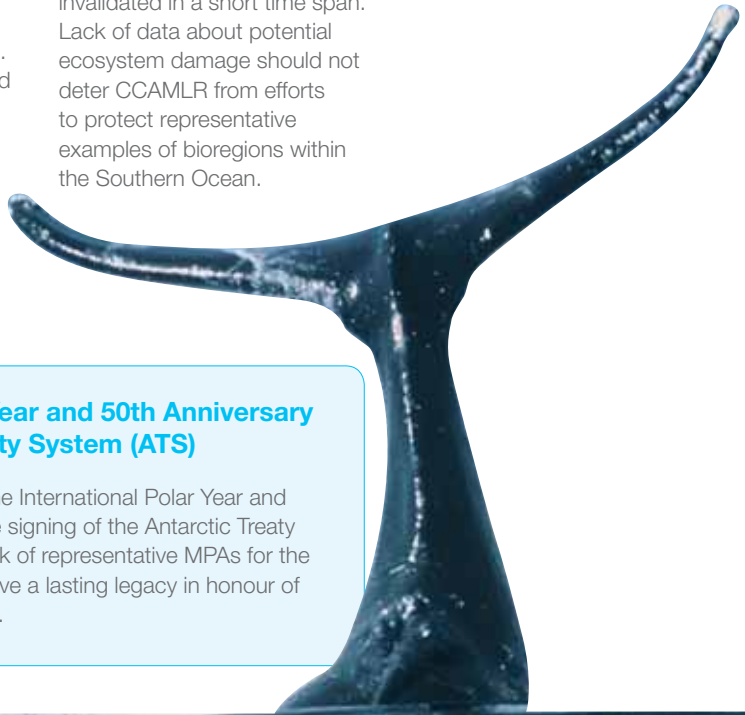
What does this involve?

Precautionary Principle. An MPA network of representative areas should be framed within the precautionary principle and be based on best available knowledge, but the absence of knowledge is not sufficient reason to preclude proactive conservation management action being taken, particularly in this age of rapid climate change when fishery management models may be invalidated in a short time span. Lack of data about potential ecosystem damage should not deter CCAMLR from efforts to protect representative examples of bioregions within the Southern Ocean.

Bioregionalisation. The 2007 Bioregionalisation Workshop established a 'proof of concept' for bioregionalisation of the Southern Ocean, which was further endorsed at CCAMLR XXVI.^{3,4} The agreed upon approach provides a sufficient biogeographical framework to immediately begin designating a fully representative network of MPAs. Fine-scale bioregionalisation should be used to enhance and improve implementation of the network.

International Polar Year and 50th Anniversary of the Antarctic Treaty System (ATS)

2009 marks the close of the International Polar Year and the 50th Anniversary of the signing of the Antarctic Treaty System. Creating a network of representative MPAs for the Southern Ocean would leave a lasting legacy in honour of these important occasions.





Representativeness.

Representativeness should be considered carefully. Because it refers to within feature diversity, true representativeness may not be indicated by a blanket 10% coverage, but rather determining what is sufficient protection will be a function of that habitat and community type, based on its distribution, uniqueness, and resilience to threats such as fishing practices and climate change.

Criteria for Protection. Criteria for the designation of Southern Ocean MPAs can be informed from many sources. The Madrid Protocol to the Antarctic Treaty and the OSPAR Commission's Guidelines for the Identification and Selection of MPAs in the OSPAR Maritime Areas provide guidance on MPA site selection.^{12,13} Further, the CBD's recent adoption of a set of scientific criteria for identifying areas in need of protection in open ocean waters and deep sea habitats and of scientific guidance on designing

representative networks of marine protected areas in areas beyond national jurisdiction should be considered alongside existing CCAMLR criteria such as representative areas, scientific areas and areas potentially vulnerable to impacts by human activities.

Legislation for high seas protection. Whereas elsewhere on the high seas, no legal mechanism exists to implement a network of MPAs, CCAMLR, in conjunction with the Antarctic Environmental Protocol, is uniquely placed, having the legal provisions to create such a network in its waters. Provisions for the development of MPAs are well established under both the Madrid Protocol and CCAMLR but, so far, have not been used to their full potential. Despite the high priority that the Antarctic Treaty System (ATS) accords to environmental protection, the development of an MPA system for the Antarctic marine environment is only in its infancy.

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“fish densities were 6 to 10 times greater than in areas outside the reserve”¹⁴

WHY CREATE MPAS?

All the world's oceans are under serious and increasing threat and the waters around Antarctica are no exception. The accelerating impacts of climate change, the unprecedented expansion of the krill fishery and the continuing activities of illegal, unreported and unregulated (IUU) fishing vessels all underscore the need for CCAMLR to adhere to ecosystem based management, apply the precautionary approach and really demonstrate leadership towards the creation of networks of representative Marine Protected Areas (MPAs) to protect these waters.

Ecologically representative networks of well-managed MPAs are essential tools for marine conservation and for delivering ecosystem-based management of the marine environment. In addition to safeguarding the full range of marine biological diversity and ecosystems on this planet, they can also provide benefits for fisheries and people.

Based on the broad scale bioregionalisation of the Southern Ocean, CCAMLR has sufficient knowledge and is well placed to progress with identifying and designating networks of representative MPAs in the Commission area.

An MPA is “any area of the intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.”¹

MPAs:

- Protect biodiversity and provide refuges for species
- Buffer habitats from the impacts of destructive fishing practices and allow impacted areas to recover

- Provide areas where fish can safely spawn and grow to adulthood
- Increase the likelihood of fish catches in surrounding fishing grounds
- Help maintain biodiversity, economies, and livelihoods
- Build resilience and provide space for adaption against environmental change, such as climate change
- Serve as benchmarks of undisturbed natural ecosystems thereby allowing human impacts to be measured comparatively to help inform management
- Can contribute to nature-based recreation and tourism and provide focal points for educating public about marine ecosystems and human impacts on them.²

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