GREENPEACE

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REVERSING THE DECLINE OF OUR SEAS AND OCEANS MARINE RESERVES AND TIMELY ACTION NOW!

BRIEFING

The life of the oceans is being destroyed. Huge ecosystems, once thought to be resilient and inexhaustible, are collapsing.

Populations of top predators, a key indication of ecosystem health, are disappearing at a frightening rate. 90% of all large fish - both open ocean species such tuna, swordfish and marlin and the large groundfish such as cod, halibut, skates and flounder - have gone since 1950[1]. The depletion of these species can cause massive shifts of entire ocean ecosystems, and fleets are fishing further down the food chain, replacing commercially valuable fish with smaller fish and simpler organisms, such as squid and jellyfish. These changes clearly jeopardise the future of those people who are dependent on the oceans for their livelihoods.

MARINE RESERVES

Marine reserves, i.e. expanses of ocean where extractive industries such as fishing and mining as well as disposal activities are prohibited, are a key tool that can help restore the huge diversity and wonderful productivity that once characterised our seas.

'It's no longer a question of whether to set aside fully protected areas in the oceans but where to establish them. We urge the immediate application of fully protected marine reserves as a central oceans management tool.' **Professor Jane Lubencho, Oregon, State University 17 Feb 2001**

There is a compelling body of scientific evidence that demonstrates how the establishment of marine reserves can both protect habitats and species and also be of benefit to fisheries beyond the reserve boundaries. The potential benefits of marine reserves are summarised in the box beside.

potential benefits of marine reserves

general:

- Increase habitat quality, species diversity and community stability
- Provide undisturbed control sites for monitoring and assessing human impacts in other areas
- Create or enhance non-extractive, non-destructive uses, including tourism
- Reduce user conflicts
- Provide opportunities to improve public awareness, education and understanding
- Create areas with intrinsic value

fishery related:

- Increase abundance, average size of target organisms, reproductive output and genetic diversity
- Enhance fishery yield in adjacent grounds
- Provide simple and effective management regime which is readily understood and enforced
- Guard against uncertainty and reduce probability of overfishing and fishery collapse
- Protect rare and valuable species
- Provide opportunities for increased understanding of exploited marine systems
- Provide basis for ecosystem management

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CBD

The ongoing degradation of the oceans has been recognised by the Convention on Biological Diversity (CBD) since its inception and the need to protect marine and coastal biodiversity was identified as an early priority at the first Conference of the Parties (CoP) in 1994. The 1995 Jakarta Ministerial Statement created a clear mandate for the protection of marine and coastal biodiversity and an expert group drew up a three-year programme of work identifying potential marine and coastal protected areas as one of five major themes.

Building on the science, the parties to the CBD took a major step forward at its most recent CoP, (CoP 7, Kuala Lumpur, Malaysia, February 2004) in committing to the establishment of a global network of marine protected areas by 2012 as set out in decision VII/28. This decision further specifies that this network should be composed of:

comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas that collectively … contribute to achieving the three objectives of the Convention and the 2010 target to significantly reduce the current rate of biodiversity loss.[2]

This commitment is consistent with the World Summit on Sustainable Development (WSSD) Plan of Implementation. This Plan promotes the conservation and management of the oceans, and agrees to develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, and the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012.[3]

The CBD's Programme of Work is explicit in stating that within the integrated network of marine and coastal protected areas there should be '**areas where extractive uses are excluded** [emphasis added], and other significant human pressures are removed or minimised, to enable the integrity, structure and functioning of ecosystems to be maintained or recovered'.[4]

Urgent action is now required across the globe to implement this decision and establish a comprehensive network of marine reserves in order to reverse the decline in our ocean ecosystems.

THE NORTH & BALTIC SEAS – Greenpeace's proposal

The North and Baltic Seas are two of the most degraded shelf seas in the world and exemplify what is happening to seas around the world. Unsustainable fisheries, oil and gas drilling and aggregate extraction are all taking a toll on these precious seas and their marine life.

Greenpeace has taken the best available scientific data relating to both the ecology of these seas and the threats, and identified seven potential marine reserves in the North Sea and ten in the Baltic[5]. Together these would form a comprehensive network of sufficient scale, (covering approximately 40% of the total sea area), that they would protect habitats and species, fish spawning and nursery grounds and ensure that the proper functioning of the ecosystem is maintained. Greenpeace is calling upon EU states to introduce a mechanism by which such large-scale marine reserves can be established inside the exclusive ecomomic zone.

Networks of marine reserves are needed not only in the North and Baltic Seas but in all regions. Such regional networks should then be linked to make up a global network.

Such a bold approach might appear uneconomic, but a 2004 study by Andrew Balmford and Callum Roberts estimated that the cost of putting 30% of the world's oceans off limits at £8 billion. This could create 1 million jobs and eventually increase the world fish catch to £44 billion.[6]

DEEP SEA ECOSYSTEMS – a special case requiring immediate and comprehensive action

It is not only the seas within country Exclusive Economic Zones that are threatened by human activities. The high seas and deep-sea ecosystems are at risk from industrial activity as ever more sophisticated technology enables us to exploit resources that were previously unavailable. In particular bottom trawling for deep-sea fish species is not only causing the collapse of target populations but also severely damaging the vulnerable ecosystems on which they depend.

"There is probably no such thing as an economically viable deep-water fishery that is sustainable...We must consider deep-sea stocks as non-renewable resources." **Callum Roberts, University of York, February 2002**

Many of these deep-sea fish species, such as the orange roughy, are found around seamounts - undersea mountains that can rise over 1,000 metres from the seafloor. Scientists studying these undersea islands have found an astonishing diversity of creatures - almost every seamount investigated is home to species that exist nowhere else.

Richer, de Forges, Koslow and Poore (Nature 2000) report that of 921 species of fish and benthic macrofauna collected on 24 seamounts in the Tasman and south Coral Seas, 16-36% were new to science and many, if not most, were potentially endemic to the individual seamounts or seamount clusters on which they were collected.

Although precise information is unavailable - only a small fraction of deep-sea seamount ecosystems have been studied - information currently available indicates that the total number of species endemic to deep-sea seamounts may range from tens of thousands to several million species. These ecosystems are amongst the most prolific and potentially diverse on the planet and by studying them it is possible that major scientific and medical discoveries will be made that will offer long term benefits much greater than the short term benefits reaped from destructive bottom trawling.

This lack of scientific information means that it is simply not possible at the present time to make informed decisions that can identify specific high seas areas in order to safeguard and conserve high seas seamounts and the biodiversity they harbour. But this lack of information does not mean that we should do nothing – as the Preamble to the CBD (1992) states, *"…that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."*

The high seas are part of our "global commons" and it is crucial that important decisions concerning their protection are made by the international community as a whole and not delayed to the detriment of the unknown species yet to be discovered in the deep ocean.

For these reasons environmentalists and scientists are agreed that in order to comprehensively protect deep-sea biodiversity, the United Nations General Assembly must pass a Resolution establishing a moratorium on high seas bottom trawling which would provide immediate and widespread protection of underwater coral forests and deep sea life. Such a moratorium would provide a "time out" to make proper scientific assessments of deep-sea ecosystems and allow the space to develop more permanent policy solutions to protect these ecosystems that are based on sound science.

1 | Ransom A. Myers & Boris Worm, "Rapid worldwide depletion of predatory fish communities", Nature 423, 280–283 (2003).

2 | UNEP/CBD/COP/7/21 Decision VII/28

3 | WSSD (2002). World Summit on Sustainable Development Plan of Implementation http://www.johannesburgsummit.org/html/documents/summit_docs/2309_planfinal.htm

4 | UNEP/CBD/COP7/L.31 Programme element 3: marine and coastal protected areas.

5 | Greenpeace (2004). Rescuing the North and Baltic Seas: Marine Reserves – A key too, The Netherlands http://eu.greenpeace.org/downloads/oceans/GPReportOnMPAs.pdf

6 | A, Balmford, P. Gravestock, N. Hockley, CJ. McClean CJ & CM Roberts, "The worldwide costs of marine protected areas" PNAS, June 29, 2004, vol. 101, no. 26, 9694-9697.