

# Towards a Strategy for High Seas Marine Protected Areas

Proceedings of the IUCN,  
WCPA and WWF  
Experts Workshop on  
High Seas  
Marine Protected Areas  
15-17 January 2003, Malaga,  
Spain

Edited by Kristina M. Gjerde  
and Charlotte Breide



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**IUCN – The World Conservation Union  
2003**



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# Preface

Vast expanses of ocean lie beyond the jurisdiction of coastal nations. They include some of the least explored and rarely studied areas on earth, as well as some of the most intensively exploited and heavily degraded environments. This contrast presents a challenge to those interested in safeguarding the marine biodiversity of the High Seas.

Marine Protected Areas are one of the tools being used to restore, safeguard and halt negative impacts on the biodiversity of the oceans. This year, in the build up to the V<sup>th</sup> IUCN World Parks Congress (8-17 September 2003, Durban, South Africa), IUCN, WCPA and WWF conducted a workshop on High Seas Marine Protected Areas from 15 to 17 January 2003 in Malaga, Spain. The aim was to develop an action plan to promote a system of such areas to ensure long-term protection of ecosystem processes, biological diversity and productivity beyond national jurisdiction. The workshop was made possible through a Planning Grant from the J.M. Kaplan Fund.

By far the largest habitat for life on earth, making up almost 80% of available volume compared to the 0.5% covered by land, oceans are the cradles of new species, habitats and undiscovered ecosystems; providing 10 to 20 % of total commercial fish catch and containing significant mineral resources. Yet these areas do not feature in a global representative protected areas system. In light of the increasing pressure on high seas resources, particularly seamounts and other seabed features vulnerable to the very serious impacts of benthic trawling for deep water fish stocks, the disappearance of fully 90% of large predatory fish populations, as well as the cumulative impact of human activities on the high seas environment, IUCN, WCPA and WWF have initiated a joint project to promote the development of a representative network of marine protected areas (MPAs) for the High Seas.

In 1988, IUCN established a program to promote a global system of MPAs. In 2000, at the World Conservation Congress, IUCN members adopted a resolution calling on IUCN to explore an appropriate range of tools including High Seas MPAs. In 2001, WWF, WCPA and IUCN commissioned a report entitled *The Status of Natural Resources on the High Seas* that assessed threats to high seas resources and reviewed some of the legal and political considerations involved in high seas conservation efforts, particularly the establishment of MPAs. These milestones fed into the High Seas Marine Protected Areas Workshop that was held in Malaga, Spain from 15-17 January. The workshop was attended by 40 leading experts on various aspects of high seas conservation.

High Seas and MPAs will be one of the key themes of the 2003 IUCN World Parks Congress. This ten-yearly event is the major global forum for protected areas. It offers a unique opportunity to take stock of protected areas; provide an honest appraisal of progress and setbacks; and chart the course for protected areas over the next decade and beyond. For more information on the 2003 IUCN World Parks Congress, please consult [www.iucn.org/wpc2003/](http://www.iucn.org/wpc2003/).

IUCN, WCPA and WWF would like to thank the J.M. Kaplan Fund for their generous support that has enabled the expansion of the joint High Seas Biodiversity and Protected Areas Project. WWF would like to additionally thank Wallenius Lines for their support.



## The editors

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## Acknowledgements

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# ***Towards a Strategy for High Seas Marine Protected Areas: Proceedings of the IUCN, WCPA and WWF Experts Workshop on High Seas Marine Protected Areas 15-17 January 2003, Malaga, Spain***

## **1.0 Overview**

### **1.1 Executive Summary**

The high seas and deep oceans are under increasing threat from human activities. The combined effects of overfishing, bycatch, habitat degradation and fishing-induced food web changes have already had significant impacts: together, they have i) altered the composition of ecological communities; ii) impaired the structure, function, productivity and resilience of marine ecosystems; and iii) placed thousands of species at risk of extinction. Shipping, deep seabed mining, scientific research and bioprospecting may also have grave impacts if not properly regulated. Climate change may cause broad-scale and uncontrolled changes to temperature levels and current systems that sustain life throughout the oceans.

Marine Protected Areas (MPAs) are a suite of tools developed in coastal waters to provide a framework for integrated area-based biodiversity conservation. Effectively managed, they can maintain ecosystem structure and function, protect habitats and species, and enable sustainable use of resources. Ranging from areas zoned for multiple uses to strictly protected areas, MPAs are flexible tools that can be molded into a variety of objectives. MPAs are not a replacement for sustainable ocean management. Rather, in light of the failure of modern management systems to stem biodiversity loss, MPAs can be a key mechanism for promoting, and the cornerstone of, integrated and ecosystem-based oceans management. Though the benefits of protected areas are now well accepted, today less than one percent of the entire oceans' surface is declared as protected and only a small portion of this is effectively managed.

In response to growing international concern, the World Summit on Sustainable Development (WSSD) highlighted the need to maintain the productivity and biodiversity of important and vulnerable marine areas beyond national jurisdiction. The world leaders at WSSD set a target date of 2012 for the completion of an effectively managed, ecologically representative network of Marine and Coastal Protected Areas and 2010 for the application of the ecosystem approach to the marine environment.

As a first step towards implementing this call to action for areas beyond national jurisdiction, thirty-eight world experts met in Malaga, Spain from 15-17 January 2003 to agree a set of actions to enable the establishment of a Marine Protected Areas network in the high seas. This workshop was organized in partnership by IUCN-The World Conservation Union, WCPA-the World Commission on Protected Areas, and WWF International, and hosted by the IUCN Centre for Mediterranean Cooperation. Invited international lawyers, scientists, marine managers, NGOs and ocean governance experts developed elements of an action plan to stimulate international action to halt biodiversity loss, protect vulnerable ecosystems and ensure sustainable use of living resources through high seas marine protected areas.

While protected areas both within and beyond national jurisdiction are urgently needed, international action is required to establish a system of MPA networks for the 50 percent of the Earth's surface (64 percent of the ocean's surface) that is beyond national jurisdiction.

The establishment of a network of Marine Protected Areas beyond national jurisdiction (High Seas MPAs or HSMPAs) represents a challenge and an opportunity to the international community. Such a network will require international co-operation at the global and regional level as well as targeted efforts to address specific requirements, objectives and circumstances.

## 1.2 Malaga Workshop Conclusions and Recommendations

The IUCN, WCPA and WWF Experts Workshop on High Seas Marine Protected Areas (Malaga, Spain, 15-17 January 2003) (Malaga Workshop) reviewed the threats to high seas resources and biodiversity and confirmed that urgent action was needed immediately to arrest their decline before it was too late. The Malaga Workshop identified the clear need to use and build upon existing legal regimes, in particular the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention on Biological Diversity (CBD), as well as the creation of new agreements compatible with this framework where necessary. Any legal framework for HSMPAs, whether at the regional or global level, should have the effect of strengthening the linkages and co-operation between states and international institutions; it should facilitate conservation and management of high seas biodiversity and ensure effective enforcement. To this end the experts proposed three priority actions:

**Coalition Building:** Establishment of expert networks among key international and intergovernmental organizations, governments, scientists, non-governmental organizations and the media to build support for high seas biodiversity conservation;

**International Recognition of the Concept of High Seas Marine Protected Areas:** Identification and use of opportunities to highlight the need for concerted action within the UN system, other international fora and the international community as a whole;

**Designation of First High Seas Marine Protected Areas (HSMPAs):** Establishment of one or more HSMPAs as “test cases,” to build experience with the practicalities of design, implementation and enforcement should be given urgent attention.

To support the activities identified above, the experts suggested the development of the following tools and supporting research:

### **Information, Networking and Awareness:**

To facilitate information exchange and access, the experts recommended the establishment of an interactive website devoted to collecting and making available the most up-to-date scientific, management, policy and legal information. Other elements include focused research, policy analyses, broad-based consultations and engagement with key industry sectors.

### **Legal Support**

To facilitate the establishment of HSMPAs, the experts recommended a process that would include: review and policy analysis of relevant existing legal frameworks for high seas conservation and governance; recommendations to harmonize and coordinate existing international, regional and national laws and policies; identification of legal gaps and the necessary action to be taken to fill those gaps; identification of options for an overall legal framework for HSMPAs including the use of existing legal instruments and the development, where necessary of new regimes; and focused international consideration for options for seamount protection.

### **Technical and Scientific Support**

To support development of a technical basis for identification, selection and management of HSMPAs, the experts recommended that activities be undertaken to: urgently establish baseline studies of marine biodiversity in representative, unique and impacted deep-sea ecosystems; draft assessment methods and criteria for determining the suitability of potential sites for designation as HSMPAs; develop draft guidelines for establishing HSMPAs; and develop a GIS database on potentially important biodiversity/productivity areas.

### **Public relations / promotion**

The experts recommended programmes to enhance support for international co-operation to protect and sustainably use high seas biodiversity. These included programmes for education, training and capacity building at the regional and national level, including assistance with the identification of potential areas that could be candidates for High Seas MPAs and development of policies to promote the use of MPAs in the context of ecosystem-based management.

### **Examples of other aims or objectives for HSMPAs discussed**

In addition to the overall objective of conservation and sustainable use of high sea biodiversity and productivity through marine protected areas, the experts noted that marine protected areas could have other values, including protecting important long-term scientific study sites and protecting historic and archaeological sites pursuant to the UNESCO Underwater Cultural Heritage Convention.

### **Areas for immediate urgent action while developing global network**

In light of the emerging and increasing threats to the high seas, the experts urged immediate action to manage and conserve vulnerable ecosystems such as seamounts, hydrothermal vents and coldwater/polar areas and to improve implementation of the legal framework for oceans governance.

## **1.3 Aim of Malaga Workshop Proceedings**

These Proceedings are offered in the hope that they will inform and inspire others to join efforts to protect the 64% of the oceans surface that is beyond national jurisdiction. This document and the four action plans produced at the workshop may serve to guide, coordinate and prioritize activities and to promote further efforts from new partners towards the development of a representative system of high seas MPAs. The four action plans identify what is to be achieved (the Objective); how it is to be achieved; who is to do it; the resources required; and the time frame.

IUCN, WCPA and WWF thank the experts participating in the Malaga Workshop for their enthusiasm and support.

### **1.3.1 Report Structure**

The Malaga Workshop Proceedings are structured in the following manner:

- Part I highlights the threats to high seas biodiversity and productivity, the need for international action, and the international response to date
- Part II reviews the workshop objective, agenda and the process followed to develop the four action plans
- Part III summarizes plenary and some breakout group discussion of the key issues, including an indication of practical steps towards development of a representative network of HSMPAs.

- Part IV summarizes the formal presentations
- Part V presents the four action plans as they were developed at the Workshop
- Part VI provides the conclusions and recommendations

### **1.3.2 Annexes**

Annex 1: Workshop Agenda

Annex 2: List of Participants

Annex 3: Scientific Background Paper: *Protecting the Natural Resources of the High Sea: the need for high sea MPAs and possible priority areas suitable for management as MPAs*, Gubbay, S., 2003.

Annex 4: Legal Background Paper: *Developing a Legal Strategy for High Seas Marine Protected Areas*

Annex 5: Action Plans as developed at Workshop

Annex 6: Expert Presentations and Papers

Annex 7: Glossary of Acronyms

## 2.0 Malaga Workshop Proceedings Detailed Report

### 2.1. Background

#### 2.1.1 Threats to High Seas Biodiversity and Productivity

Vast expanses of ocean lie beyond the jurisdiction of coastal nations. They include some of the least explored and rarely studied areas on earth, as well as some of the most intensively exploited and heavily degraded environments. This contrast presents a challenge to the achievement of international goals regarding the biodiversity of the High Seas.

Individually and collectively, the high seas<sup>1</sup> are the largest habitats of life on earth, the cradle of new species and undiscovered ecosystems. Here are just a few interesting facts that can be found in the Scientific Background Report prepared for the Workshop<sup>2</sup>:

- Long thought to be a biological desert, the deep seabed hosts a species richness that may number in the tens of millions.
- There are now at least 134 species of hard, stony (Scleractinian) corals known to live at depths greater than 200 metres<sup>3</sup>. Many species of soft and horny (Gorgonian) corals can also be found. Unlike tropical corals, deep-sea corals thrive without sunlight by capturing small food particles from the water column.
- Scientists discovered the largest known (so far) cold-water coral reef (35km. long, 3km. wide) off Rost Island in Lofoten (Norway) as recently as June 2002.
- Hydrothermal vents support some of the most unusual animal communities on the planet. These communities derive energy from chemosynthetic processes rather than the sun; they tolerate great extremes in water temperature, and survive potentially toxic concentrations of heavy metals.

Seamounts are areas of the high endemic biodiversity with little overlap in community composition between seamount clusters. Reports from scientists on the few seamounts studied report that of the 921 species of fish and benthic macrofauna collected from 24 seamounts in the Tasman and Coral seas, 16-36%

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<sup>1</sup> The workshop considered “high seas” to be comprised of those parts of the world’s oceans that lie beyond the territorial sea and exclusive economic zones (EEZ) and above the continental shelf of coastal nations. They cover an estimated 50% of the Earth’s surface, 64% of the oceans’ surface, and include the water column and the seabed beyond national jurisdiction. Volumetrically, the oceans provide more than 90% of the planet’s biologically useful habitat. Young, TR., 2003. *Developing a Legal Strategy for High Seas Marine Protected Areas*, Legal Background Paper for the IUCN, WCPA High Seas Marine Protected Areas Workshop, attached as Annex 4.

<sup>2</sup> See Gubbay, S., 2003, *Protecting the Natural Resources of the High Sea: the need for high sea MPAs and possible priority areas suitable for management as MPAs*, Scientific Background Document for the IUCN, WCPA High Seas Marine Protected Areas Workshop, attached as Annex 3. See also, Butler, A.J., Koslow, JA, Snelgrove, PVR, Juniper, SK. 2001. *A review of the Biodiversity of the Deep Sea*. Environment Australia, Canberra. [www.ea.gov/au/marine](http://www.ea.gov/au/marine).

<sup>3</sup> Cairns and Chapman, 2001. “Biogeographic affinities of the North Atlantic deep-water Scleractinia” in: *Proceedings of the First International Symposium on Deep-Sea Corals*, Willison, J.H.M., J.Hall, S.E. Gass, E.L.R. Kenchington, M.Butler and P. Doherty (eds.). Ecology Action Centre and Nova Scotia Museum, Halifax, pp. 30-57.

- are new to science and many of them could be endemic to the individual seamount or seamount clusters<sup>4</sup>.
- Despite the seeming monotony of the sediment covered abyssal plains, small and large scale habitat variations allow the development of a high species diversity that some scientists suggest may rival even tropical rainforests in terms of total species numbers.

Currently the high seas provide 10 to 20% of the total commercial sea catch. With 72 to 78% of the world's major fisheries fully exploited, over-exploited or depleted, pressures on unexploited deep-sea habitats such as seamounts are increasing. Scientists and others are worried that the increasing scale and impact of deep-sea fishing means that a "silent" (as-yet unnoticed) biodiversity crisis is already underway.

New technologies in resource exploitation (e.g. global positioning systems, multibeam sonar, stronger cables, more powerful winches, etc.), which allow access to previously inaccessible areas (e.g. down to 2000 metres) have stimulated this increased intensity of exploitation and impact. Bottom trawlers can now easily locate and harvest deep-sea fish stocks such as orange roughy that aggregate on seamounts, banks and canyon walls, destroying, with their heavy trawls, the fragile benthic coral-based communities. Such efficiency has rapidly (within 3-5 years) brought some demersal fish stocks to commercial extinction and left some important marine habitat areas barren – a calamity that is rarely noticed, as the fishers remain free to move on to the next site. The long life span, slow growth rate and low productivity of many deep-sea fish species (e.g. orange roughy may live over 100 years and reach sexual maturity at age 30) and deep-water corals means that the damage may be irreversible<sup>5</sup>.

Many ongoing threats from other types of fishing activities appear already to have reached crisis proportions:

- Long-line fisheries have incidental catches of tens of thousands of seabirds, marine mammals, sea turtles each year, creating significant population level impacts;
- Fishing gear (both active and lost) entangles critically endangered cetaceans and other species on an all-too-frequent basis.

These "by-catch mortality" problems are compounded by general problems of overcapacity, overexploitation, and the absence of incentives and effective measures to protect ecosystems and species. Their combined effect has already i) altered the composition of ecological communities; ii) impaired the structure, function, productivity and resilience of marine ecosystems; and iii) placed thousands of fish, invertebrate and other species at risk of commercial if not biological extinction<sup>6</sup>.

Other threats to high seas biodiversity are looming. Ocean-borne trade is expected to double in twenty years. Ship generated pollution including spills, intentional discharges, and noise

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<sup>4</sup> Bertrand Richer de Forges, J. Anthony Koslow, & G.C.B. Poore, 2000. Diversity and endemism of the benthic seamount fauna in the southwest Pacific. *NATURE*, Vol. 405, 22 June pp. 944-947.

<sup>5</sup> J.A. Koslow, G.W. Boehlert, J.D. M. Gordon, R.L. Haedrich, P. Lorance and N. Parin, 2000, Continental slope and deep-sea fisheries: implications for a fragile ecosystem. *ICES Journal of Marine Science*, 57:548-557

<sup>6</sup> Gubbay, S. note 2 *supra*. See, also, Dayton, PK, Thrush, S., Coleman, F.C., 2003. *The Ecological Effects of Fishing in Marine Ecosystems of the United States*, Report prepared for the Pew Oceans Commission.

will also rise, increasing the need to manage shipping effectively to reduce its site-specific as well as its cumulative impacts. The effects of certain large-scale scientific experiments, acoustic technologies and former waste-disposal sites are likely to increase if not properly controlled and monitored. Waterborne rubbish from land and sea-based sources, especially plastics, harm marine animals and act as vectors for the transport of invasive species to areas previously outside their known ranges.

Uses of the oceans are expanding as well. Deep-sea tourism and bioprospecting for genetic resources have already started. Exploitation of deep seabed mineral resources and methane hydrates is forecast to begin within the next five to fifteen years. As yet, little is known of the potential impact these activities may have on habitats and ecosystems that have evolved over the millennium to host unique and sometimes incredibly diverse communities. These activities need to be brought within a framework of sustainable ocean management that recognizes that some areas may need to be especially protected for the benefit of present and future generations.

### **2.1.2 The Need for International Action**

The legal regime of the high seas has traditionally been based on open access to resources/freedom of the seas that has often resulted in the “tragedy of the commons”. Those with access utilize common resources without control, leading ultimately to the destruction or extinction of those resources. The exploitation of seamounts is a case in point – all the more “tragic” because each seamount is in some ways biologically unique, and because the resources in question are damaged (perhaps irretrievably) by a very small group of users, whose only objective is to utilize a very small share of the potential richness of these areas.

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) established the modern framework for ocean governance, specifying rights of access but also duties to conserve living resources and protect and preserve the marine environment. Measures taken are to include those necessary to protect rare and fragile ecosystems, the habitat of rare and endangered species, and other forms of marine life.

As explained in greater detail in the Legal Background Paper prepared for the Workshop<sup>7</sup>, UNCLOS recognizes that the problems of ocean space are closely interrelated and need to be considered as a whole through an integrated, interdisciplinary and intersectoral approach. However, to date, ocean management has been fragmented and is primarily focused on national, particularly coastal waters. Expanding uses of the high seas call for new measures to implement the environmental provisions of UNCLOS. Some types of practices (e.g. benthic fishing, bioprospecting) are not yet subject to clear international agreement. Where international oceans agreements do have mandatory effect, the effect is usually limited to those countries that agree to be bound, creating a free-rider situation that can undermine the effectiveness of an existing conservation regime.

UNCLOS envisages the continuous development of international law to supplement its provisions. Where additional rules are necessary, UNCLOS calls on states to cooperate on a global or regional basis, to formulate and elaborate international rules, standards and recommended practices as well as procedures for the protection and preservation of the

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<sup>7</sup> See Young, TR., 2003. *Developing a Legal Strategy for High Seas Marine Protected Areas*, Legal Background Paper for the IUCN, WCPA High Seas Marine Protected Areas Workshop’, attached as Annex 4. See also Warner, R., 2001. *Marine Protected Areas Beyond National Jurisdiction: Existing Legal Principles and Future International Law Framework*. Environment Australia, Canberra. [www.ea.gov.au/marine](http://www.ea.gov.au/marine).



marine environment and the conservation of marine living resources. This can be done directly or through the competent international organizations (Article 197) This mandate has resulted in, *inter alia*, numerous regional seas and regional fishery agreements, a large number of legal instruments concluded under the auspices of the International Maritime Organization (IMO), and the creation of two implementing agreements linked directly to UNCLOS: “The Agreement Relating to the Implementation of Part XI of the Convention” (regarding deep-seabed mining) and the “UN Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks” (“UN Fish Stocks Agreement”).

### 2.1.3 The International Response: update to May 2003

Marine Protected Areas (MPAs) are some of the tools being used to restore, safeguard and halt negative impacts on the biodiversity of the oceans. The idea was promoted during the 1962 World Congress on National Parks and it is now an accepted part of the marine conservation programmes of many coastal nations. In 1988 IUCN adopted the goal of a global representative system of marine protected areas<sup>8</sup>. In order to complement efforts to develop national and regional systems, and with rising urgency as the level of threats to high seas biodiversity has become apparent, IUCN, WCPA and WWF, among others have realized the need for concerted efforts to expand the system to the high seas. At the World Conservation Congress in 2000, IUCN members adopted a resolution calling on IUCN to explore an appropriate range of tools including High Seas MPAs, with the objective of implementing effective protection, restoration and sustainable use of biodiversity and ecosystem processes on the High Seas.

In 2001, WWF and IUCN commissioned a report entitled *The Status of Natural Resources on the High Seas*<sup>9</sup> that assessed threats to high seas resources and reviewed some of the legal and political considerations involved in high seas conservation efforts, particularly the establishment of MPAs. Also in 2001, the German Federal Agency for Nature Conservation sponsored an Expert Workshop on the scientific requirements and legal aspects of high seas MPAs. The analytical framework and Statement of Conclusions developed at the Vilm Workshop provided a useful starting point for discussions at the Malaga Workshop on how to achieve a sound protection regime in the high seas through tools such as MPAs. By introducing the concept of HSMPAs and educating international lawyers of its meaning and intent, the Vilm Workshop helped pave the way for subsequent acceptance of this innovative and integrated approach to high seas biodiversity conservation<sup>10</sup>.

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<sup>8</sup> The resolution of the 17<sup>th</sup> General Assembly of IUCN established the following goal: “To provide for the protection, restoration, wise use, understanding and enjoyment of the marine heritage of the world in perpetuity through the creation of a global, representative system of marine protected areas and through the management in accordance with the principles of the World Conservation Strategy of human activities that use or affect the marine environment.” Kelleher, G. 1999. *Guidelines for Marine Protected Areas*, IUCN, Gland, Switzerland and Cambridge.

<sup>9</sup> “*The Status of Natural Resources of the High Seas*” (WWF, IUCN/WCPA, 2001) [www.panda.org/resources/publications/water/highseas.pdf](http://www.panda.org/resources/publications/water/highseas.pdf) or [www.iucn.org/themes/marine/pubs/html](http://www.iucn.org/themes/marine/pubs/html)

<sup>10</sup> Thiel, H. and J.A. Koslow, (eds.). 2001. *Managing Risks to Biodiversity and the Environment on the High Sea, Including Tools such as Marine Protected Areas—Scientific Requirements and Legal Aspects*: Proceedings of the Expert Workshop held at the International Academy for Nature Conservation, Isle of Vilm Germany, 27 February - 4 March 2001. BfN – Skripten 43 ([www.bfn.de/09/090203.htm](http://www.bfn.de/09/090203.htm)). See also Gjerde, K. (in press). “Overview of the Vilm Experts Workshop 2001”, paper prepared for the Workshop on the Governance of High Seas Biodiversity Conservation, June 16-20. 2003, Cairns, Australia, and Gjerde, K., 2001. “Participants Report on the Expert Workshop on Managing Risks to Biodiversity and the Environment of the High Sea” *The International Journal of Marine and Coastal Law*, Vol. 16, No. 3, pp. 515-528.

At the third United Nations Open-ended Informal Consultative Process (ICP) in May 2002, Australia and other countries and NGOs highlighted the urgent need for coordinated efforts to conserve high seas biodiversity. The ICP report called for the United Nations General Assembly to invite international and regional organizations to urgently consider how to integrate and improve on a scientific basis the management of risks to seamounts and other underwater features within the framework of UNCLOS, and to make suggestions on appropriate management action.

The World Summit on Sustainable Development (WSSD, Johannesburg, 2002) further highlighted the need for action to conserve high seas biodiversity and resources. In particular, the WSSD Plan of Implementation in its section on oceans, seas, islands and coastal areas calls for action at all levels to:

- Encourage the application by 2010 of the ecosystem approach;
- Maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction; and
- 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, time/area closures for the protection of nursery grounds and spawning periods and the integration of marine areas management into key sectors.

The United Nations General Assembly in its December 2002 Resolution on Oceans and Law of the Sea endorsed the WSSD Plan of Action and the recommendations of the ICP report, including its call for urgent action to improve the management of seamounts and other underwater features and to establish representative networks of marine protected areas by 2012.

Since the Malaga Workshop in January 2003, interest in high seas MPAs has intensified. The clearest statement regarding the need for and value of MPAs within and beyond national jurisdiction can be found in the report of the March 2003 meeting of the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA), an advisory body to the Convention on Biological Diversity.<sup>11</sup> SBSTTA recommended acceptance of the goal of representative networks of marine and coastal protected areas (MCPAs or MPAs)<sup>12</sup> and development of a strategy to meet the WSSD-agreed target date of 2012 for representative networks. MCPAs are envisaged as part of a broad marine and coastal biodiversity management framework that includes sustainable management practices over the wider marine and coastal environment, and an integrated MCPA network consisting of representative protected areas where extractive activities are excluded, and other protected areas managed for biodiversity conservation and/or sustainable use where extractive uses may be permitted.

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<sup>11</sup> The basis for these discussions was a report prepared by the Ad Hoc Technical Experts Group on Marine and Coastal Protected Areas (UNEP/CBD/SBSTTA/8/9/Add.1). Discussions at the Malaga Workshop also benefited from this report.

<sup>12</sup> The goal SBSTTA recommended for work under the Convention relating to marine and coastal protected areas calls for: "The establishment and maintenance of marine and coastal protected areas that are effectively managed, ecologically based and contribute to a permanent representative global network of marine and coastal protected areas..."(UNEP/CBD.SBSTTA.8/L.11)

Most significantly, SBSTTA recognized an urgent need to establish protected areas beyond national jurisdiction, consistent with international law and based on scientific information, and recommended that the next CBD Conference of Parties call for the Executive Secretary to work with other international and regional bodies with the specific aim of identifying appropriate mechanisms for the establishment and effective management of marine protected areas beyond national jurisdiction.

The Workshop on the Governance of High Seas Biodiversity Conservation organized by the Australian government from 17-20 June 2003 in Cairns will further accelerate practical international action as called for by the World Summit on Sustainable Development. The Cairns Workshop will involve around 125 legal, scientific and policy experts with the goal of identifying institutional gaps in the United Nations system and gaps in international governance arrangements and developing a range of approaches to reduce these gaps. Cambodia, Canada, New Zealand, the United Kingdom, the United States, UNESCO/International Oceanographic Commission (IOC), IUCN, WWF and the International Oceans Institute (IOI) are also partners in this Type 2 WSSD initiative. The results of the Malaga High Seas MPA Workshop will feed into that broader effort.

## 2.2 Workshop Objectives, Agenda and Process

This section reviews the workshop objectives, agenda and the process followed to develop the four action plans that serve as the basis for the consolidated Action Plan.

The Workshop in Malaga Spain from 15-17 January 2003 was organized with the support of the J.M. Kaplan Fund (IUCN and WCPA) and Wallenius Lines (WWF), as part of the joint IUCN, WCPA and WWF project to promote high seas marine protected areas. The Workshop was hosted by IUCN's Center for Mediterranean Cooperation and chaired by Graeme Kelleher, senior advisor to IUCN WCPA Marine and Leader of WCPA's High Seas Working Group<sup>13</sup>.

The main objective of the High Seas Marine Protected Area (HSMPA) workshop in Malaga was to "develop an action plan to promote a system of high seas protected areas to ensure long term protection and wise use of ecosystem processes, biological diversity and productivity beyond national jurisdiction". The Agenda is attached as Annex 1.

Thirty-eight participants from around the world attended the workshop: 15 law and policy experts, 11 scientists, and 12 marine management experts. Participants came from Australia, Brazil, Canada, Germany, Ireland, Italy, Monaco, the Netherlands, Poland, Portugal, Spain, Switzerland, Sweden, Tunisia, the United Kingdom and the United States. It included representatives from UN Department of Ocean Affairs and Law of the Sea, the UN Food and Agriculture Organization, the Convention on Migratory Species, Monaco's Department for International Cooperation for the Environment and Development, the Spanish Ministry of Agriculture and Fisheries, the Mediterranean Regional Activity Center for Specially Protected Areas, IUCN, WWF, Greenpeace, and the J.M. Kaplan Fund. Scientists, law professors and other marine experts from numerous research institutions and universities also attended, including the University of Alicante, Spain, Australia's Commonwealth Science and Industry Research Organization; the Scottish Association for Marine Science, Dunstaffnage Marine Laboratory; The Centre for Environmental Law, Macquarie University, Sydney, Australia; Centre GEOTOP University of Quebec, Montreal, McGill Canada; the Marine Law and Ocean Policy Centre of the National University of Ireland, Galway, Ireland; the Department of Law, University of Milano-Bicocca; the Department of Oceanography and Fisheries of the University of the Azores, and the University of Hamburg. The List of Participants is attached as Annex 2.

The workshop commenced with a morning of presentations to develop a common understanding of the scope and objectives of the workshop and the challenges ahead. Section IV below provides a summary of the presentations.

The workshop then turned to the two major tasks:

1. Defining the "road map" for HSMPAs by identifying the most important issues and concerns, as well as the interested players and stakeholders, and
2. Developing the strategies for promoting both individual sites and a representative system of HSMPAs by identifying the mechanisms, gaps, messages, timeframe, opportunities and funding issues.

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<sup>13</sup> Simon Cripps, Director of WWF's Endangered Seas Programme, and Carl Gustaf Lundin, Head of IUCN's Global Marine Programme acted as Facilitators. Kristina M. Gjerde, IUCN, WCPA and WWF High Seas MPA Project Coordinator provided the offsite preparatory activities, and Imene Meliane of IUCN's Centre for Mediterranean Cooperation organized local facilities and support.

The first task of defining the “road map” occurred in plenary and informal breakout groups, through a series of specific issue-driven questions. Participants were asked to address the following questions

- What are the issues, threats and resources the world considers the most important? In what time frame?
- Why are these issues considered important?
- Who thinks the issues are important? Who thinks the issues are not important?
- What are their primary concerns?
- How can High Seas MPAs address these issues? (This also led to a discussion of what issues High Seas MPAs cannot address)
- What can a network of marine protected areas contribute?

For the second task of defining the strategies, delegates were divided into four working groups

- a) Global Instruments (e.g. UNCLOS, CBD)
- b) Global Fisheries Instruments
- c) Regional Instruments
- d) Potential Priority Sites/Opportunities

These groups were asked to explore and identify relevant mechanisms, including hard and soft law instruments, and new technical and legal approaches, to address the following series of questions:

- What are the most useful mechanisms to promote: a) individual priority MPAs and b) a high seas MPA system? How do these relate to particular threats (e.g., fishing, mining)?
- Where are the gaps in the mechanisms? What are the opportunities and impediments to fill in the gaps?
- Who needs to work to fill gaps, promote, utilize opportunities?
- Which messages/measures are appropriate and likely to influence global decision makers?
- When—what is the timeframe for action? What are the relevant meetings, events, and globally agreed time frames? How much time do we have?
- Funding needs and opportunities
- What additional actions may be necessary?

These discussions produced four separate groups of Action Plans that are shown in Part V.

## 2.3 Workshop Discussions

Below the main components of the workshop plenary and breakout discussions are combined in a series of questions and answers.

### 2.3.1 Question: What are the issues, resources and threats that the world considers most important?

Many issues, resources and threats are important on a global basis to high seas biodiversity and productivity. Some of the most important *issues of global concern* the experts identified include: i) loss of biodiversity—encompassing genetic, species, habitat, community, ecosystem and functional diversity; ii) loss of productivity and total biomass; iii) sustainable resource use; iv) lack of scientific knowledge and research; and v) high seas governance and management, with related concerns such as compliance and enforcement, cooperation and coordination, and compatibility with the framework of UNCLOS.

*Threats of global concern* include: i) overexploitation of living resources; ii) by-catch of certain species; iii) fishing practices and gear that crush and destroy fragile habitats (e.g. cold water corals); iv) the resulting ecosystem modification and trophic level alterations; v) potential impacts of scientific research (e.g. large-scale ecosystem manipulation such as CO<sub>2</sub> sequestration; some scientists are also concerned about the potential for damage and/or conflicting uses from research concentrated at certain hydrothermal vent sites); vi) deep sea-bed mining; vii) pollution (atmospheric deposition, ship-generated, noise) ; and viii) the impacts of climate change.

*Identified resources and values of global concern* spanned from: i) biodiversity and productivity, and its importance to fish, natural products, source of recruits for living resources, food security, sustainable living resource use, and protection of charismatic species, to ii) economic values, including services with no current market value, but providing substantial economic benefit, e.g. weather modulation, CO<sub>2</sub> absorption, and iii) abstract values such as existence values, world heritage value, scientific knowledge and aesthetic value.

### 2.3.2 Question: Who thinks the issues are important? Who thinks the issues are not important? What are their primary concerns?

The high level commitments at WSSD and the UN General Assembly to high seas biodiversity conservation demonstrate that many governments are alarmed over the loss of high seas biodiversity, productivity and biomass and threats to sustainability. Many scientists, and a growing number of scientific organizations, have been vocal in their alarm over the impacts of destructive fishing practices and gear on seamounts, cold-water corals and other fragile deep-sea ecosystems, as well as on vulnerable species such as sea turtles, cetaceans and seabirds<sup>14</sup>. As evidenced by the interest in and attendance at the IUCN, WCPA and WWF High Seas MPA and the Cairns High Seas Biodiversity Conservation Workshops, a growing number of non-governmental organizations, intergovernmental

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<sup>14</sup> Scientists are also actively pursuing remedies for two other issues involving the potential for conflicting uses of research sites. The first is a form of protected area for significant research sites to ensure that the benefits of long term research and monitoring are not impinged by other human activities. The second arises from concern at hydrothermal vent sites over the need to prevent harm and manage potentially conflicting uses such as long-term monitoring, extractive sampling, and tourism.

organizations and regional institutions are also supportive of action to conserve biodiversity and ensure sustainable use.

Some within the fishing industry are clearly alarmed over threats to productivity such as the destruction of critical fisheries habitat and the impact of overfishing and chronic pollution on global fish stocks. These leaders should be identified as natural allies in promoting sustainable and ecosystem-based fisheries. Similarly, environmental leaders within the shipping and mineral mining industries who share a common long-term interest in sustainable use of the oceans should be identified and their support sought.

On the other hand, governments that condone and support illegal fishing and fail to regulate ships registered under their flags may be concerned that growing international attention to high seas issues may bring a greater attention to their lack of regulations, management and compliance. Governments with strong maritime or military interests may be concerned that HSMPA may hamper their rights to freedom of navigation throughout the high seas. Some governments, as well as the general public, might not be well informed regarding the significance of the oceans and its biodiversity, or about the threats confronting high seas biodiversity and productivity.

Education of and awareness raising among politicians, civil servants, industry, and the general public are clearly key to building broad-based support. The media can be an invaluable tool in these efforts: it will be important to develop relationships with and provide information to the media. A transparent and coherent process for HSMPA selection and management consistent with international law and based on science may minimize concerns with the concept of high seas marine protected areas. The experts recognized that such a process should recognize the legitimate rights and concerns of coastal and user states as well as other stakeholders.

### **2.3.3 Question: How can High Seas MPAs address these issues?**

It is now widely recognized that MPAs can generate a wide range of benefits, including protecting ecosystem structure, function and beauty, improving fishery yields, reducing over-fishing and by-catch in a specific area, preserving critical and sensitive habitat, allowing recovery of damaged areas, safeguarding species and genetic resources, and reducing conflict between users<sup>15</sup>. As flexible tools ranging from multiple-use to fully protected areas, MPAs can address a range of threats, including cumulative, potential and unknown, through a more integrated management approach than traditional sector-based methods. While MPAs can do little to stem global climate change, it is evident that healthy ecosystems are more resilient and respond better to a variety of consequent changes<sup>16</sup>. In the face of the failure of traditional management techniques, MPAs may offer the best insurance against mismanagement due to human error and ignorance.

MPAs are not a replacement for sustainable ocean management. Rather, in light of the failure of modern management systems to stem biodiversity loss, they can be a key mechanism for promoting, and the cornerstone of, integrated and ecosystem-based oceans

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<sup>15</sup> Full discussion of this issue can be found, inter alia, in the *Ad Hoc Expert Group's Report to SBSTTA on Marine and Coastal Protected Areas* (UNEP/SBSTTA/8/9/Add.1), which served as one of the critical background documents for workshop discussions. See also, *The value and effects of marine and coastal protected areas on marine and coastal biodiversity: a review of available information* (UNEP/CBD.SBSTTA.8/INF/12)

<sup>16</sup> MPAs can also provide leverage for the fishing industry and conservation groups to advocate for better policies on Climate Change, which scientists are now certain will cause loss of oceans productivity particularly in the polar seas and over coral reefs.

management. High seas MPAs can protect critical ecosystems and keystone species while more comprehensive management tools are developed; help raise awareness of the importance of and threats to high seas biodiversity; and provide a coordinating function to engage all relevant intergovernmental and government institutions, industry sectors, NGOs and maritime communities.

#### **2.3.4 Question: What can a network of marine protected areas contribute?**

While lack of time prevented full discussion of this issue, the scientific experts acknowledged that networks of MPAs could provide benefits beyond those of single sites<sup>17</sup>. The fluid nature of the marine environment means that a single site may not be ecologically viable, or may be vulnerable to a single catastrophe, whether natural or caused by human impact. A network can potentially protect the full range of biodiversity in a region, by i) providing linkages between individual locations so that breeding or migratory route can be protected; ii) encompassing the full range of marine ecosystems (including both representative and those that are unique or special) and protect them from human impacts; and iii) including examples of the full range of oceanic habitat types, such as shelf edge, canyons, deltaic fans, seamounts and abyssal plains. Networks of MPAs can further support sustainable use of biodiversity by protecting vulnerable life cycle stages of exploited biota, or providing refugia for by-catch species.

Long-term benefits of networks of highly protected MPAs (or MPAs zoned with highly protected components) also include safeguarding areas where natural processes are able to operate, maintaining a baseline for identifying the effects of human interventions in other areas, and providing an undisturbed area to undertake scientific work to improve our understanding of the marine environment. Most importantly, perhaps, such networks can ensure that management failures in other areas cannot result in irreversible biodiversity loss.

#### **2.3.5 Question: Why focus on the high seas when there is so much to be done in coastal and offshore waters?**

Although action at the national level is clearly of critical importance, the intensive growth of unchecked activities causing damage to or affecting high-seas biodiversity continues to escalate. These problems will require international and/or regional action. Hence, their solutions will be found only through lengthy and difficult multi-national processes, which must begin now, to minimize the amount of loss. Conservation efforts within national jurisdiction yield many examples – good and bad – and it is time to transfer good practices from these areas to tackle intensifying high seas activities proactively.

Moreover, in order to conserve marine biodiversity, efforts must span coastal zones, territorial waters, EEZs and the high seas. They cannot be easily bounded. For this reason, HSMPAs must form part of a representative global system of MPA networks that takes the connections among ecosystems into account.

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<sup>17</sup> See, for example, Ad Hoc Expert Group's Report to SBSTTA on Marine and Coastal Protected Areas (UNEP/SBSTTA/8/9/Add.1).



### **2.3.6 Question: Why is the primary focus on seamounts, deep-sea coral reefs and hydrothermal vents, and not on pelagic systems, or species such as seabirds, cetaceans, or sea turtles?**

Initially, the application of protected area design concepts and parameters is more directly relevant to benthic systems: these are more immediately suited to processes involving the defining of boundaries and particular management programmes within them. In the national experience, area-based restrictions have proven a valuable tool for protecting and managing benthic areas that are special or particularly vulnerable. It should be noted, however, that most such protections also positively impact the conservation status of pelagic fisheries, indirectly, through the conservation of particular spawning and other areas, and of more sedentary elements of the food chain on which they depend. It is anticipated that as more information becomes available regarding oceanographic “hot spots” of biodiversity and productivity, such as upwellings, fronts, and gyres—prime feeding habitats for pelagic species – these areas too will be included within the network of HSMPAs

As noted elsewhere, biodiversity conservation in any biome is not achievable with only one type of protection. HSMPAs are one tool, which should be used in conjunction with other measures, including species-specific protection measures, fishing gear and intensity restrictions, controls on species trade and management, etc. As in all types of sustainable natural resource management, it is essential that all types of tools be available, and that their use be coordinated to maximize the conservation benefit, while fully recognizing the importance of other key values, including human livelihoods and development.

### **2.3.7 Question: Why bother with HSMPAs – aren't there preexisting solutions for the most pressing problems (e.g. fishing on seamounts)?**

Such “solutions” as currently exist regarding seamount destruction are somewhat deficient in addressing this urgent problem. Despite the enlightened approach to fisheries management adopted in the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA), that agreement is still relatively new. Few Regional Fisheries Management Organizations (RFMOs) have incorporated its principles, as yet, and most are reluctant to close areas to fishing. Moreover, because high seas benthic fisheries do not normally pursue straddling or highly migratory fish stocks, it appears unlikely that benthic trawling (including on seamounts) will be covered by the UN FSA. It is encouraging to note that nascent efforts are ongoing to build a management regime in the South West Indian Ocean specifically addressing the orange roughy fishery on seamounts -- a fishery that has already been reduced to levels approaching commercial extinction (1999: 42,000 tonnes, 2002: 5,000 tonnes). To avoid other key fisheries and ecosystems coming to this pass, however, it will be important to develop and utilize other key tools, including HSMPAs, in support of these instruments.

Available tools are even less effective for addressing many other key conservation needs (e.g. hydrothermal vents, deep-sea coral communities, oceanographic “hotspots”). This lack of effectiveness is in part a function of lack of co-ordination among existing organizations and instruments. Where geographical areas are subject to protection under one international regime, they may be unprotected, or even developed, under another. For example, even if a seamount were protected from benthic fishing activities, it could still be vulnerable to impacts from seabed mining for its mineral-rich polymetallic sulphides. Achievement of the current ambitious goals of high seas biodiversity conservation and restoration must necessarily depend on an integrated approach under which all types of management tools work toward the same ends. HSMPAs can be both a mechanism for such integration (enabling many

international institutions to co-ordinate their activities in regard to specific designated areas) and a part of the larger process of integrated ocean management.

And finally, it appears that High Seas MPAs are “an idea whose time has come.” Following the WSSD and in light of collaborative work being undertaken by the CBD and United Nations Division on Ocean Affairs and Law of the Sea (UNDOALOS)<sup>18</sup>, there appears to be significant international momentum toward forward motion in relation to marine biodiversity protection, as well as a clear recognition of the need for new tools to manage risks to biodiversity on the high seas.

### **2.3.8 Where to Begin? Practical Steps Towards Development of a Representative Network of HSMPAs**

The Malaga Workshop identified a wide range of ways forward towards the goal of a representative network of HSMPA. These are explored in greater detail in the action plans developed by the four working groups depicted in Part V. This overview highlights some of the first practical steps necessary to achieve the longer-term goal.

The experts recognized that a HSMPA network will require international cooperation at the global level as well as targeted regional efforts to address specific requirements, objectives and circumstances. Action should begin immediately to i) protect seamounts and other vulnerable deep sea-ecosystems; ii) improve implementation of the existing legal framework for oceans governance; iii) utilize existing instruments and arrangements to develop the first demonstration HSMPAs; and iv) promote development of a policy framework to strengthen linkages and cooperation between states and international institutions and facilitate the conservation and management of biodiversity in the high seas and adjacent areas and ensure effective enforcement.

A project of such major proportions and significance needs to start on several fronts simultaneously. Three priority activities identified by the experts include:

**Coalition Building:** An essential first step is the establishment of expert networks among key international and intergovernmental organizations, governments, scientists, non-governmental organizations and the media to build support for high seas biodiversity conservation;

**International Recognition of the Concept of High Seas Marine Protected Areas:** It is also essential to identify and use opportunities to highlight the need for concerted action within the UN system, other international fora and the international community as a whole and to use and build on existing legal regimes such as UNCLOS and CBD;

**Designation of First High Seas Marine Protected Areas (HSMPAs):** The establishment of one or more HSMPAs as “test cases,” is essential to build experience with the practicalities of design, implementation and enforcement, as well as to promote cooperation and coordination among relevant regional and international organizations.

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<sup>18</sup> See, for example, the Joint Study on the Relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with regard to the conservation and sustainable use of genetic resources of the deep seabed (UNEP/CBD/SBSTTA/8/INF.3/rev.1).

### **a) Coalition Building**

Pressures to improve high seas governance are building in a variety of areas and sectors. A network or networks among key international and intergovernmental organizations, governments, scientific organizations, educational institutions, non-governmental organizations, committed individuals, industry leaders and the media can effect far greater changes than isolated attempts targeting one specific region (e.g. Antarctica, the Mediterranean); species (e.g. seabirds, cetaceans, sea turtles, deep-sea corals), sector (e.g. fishing, shipping, mining) or gear (e.g. bottom trawls, long-lines). Nevertheless, these efforts are essential as well and can complement the larger goal if well coordinated. For example, they can provide models of successful cooperative action with stakeholders to work from.

IUCN, WCPA and WWF are proposing the establishment of a High Seas Coalition to bring together all those with an interest in high seas biodiversity conservation. The purpose of this coalition is to promote a system of representative HSMPAs, as well as a sustainable oceans governance framework to support it. This proposal will be further discussed at the Cairns High Seas Biodiversity Workshop, and carried forward to the WCPA World Parks Congress in Durban, South Africa 8-17 September 2003. All those with an interest in taking part in this coalition are encouraged to contact one of the three organizations.

### **b) Utilizing International and Regional Fora**

There are many international and regional organizations with a key role to play in promoting biodiversity conservation and building networks of HSMPAs consistent with international law and based on science. Their meetings provide a useful platform to highlight the need for concerted action and to promote use of all appropriate tools. Examples of relevant regional and international organizations that are actively involved in high seas biodiversity conservation include:

- The UN Informal Consultative Process (ICP) has called for urgent and coordinated action to address high seas biodiversity, with a particular emphasis on seamount fisheries. In June 2003, the ICP will be dealing with topics including protecting vulnerable marine ecosystems. The Informal Consultative Process may provide a useful forum to advance international action/agreement for a unified policy framework as well as facilitating coordination, information exchange and access, networks and awareness building.
- The Convention on Biological Diversity is beginning to explore how to meet the WSSD target of representative MPA networks by 2012, including in areas beyond national jurisdiction. The 2004 Conference of Parties will be focusing on protected areas.
- The OSPAR Convention for the North East Atlantic includes high seas areas and has a goal of developing a representative network of MPAs by 2010. Other regional seas arrangements, some of which cover high seas areas, are beginning to explore how to meet the WSSD target of representative MPA networks by 2012. These are discussed in more detail below in the section on designation of the first MPAs.
- The International Seabed Authority (ISA) has management responsibility for deep seabed mineral resource related activities and is explicitly charged with protecting

- the marine environment from mining activities. The ISA is currently developing rules to regulate mining for polymetallic sulphides and cobalt crusts that occur mainly at hydrothermal vents and seamounts. The ISA is being encouraged to exercise fully its responsibility to protect and preserve the marine environment by identifying potentially vulnerable deep seabed ecosystems of critical importance and sensitivity in advance of mineral activities, where special protection from minerals activities would apply<sup>19</sup>.
- The UN Fish Stocks Agreement provides a mandate to adopt measures to ensure long-term sustainability of straddling and highly migratory fish stocks, as well as for species belonging to the same ecosystem or associated with or dependent upon the target stocks. It further contains a specific requirement to protect biodiversity in the marine environment and to apply the precautionary approach, which requires the proponents of resource exploitation to prove the sustainability of their actions. This recent agreement has great potential to improve management of high seas fisheries for the covered fish stocks, but much work is required to ensure its widespread adoption and implementation.
- The UN Food and Agricultural Organization has promoted several other instruments relevant to high seas biodiversity conservation, including the Code of Conduct and Compliance Agreement, and is starting to turn its attention to high seas/deep water fisheries. The FAO biennial meeting (COFI) can be used to raise “deep seas fisheries” issues on the agenda and call for consultation on seamount fisheries. FAO is also assisting New Zealand and Australia to organize a conference on the management and governance of deep-sea fisheries, scheduled for December 2003 in Queenstown, New Zealand.
- Many Regional Fisheries Management/Conservation Organizations have a mandate for sustainable fisheries management and some have the capacity to close areas to fisheries. Their authority could be used to ‘close’ critical conservation areas, or perhaps to establish no-take reserves.
- The new UNESCO International Convention for Protection of Underwater Cultural Heritage may be relevant for protecting high seas sites of cultural importance
- CITES has recently entered strongly into the field of high-seas biodiversity conservation – providing, through its mandate to control trade that impacts listed species status, a strong impetus for bringing national governments “to the table” to discuss the tools for species management on the high seas (including HSMPAs and other ecosystem protection).
- The Convention on Migratory Species, an agreement that focuses primarily on protecting migratory species by protecting their habitats, is active through its subsidiary agreements in the protection of a number of marine species, including cetaceans and sea turtles.

The Antarctic Environment Protocol contains an Annex V on Area Protection and Management that envisages the development of a systematic approach to the identification and establishment of protected areas including in marine areas

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<sup>19</sup> The International Seabed Authority has already sponsored a number of meetings between marine biodiversity experts and pioneer mining companies from around the world. Initial research is already taking place on the biodiversity of deep-seabed communities of the Clarion-Clipperton Fracture Zone in the Equatorial Pacific Ocean.

- beyond national jurisdiction. The Antarctic Committee for Environmental Protection and the Commission on Conservation of Antarctic Living Marine Resources are beginning to discuss the implications of Annex V as it relates to the marine environment.

### **c) Designating the First High Seas Marine Protected Areas**

To gain experience with the practicalities of site selection, management, and enforcement, the scientific experts strongly recommended early focus on identifying and promoting one or more “test” sites. Given the present gaps in information, this will help build scientific knowledge and management experience to develop the basis for a system of MPAs.

#### **Potential areas for search**

There may be a variety of areas that would present useful models for the development of a high seas MPA. The Scientific Background Paper identified seven areas or regions for further consideration as potential priority high seas MPAs<sup>20</sup>. These were very broad general areas selected to give examples for each of the major oceans of the world:

- i. *Arctic Mid-Ocean Ridge/Gakkel Ridge hydrothermal vents*: The Arctic Ridge system is the most remote and almost every segment is anomalous in some way.
- ii. *Antarctic Seamounts: The 4,000 mile long Pacific-Antarctic ridge contains a number of seamounts but little information is currently available.*
- iii. *Central Indian Ocean Ridge seamounts and hydrothermal vents*: This ridge and rift valley system contains several sites of particular interest to scientists for their previously unknown types of bacteria and unique species composition compared to other ocean mid-ocean ridges.
- iv. *Mid-Atlantic Ridge vent fields*: An area of intense scientific study, two of the proposed mid-Atlantic ridge research sites are in the high seas: the Rainbow field and the Logatchev vent field. Both sites have unique characteristics and features that distinguish them from other vent fields. The Rainbow vent field is within the OSPAR Maritime Area.
- v. *Lord Howe Seamount chain*: The Lord Howe Rise extends from the EEZs of Australia and France (New Caledonia) to international waters. As apparently isolated marine systems, the seamounts provide an exceptional opportunity to examine evolution and speciation in the deep sea.

*The European Deep Seas Transect (a proposed Unique Science Priority Area)*: This long-term research site covering the Porcupine Seabight, the Porcupine Abyssal Plain and the BIOTRANS area has provided long-term insight into deep

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<sup>20</sup> WWF's North East Atlantic Program has published briefings on four possible HS MPAs in the North East Atlantic: *Rainbow* <http://www.ngo.grida.no/wwfneap/Publication/briefings/Rainbow.pdf>  
*Logatchev* <http://www.ngo.grida.no/wwfneap/Publication/briefings/Logatchev.pdf>  
*Rockall Bank* [http://www.ngo.grida.no/wwfneap/Publication/briefings/Rockall\\_upd.pdf](http://www.ngo.grida.no/wwfneap/Publication/briefings/Rockall_upd.pdf)  
*BIOTRANS* <http://www.ngo.grida.no/wwfneap/Publication/briefings/BIOTRANS.pdf>.

- vi. sea communities and ecological processes. It is within the Maritime Area of the OSPAR Convention<sup>21</sup>.
- vii. *The Rockall Bank coral communities in the North East Atlantic*: The Rockall Bank contains extensive coral-associated communities and abundant fish stocks but is also under considerable pressure from human activities. It is also within the high seas part of the Maritime Area of the OSPAR Convention, though much of the seabed is under UK and Irish jurisdiction (continental shelf).

Working Group discussions identified six rather more specific areas based on potentially favorable political opportunities for designation as HSMPAs.

- i. *Logatchev Vent field in the mid-Atlantic ridge*: The Logatchev vent field could provide a good pilot to develop a programme in cooperation with the International Seabed Authority to preserve its unique characteristics and biodiversity.
- ii. *Tasman seamounts south of Australia*: These seamounts would provide another good example of an MPA for a representative system, in an area benefiting from experienced and friendly neighboring governments that have good relations with fishing industry and other stakeholders.
- iii. *Grand Banks, Canada*: This area is experiencing a fisheries management crisis and requires an innovative, cooperative approach to protect cod breeding grounds and restore the fishery.
- iv. *Kerguelen Island and Heard Island-McDonald Islands bordering French and Australian Antarctic territories*: Adjacent to protected areas in French and Australian exclusive economic zones, this area suffers from heavy illegal and unreported fishing.
- v. *Great Meteor Seamount*: As an area of scientific research that has developed a good knowledge of local species diversity and endemism, it would be a good candidate for protection as a Unique Science Priority Area. It is also the world's largest isolated seamount.
- vi. *Rainbow vent field of the Mid-Atlantic ridge*: Within the OSPAR Maritime Area, this unique vent field would be a potential candidate for inclusion in the OSPAR representative system of MPAs targeted for 2010. It would serve as a good pilot to develop management schemes in cooperation with scientific institutions.

### **Steps to Designation:**

The experts outlined a series of steps that can lead from site selection to the designation of the first demonstration HS MPA or MPAs. It was stressed that this process clearly required a broad based collaborative effort, with many iterative steps that need adaptation to regional and local needs and capabilities.

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<sup>21</sup> The European Deep Seas Transect is clearly one of many other valuable scientific research sites that might benefit from long-term protection. A session in the upcoming Deep-Sea Biology Symposium at Oregon in August 2003 will address conservation and human impact issues including selecting HSMPAs. See <http://www.uoregon.edu/~oimb/deepsea/frontpage.html>. Some scientists feel it may be better to wait until there is a community consensus on criteria for choice of sites before any preliminary sites are put into the system above other worthy candidate sites.

- 1) Selection of candidate sites
  - a) Collection of data on habitats, species, usage and threats
  - b) Definition of criteria
  - c) Selection of sites
  - d) Production of supporting documentation
- 2) Promotion, consultation and funding
  - a) Required throughout the process
  - b) Many different levels
  - c) Funding strategy needed early
- 3) Identify relevant authorities and interested stakeholders, including those with customary rights (Steps 1-3 need to occur from the beginning)
- 4) Gather relevant background technical, scientific and legal information, including on feasibility of management and enforcement
- 5) Prepare interest-generating proposal- a white paper to generate discussion and support
- 6) Examine available legal mechanisms that might be used to protect area
- 7) Consider socio-economic and political realities that exist for achieving success
- 8) Develop and finalize the proposal for MPA designation
  - a) Detailed technical, socioeconomic and legal analysis
  - b) Special focus on legal mechanisms or framework to make it legally binding
  - c) Conservation Report
- 9) Prepare a management plan for the protected area
- 10) Implement the designation process
  - a) Could involve several iterative steps
- 11) Designate, implement the management plan and enforce
- 12) Monitor and evaluate the success

Experience with development of MPAs within national exclusive economic zones such as off the Azores in Portugal may provide practical guidance on many of these issues.

### **Developing a legal framework**

Currently available mechanisms for the establishment and management of HSMPAs explored at the Workshop include:

- Collective action by like-minded states, e.g. through an agreement to voluntarily refrain from certain activities in order to protect an area of common concern
- Soft law Agreements, including non-binding instruments and best efforts agreements, voluntary codes of conduct, certification, and standard setting

- Promoting action through RFMOs and regional seas arrangements to develop and extend regional networks:
  - The OSPAR Convention for the North East Atlantic has a goal of developing a representative network of MPAs by 2010 including for the two thirds of the Maritime Area that lie beyond national jurisdiction.
  - The Mediterranean Protocol on Specially Protected Areas and Biodiversity provides a framework to adopt, by consensus, areas beyond national jurisdiction as Special Areas of Mediterranean Importance (SPAMIs). Parties to the Protocol are obligated to follow the management guidelines, and to apply pressure to recalcitrant third parties.
  - The Antarctic Environment Protocol contains an Annex V on Area Protection and Management that envisages the development of a systematic approach to the identification and establishment of protected areas including in marine areas beyond national jurisdiction. The Commission on Conservation of Antarctic Living Marine Resources must approve of any marine areas that may affect fisheries, but has a strong track record of ecosystem-based management and conservation.
  - Under the UN Fish Stocks Agreement, if Parties to a RFMO close certain areas to fishing, these rules arguably govern *all* FSA member states fishing in the area, even those not party to the RFMO.
- Seeking agreement of the International Seabed Authority to close the proposed area to seabed mining as part of its remit to protect the marine environment.
- Seeking agreement through the International Maritime Organization to implement measures that may be necessary to manage risks to an area posed by international shipping, e.g. designation as a Particularly Sensitive Sea Area.
- Securing support for regional measures to protect specific areas by providing for accession by other states and securing the endorsement of international organizations, such as the UNGA, CBD, ISA and IMO.
- Creating a coordinating mechanism to ensure that existing instruments governing different types of activities (e.g., fishing, mining, shipping) address threats to high seas biodiversity, including through use of HSMPAs<sup>22</sup> for example, through regular reporting by the UN Secretary General in his report on Oceans and Law of the Sea, and discussions at the UN Informal Consultative Process.

## Enforcement issues

Feasibility of enforcement may be one of the primary considerations for the first few demonstration sites. Areas already subject to high levels of illegal fishing, for example, will not be protected through the simple establishment of a HSMPA. Though it may be possible to utilize the enforcement mechanisms of the UN Fish Stock Agreement, user state and other stakeholder support may be essential.

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<sup>22</sup> The Legal Background Paper explores this subject in greater detail, and describes additional hard and soft law mechanisms.



The current practical limitations on enforceability may be of limited duration. In recent years, many have cited the need to improve compliance with international and regional regulations (e.g., shipping, fishing, dumping) on the high seas, as a major problem globally. New technologies such as transponders and satellite surveillance, as well as old-fashioned observer coverage, combined with full implementation of the UN FSA, are being developed as a result: this means that it may soon be possible to enforce international legal obligations more effectively.

## 2.4 Summary of Presentations

### 2.4.1 Scientific Background Paper: “Protecting the Natural Resources of the High Sea: the need for high seas MPAs and possible priority areas suitable for management as MPAs”

Susan Gubbay

The aim of the scientific background paper was to provide the scientific basis for an Action Plan to promote MPAs on the high seas. The paper builds on the earlier Southampton study on the *Status of Natural Resources of the High Seas*<sup>23</sup> by focusing on three priority benthic habitats/ecosystems: seamounts; cold water corals and hydrothermal vents. It identifies threats to these systems, reviews criteria that might be appropriate for HSMPAs, describes reasons why high seas MPAs are justified for these areas, the types of measures that might be considered, and identifies research needs. It also identifies seven areas or regions for further consideration as potential priority high seas MPAs. These were very broad general areas selected to give examples for each of the major oceans of the world:

1. Arctic Mid-Ocean Ridge/Gakkel Ridge hydrothermal vents
2. Antarctic Seamounts
3. Central Indian Ocean Ridge seamounts and hydrothermal vents
4. Mid Atlantic Ridge hydrothermal vents
5. Lord Howe Seamount chain
6. The European Deep Seas Transect (a proposed priority unique science area)
7. The Rockall Bank coral communities in the North East Atlantic

**Susan Gubbay** (independent marine protected areas and policy management expert) described some of the complexities of analysing and pinpointing specific threats to high seas biodiversity, for the level of information available varies greatly. In light of the dearth of information, there is a need for a proactive stance. Often the threats to a specific location can only be described in general terms, but this can be substantiated by information on real impacts in known locations. For example, the information gained from detailed scientific studies on the impact of benthic trawling on seamounts in Tasmania provided a solid basis for understanding the potential impacts of benthic trawling on seamounts elsewhere.

In terms of criteria for high seas MPAs, there is a broad base of agreement on the need to protect locations that are:

- Representative of the range of habitats and ecosystems,
- Functionally critical areas (e.g. nursery grounds, spawning sites),
- Support rare species/habitats and ecosystems,
- Support unique species or areas exhibiting high endemism; or
- Support a high diversity of species/habitats.

Practical considerations include site integrity, degree of threat and feasibility of management/enforcement.

Many high seas fisheries activities already pose threats to high seas biodiversity as a whole as well as at specific locations. Examples include seamount destruction caused by bottom trawling for orange roughy, continued depletion of e.g. sea birds due to longlining in important bird areas, and fishing to commercial extinction of long-lived, slow reproducing stocks that aggregate at certain features (e.g.; orange roughy, some sharks). Other

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<sup>23</sup> *The Status of Natural Resources of the High Seas* (WWF, IUCN/WCPA, 2001)

[www.panda.org/resources/publications/water/highseas.pdf](http://www.panda.org/resources/publications/water/highseas.pdf) or [www.iucn.org/themes/marine/pubs/html](http://www.iucn.org/themes/marine/pubs/html)

potentially damaging activities that could be regulated on an integrated basis through management of an area as an MPA include:

- Mineral Extraction
- Scientific research
- Bioprospecting/sampling
- Cable-laying
- Renewable energy generation
- Tourism (already occurring at hydrothermal vents)
- Shipping
- Marine archaeology
- Deep Ocean Disposal e.g. radioactive wastes, CO<sub>2</sub>

Thus there is a need for urgent action to begin safeguarding representative areas that are relatively natural and to prevent damage to species/habitats and ecosystems that are sensitive and vulnerable to human activity. Potential measures that might be used to manage activities inside a high seas protected area include: strategic environmental assessments of past, present and future human activities in broad areas or regions; site specific environmental impact assessments; pre-agreed management trigger points, zoning schemes (highly protected to multiple use, temporal restrictions); codes of practice; licenses with conditions, recommended areas to be avoided, effort controls; quotas and monitoring schemes involving observers and/or transponders.

The information needed to establish a system of representative MPAs for the high seas is great. Nevertheless, it is important to act now while building the scientific information base. The first few HSMPAs would greatly improve the information base regarding management and monitoring practicalities.

#### **2.4.2 Legal Background Paper: “Protecting the Natural Resources of the High Seas: Relevant policy and legal instruments and options for a strategy to protect priority areas and promote a system of MPAs”**

Tomme Rosanne Young

The aim of the background legal paper was to assist in the identification of legal and policy tools to provide the basis for a strategy to promote 1) one or more MPAs and 2) a representative system of high seas MPAs. It does this by highlighting the legal instruments and international and regional processes and institutions that may be of relevance to the development of marine protected areas in the high seas.

**Tomme Rosanne Young** (Senior Legal Officer, IUCN Environmental Law Centre) first noted the overwhelming legal and historical mandate for sustainable natural resource management, of which protected areas form an essential component. Her survey of relevant laws and policies as depicted in the paper and its appendices provides both a useful planning tool and guidance on what to expect from the various instruments and institutions.

The law and policy “tool kit” for high seas MPAs is comprised of range of options:

- Existing hard law instruments (both regional and global)
- New instruments (bilateral/trilateral, regional and global)
- Contractual instruments (public/private partnerships)
- Soft law Agreements, including non-binding instruments and best efforts agreements, voluntary codes, certification, and standard setting

There is also a range of mixed approaches, for example:

- Declarations and mandates from Conferences of the Parties (e.g. the Jakarta Mandate for coastal and marine biodiversity conservation from the Convention on Biological Diversity COP);
- Programmes for coordination and sustainable use (such as those developed at the regional level for regional seas);
- Joint work plans (e.g. a joint work plan between the CBD and Convention on Migratory Species);
- Intergovernmental coordinating groups (formal or informal); and
- Environmental Impact Assessment standards for international and regional bodies.

Hard questions remain that must be considered as the process progresses. These include:

1. How can stakeholders be meaningfully engaged in the creation of new HSMPAs?
2. How can proponents build and sustain sufficient political will to pursue the process to completion?
3. How far will political opposition extend, and what can be done to address it in a constructive manner?
4. How much and what type of evidence (scientific basis) will provide the best support for the creation and implementation of HSMPAs?
5. How can proponents approach the needs for HSMPA planning, finance and enforcement, in order to ensure that areas are more than just “paper parks”?

### **2.4.3 “Global Oceans Governance in the Spotlight”**

Simon Cripps

**Simon Cripps** (Director of WWF International's Endangered Seas Programme) highlighted current problems afflicting global oceans governance. In the realm of fisheries, these include: 1) plunging catch rates and soaring vessel capacity; 2) lack of “custodial jurisdiction” over ecosystems and stocks when these stray beyond national jurisdiction affecting the ability of (e.g.) cod stocks in Canada's Grand Banks to recover despite national efforts including a ten year closure; 3) reform of the EU's Common Fisheries Policy – plagued by concerns over where the excess capacity will go (most likely the high seas if effective fleet reduction measures are not taken); and 4) growing levels of illegal, unreported and unregulated fishing (IUU) and increasingly desperate national responses. This was recently evidenced by Australia's hot pursuit of a vessel spotted illegally fishing in Australian waters all the way to Namibia and South Africa. In 2002, Australia declared a 6,460,000-hectare marine reserve surrounding its sub-Antarctic Heard Island and McDonald Islands, but this can do little to curb illegal toothfish fishing in adjacent high seas waters.

From the energy side, there are increasing amounts of oil being transported in aging ships run by mirage companies that are difficult to identify and to hold responsible for damage from oil spills. The Prestige oil spill highlighted this system in chaos. The Iraq crisis only serves to underscore the need for stable energy supplies (as well as reduced demand). This may instigate greater demands on the deep seas for energy from such untried sources as gas hydrates.

The good news is that as a result of this “chaos without liability” that marks current high seas governance, national ministers at the World Summit on Sustainable Development have delivered a strong mandate with timelines to restore fish stock to maximum sustainable yield by 2015 (where possible) and to establish a representative network of marine protected areas by 2012. Recognition of the need to transform high seas governance has never been higher making this an opportune time to act.

#### **2.4.4 “Case study on the International Sanctuary for Mediterranean Marine Mammals in the Ligurian Sea, the first regionally agreed MPA with a high seas component”**

Giuseppe Notarbartolo di Sciara, Tullio Scovazzi and Patrick van Klaveren,

**Giuseppe Notarbartolo di Sciara** (WCPA Mediterranean Coordinator) led off this group presentation on the International Sanctuary for Mediterranean Marine Mammals in the Ligurian Sea. The Sanctuary is a large protected area (almost 90,000km<sup>2</sup>), including shallow coastal and deep pelagic habitats, comprising the territorial waters of France, Italy and Monaco and the Mediterranean high seas. The impetus for the sanctuary came from findings in the 1980s of rich pelagic mammal fauna in the area (eight species) attracted by rich primary productivity, and that the area was suffering from serious conservation problems from fishing (e.g. driftnets), pollution, collisions, disturbance and, in perspective, global change. Implementation of conservation measures was hindered by the fact that most of the habitat is in international waters beyond 12 miles from the coast (no EEZs have been declared in the Mediterranean). Thus a search began at the very local/grassroots level for novel initiatives in the field of international law to protect the Mediterranean cetaceans.

Protection began by a series of Italian ministerial decrees setting the area off limits to most Italian driftnets (1990), followed by a proposal to establish the area as a Biosphere Reserve (1990), which resulted in a trilateral Declaration of Intent for the creation of the Sanctuary (1993) and eventually a formal legal agreement signed by Environmental Ministers (1999). This agreement was the product of local activism, scientific and NGO cooperation, community organization support, educational seminars for decision makers, lawsuits by NGOs, and development of a supportive international legal framework at the Mediterranean level, as will be described by Prof. Tullio Scovazzi. The area was approved by parties to the 1995 Barcelona Protocol on Specially Protected Areas and Biodiversity and inscribed in the list of Specially Protected Areas of Mediterranean Importance (2001). The trilateral agreement finally came into force in 2002.

**Tullio Scovazzi** (Professor of International Law, University of Milano-Bicocca, Italy) continued by describing steps after the 1993 non-binding political declaration. There was still a perceived need to move to a binding legal instrument. Thus local experts began work both on drafting a trilateral management agreement between France, Italy and Monaco, and on updating the 1972 Specially Protected Areas Protocol to extend its coverage to the high seas.

The resultant Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995, into force 1999) applies to all marine waters of the Mediterranean, including the seabed. Much of the Mediterranean beyond 12 miles from shore still has the status of the high seas for a series of complex legal and political reasons, but the nations recognized the need to treat the sea as a whole and agreed that existence of such legal questions should not jeopardize the adoption of necessary conservation measures. The Specially Protected Areas and Biodiversity Protocol provides for the establishment of a List of Specially Protected Areas of Mediterranean Importance (SPAMI List). The criteria and procedures for designation are specified in the Protocol. For areas wholly or partly on the high seas, the proposal must be made “by two or more neighbouring parties concerned, and the decision to list the area must be taken by consensus.” Once the areas are included in the list, all contracting parties agree to comply with the measures applicable to the SPAMI, and not to authorize or undertake any activity contrary to the area’s objectives. To deal with the problem that treaties can produce rights and obligations only among parties, third parties and international organizations are invited to cooperate in the implementation of the Protocol, and parties are to ensure, consistent with international law, that no one engages in any activity

contrary to the principles and purposes of the Protocol. Thus every party has an obligation to enforce measures on ships flying their own flag and third party states, albeit within the limits of international law.

As developed, the Sanctuary Agreement is a comprehensive agreement between the three countries to ensure a favorable state of conservation for the eight marine mammal species, and to protect them and their habitat from negative impacts, both direct and indirect. It also prohibits the deliberate taking (including killing or harassing) of marine mammals, other than for urgent situations or in-situ scientific research. The Agreement is linked to the SPAMI Protocol, as the three Parties agreed to submit a joint proposal to list the area as a SPAMI as soon as the Protocol came into force. The Agreement came into force on 21 February 2002, after the area had already been recognized as a SPAMI.

**Patrick van Klaveren** (Technical Councilor, International Cooperation for Environment and Development, Monaco) provided information on the implementation of the Agreement and management of the Sanctuary. The first Conference of Parties took place in February 2003. Italy, France and Monaco are in the process of drafting a Management Plan. All decisions related to management structures and ad hoc technical Committee would be taken during development of this plan.

Those in charge of managing the Sanctuary are interested in applying the “ecosystem based management approach” and ensuring the participation of all users, but these approaches were sometimes a challenge to apply in actual practice. Another challenge was balancing the need for more data and the need to take decisions before all was known, a challenge common to all MPAs, not just high seas ones. Several tough questions for management and enforcement remain, brought about by some continued competition between fisheries and cetaceans, scientific requests for non-lethal sampling and disturbance of cetaceans, and an increasing whale watching industry. Moreover, international and domestic maritime traffic may pose a threat of pollution and other impacts.

#### **2.4.5 “Update on the Protection of Oceanic Areas around the Azores”. (Paper by F. Tempera, R. Serrão Santos, A. Colaco & F. Cardigos of the Department of Oceanography and Fisheries, University of the Azores)** Fernando Tempera

**Fernando Tempera** (research assistant to Dr. R. Serrão Santos at the University of the Azores) presented a joint paper on the protection of oceanic areas around the Azores. The Azores are an oceanic archipelago in the Macaronesian region, located at and divided by the Mid-Atlantic Ridge. This unique location enables the study of hydrothermal vents and seamounts in the proximity of the islands. With an EEZ that spans 1 million km<sup>2</sup>, the Azores has been a leader in the development of offshore MPAs, with the first offshore (beyond 12 miles) Special Area of Conservation (SAC) of the EU NATURA 2000 network - D. Joao de Castro Bank (shallow seamount and hydrothermal vent field). Management plans for SACs have already been prepared and are in the process of governmental review for several protected areas including an offshore case in Formigas Bank<sup>24</sup> (shallow seamount).

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<sup>24</sup> Tempera, F., P. Afonso, T. Morato, S. Gubbay, T. Dentinho, F. Cardigos, M.J. Pitta & R. Serrão Santos. 2001. Technical-Scientific Planning Proposal for the Formigas Islets and Dollabarat Reef SAC (in Portuguese). Departamento de Oceanografia e Pescas da Universidade dos Açores, Horta. *Arquivos do DOP*. Série Relatórios Internos, nº 4/2001, v+17 pp.

The EU-funded OASIS<sup>25</sup> project on seamount biology, oceanography and management needs has one study site in the Azores (Sedlo Bank). Among the results of the project will be the elaboration of a model seamount management plan and possibly the proposal for at least one area as an OSPAR MPA.

There are two key deep-sea hydrothermal vent fields inside Portugal's EEZ (Menez Gwen and Lucky Strike) and two just beyond national jurisdiction (Saldanha and Rainbow). Each has distinct geological, geochemical and ecological features. Management plans for the Menez Gwen and Lucky Strike vent fields were developed at a workshop in June 2002. The workshop report<sup>26</sup> and the draft management plan are under consideration by regional and central governments. Proposed regulations include a prohibition on fisheries and commercial exploitation of mineral, geothermal and biotechnological resources, permit requirements for scientific research and tourism, accompanied by separate codes of conduct for research and tourism.

#### **2.4.6 “Towards a System of High Seas Marine Reserves”**

Matthew Gianni

**Matthew Gianni** (independent expert on high seas fisheries policy) presented a strategy to achieve, within a period of 3-5 years, a global agreement for a large-scale system of marine reserves for seamounts, deep-sea ridges and plateaus on the high seas through first obtaining a moratorium on fishing on seamounts on the high seas. This idea would attempt to develop a resolution similar to the UN General Assembly Resolution in 1989 that first called for a moratorium on large-scale driftnet fishing, unless and until it could be proven that this fishery could be managed sustainably. Such a moratorium on seamount fishing would be intended to “buy time” for the development of permanent protection mechanisms.

Several arguments support this type of approach: (i) seamounts are already on the international agenda; (ii) the seamount fishing issue is more manageable than, for example, negotiating high seas MPAs involving multiple extractive industries; (iii) the scientific case against fishing on seamounts is very strong; (iv) the political/legal arguments are also strong, and can cite a number of important agreements, declarations and resolutions adopted over the past ten years; (v) the economic value of fishing on seamounts on the high seas is relatively small (few countries that have a significant financial stake in the industry, so that it may be much easier to restrict deep-sea fishing now, rather than in ten or twenty years time); and, (vi) if successful, a global agreement of this nature could serve as a powerful precedent for establishing marine reserves inside EEZs as well as MPAs covering other activities (e.g. oil and gas, mining etc) both on the high seas and within areas of national jurisdiction.

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<sup>25</sup> Information on the OASIS project can be found at [www.rz.uni-hamburg.de/OASIS](http://www.rz.uni-hamburg.de/OASIS).

<sup>26</sup> Santos, R.S., A. Colaço, S. Christiansen, E. Carqueijeiro & M. Ruivo (eds). in press. Planning the Management of Deep-sea Hydrothermal Vent Fields MPAs in the Azores Triple Junction. *Arquipélago*. Life and Marine Sciences. Suppl. 4.

#### **2.4.7 Updates on “Unique Science Priority Areas” and OSPAR MPAs (on behalf of Henning von Nordheim, Chair of the OSPAR Marine Protected Areas Working Group)**

Hjalmar Thiel

**Hjalmar Thiel** (retired benthic deep-sea ecologist) has been an active proponent of protected areas for long-term scientific study sites. A recent article he has written on these “Unique Science Priority Areas” has been received with great interest. The article has been distributed to 6500 marine scientists, policy makers, and others interested in marine science in Europe, and will be reprinted in two international scientific deep-sea newsletters. It has even been translated into Russian. Arguments for protection of these sites are not directly biodiversity based, but rather to protect hot spots of science from outside disturbances. Professor Thiel's concerns had been purely theoretical and anticipatory until recently, when scientists returning to a long-term research site in the North East Atlantic were refused permission to sample after a cable company had laid a cable too close to the site. This long-term research site is now inaccessible to scientists. Unique Science Priority Areas could be managed separately from MPAs, but would have many indirect biodiversity benefits.

The OSPAR Convention (Paris/Oslo Convention for the North East Atlantic Maritime Area) covers the marine environment from the Arctic down to Gibraltar and west to the Mid Atlantic Ridge (42°W), two-thirds of the area is beyond national jurisdiction. Parties to OSPAR have committed to establishing a network of effectively managed MPAs by the year 2010. In June there will be an Environment Minister level-meeting for all the Parties. The OSPAR Biodiversity Committee is in the process of establishing an integrated system of MPAs for the whole region, including the high seas and hopes to have a set of proposals by 2005. NGOs have been invited to prepare and submit proposals for potential high seas MPAs.

#### **2.4.8 “European Fisheries Law and Marine Protected Areas”**

Ronan Long

**Ronan Long** (Research Director, Marine Law and Ocean Policy Centre, National University of Galway, Ireland.) highlighted the size and importance of the European fishing industry, the third largest after China and Peru. Of European Union members, Spain and Greece had the largest fishing fleets and the largest number employed in the fishing sector. Progress on high seas marine protected areas is more likely if the EU can be convinced to provide its support, as any agreed measures would bind 15 member countries and ultimately the 10 accession countries.

The MPA issue must be resolved in the context of EU Fisheries Policy. There is supportive hard law basis for MPAs, but slow progress in developing the soft law and obtaining political commitment.

Developments in fisheries policy for EU members are made at the Community level, and have several components and elements. 2002 saw a major policy review of the Common Fisheries Policy, and one of the major aspects was how to make fisheries policy and practices more compatible with marine environmental and biodiversity protection. The guiding international legal framework for EU fisheries law is UNCLOS, the UN FSA, the FAO Code of Conduct for Responsible Fishing, and the Compliance Agreement. The EC Treaty sets up a framework for sustainable development, integration of environmental protection into sectoral activity, prudent use of natural resources, and application of the precautionary principle.



The EU Biodiversity Action Plan for Fisheries contains some specific elements relevant to high seas MPAs but is more focused on the role of wider conservation measures. In response, the European Council has emphasized the need to study the possibilities of enlarging the set of available management tools including real-time area closures, marine protected areas to enhance protection of marine biodiversity and measures to protect, restore or improve habitats for specific species. The objective of protecting and preserving living aquatic resources and limiting the environmental impact of fishing is now firmly embedded in EU Council regulation No. 2371/2002, as are the call for a marine ecosystem approach and a consultative role for stakeholders.

For future planning, Professor Long noted the importance of linking HSMPAs with multilateral frameworks, using current laws, structures and processes, and empowering the stakeholders with responsibility.

#### **2.4.9 “The Role of Science: A deep-sea biologist’s perspectives”**

John Gage

**John Gage** (Deep-Sea Benthic Group, Scottish Association for Marine Science, Dunstaffnage Marine Laboratory) pointed out that the vast majority of the deep-sea bottom beyond the outer continental shelves is in fact mud and sediment-covered abyssal plain. Though greater attention was currently being paid to hard bottom communities such as seamounts and cold-water corals, the abyssal plain was also rich in species diversity. Studies in the 1990s of just one small site (21m<sup>2</sup>) held 798 species among the 90,672 individuals (excluding colonial epizooties); fifty eight percent of these species were new to science.

We are at a crossroads where decisions now made will have far reaching implications for biodiversity in the deep ocean. Science has made great advances in understanding the chief scales of variability of species richness, but there remain many uncertainties. We scarcely know enough to begin to guess at likely sensitivities of species.

Science itself (from seabed collection, experimental manipulation) has been recognized as a possible major influence in natural deep-sea biodiversity, but if scientific sites are to be protected as special areas, site selection must be subject to full scientific scrutiny with proper criteria for selection applied.

From a pragmatic point of view, can we afford and do we need a comprehensive precautionary approach? Knowledge of what humans have already wrought in shallow waters through historical over fishing may be a strong reason to act now to prevent it from happening again in deep waters. We already know that benthic trawling leaves lasting scars, even at a muddy bottom at 1427 meters deep. More striking images are from the impacts of trawling on cold-water corals, through comparison of photographs of the complex, delicate branches of the reef-forming cold-water coral *Lophelia pertusa* at the Sula Ridge in Norway, an area now closed to trawling, with the flat and barren landscape strewn with coral rubble in trawled areas. Fishing also leaves huge amounts of discards; from deep-sea trawls this may be more than 50% of the total catch, and will be dumped back as dead biomass. Thus the question we must consider is whether we are willing to accept for our high seas the same fate as we have in the northern North Sea, a brown-field site of oil and gas and fisheries?

## **2.5 Workshop Action Plans**

Overview: The Workshop developed four groups of action plans divided by 1) Global Instruments (General); 2) Global Fisheries Instruments; 3) Regional Arrangements; and 4) Potential priority sites/opportunities. For each section, the action plan identifies goals, objective, delivery mechanisms, key players and a timeline to achieve the agreed objectives. Thus rather than one action plan, four groups of action plans were developed at the Workshop.

**Group A Global Instruments and Institutions** covered several approaches such as collective action by like-minded states; utilizing regional seas instruments; securing wider support for regional and/or like-minded agreements; sector-specific HSMPAs to protect biodiversity from minerals activities (International Seabed Authority), fishing activities (RFMOs), and scientific research (e.g. voluntary professional code). It also considered more comprehensive approaches that might be utilized for creating a coherent framework for HSMPAs, such as United Nations Convention on the Law of the Sea, the Convention on Biological Diversity, or institutions such as the UN Informal Consultative Process, and appropriate conservation measures under the Convention on Migratory Species and the United Nations Fish Stocks Agreement.

**Group B Global Fisheries Instruments and Institutions** covered international and regional fisheries-related agreements, voluntary codes of conduct and other opportunities for promoting the adoption of an ecosystem-based management framework that promotes and endorses a network of HSMPAs. Opportunities for engaging the fishing and seafood industries were also explored. The group developed a sub-action plan specific to protection of the biodiversity of seamounts, cold-water corals hydrothermal vents and other sensitive deep-water habitats from fishing activities.

**Group C Regional Arrangements and Legal Framework** covered regional agreements and institutions by developing a road map for establishing HSMPAs through regional mechanisms, with specific sub-action plans for the North East Atlantic and Mediterranean.

**Group D Potential Priority Sites/Opportunities** developed examples of a framework or template to enable, facilitate and assist in the establishment and implementation of a HSMPA on a site-specific basis. As initial tests of this approach, this group developed initial draft action plans for six different sites, which are purely indicative and not conclusive. Areas discussed included:

- Logatchev vent areas in the North East Atlantic
- Tasman Sea seamounts (Australia, NZ and France neighbouring countries)
- Grand Banks (off Canada in North west Atlantic)
- Sub-Antarctic waters contiguous with existing French and Australian MPAs
- Great Meteor Seamount in North East Atlantic
- Rainbow vent field in North East Atlantic waters inside area of relevant regional agreement (OSPAR)

## 2.6 Conclusions and Recommendations

The Workshop delegates concluded that urgent action was necessary to arrest threats to high seas biodiversity and productivity. The experts developed four action plans to guide, coordinate and prioritize activities and to promote further efforts from new partners. They also urged that additional mechanisms be considered to 1) protect seamounts in the short term and 2) improve implementation of the existing legal framework for oceans governance. Almost all expressed a high degree of enthusiasm and willingness to participate as actors in implementation of the Action Plan.

To this end, the experts proposed three priority actions.

**Coalition Building:** An essential first step is the establishment of expert networks among key international and intergovernmental organizations, governments, scientists, non-governmental organizations and the media to build support for high seas biodiversity conservation;

**International Recognition of the Concept of High Seas Marine Protected Areas:** Identification and use of opportunities to highlight the need for concerted action within the UN system, other international fora and the international community as a whole;

**Designation of First High Seas Marine Protected Areas (HSMPAs):** the establishment of one or more HSMPAs as “test cases,” to build experience with the practicalities of design, implementation and enforcement should be given urgent attention.

To support the activities identified above, the experts suggested the development of the following tools and supporting research:

#### **Information, Networking and Awareness**

To facilitate information exchange and access, the experts recommended the establishment of an interactive website devoted to collecting and making available the most up-to-date scientific, management, policy and legal information. Other elements include focused research, policy analyses, broad-based consultations and engagement with key industry sectors.

#### **Legal Support**

To facilitate the establishment of HSMPAs, the experts recommended a process that would include: review and policy analysis of relevant existing legal frameworks for high seas conservation and governance; recommendations to harmonize and coordinate existing international, regional and national laws and policies; identification of legal gaps and the necessary action to be taken to fill those gaps; identification of options for an overall legal framework for HSMPAs including the use of existing legal instruments and the development, where necessary of new regimes; and focused international consideration for options for seamount protection.

#### **Technical and Scientific Support**

To support development of a technical basis for identification, selection and management of HSMPAs, the experts recommended that activities be undertaken to: urgently establish baseline studies of marine biodiversity in representative deep-sea ecosystems; draft assessment methods and criteria for determining the suitability of potential sites for designation as HSMPAs; develop draft guidelines for establishing HSMPAs; and develop a GIS database on potentially important biodiversity/productivity areas.

#### **Public relations / promotion**

To enhance support for international co-operation to protect and sustainably use high seas biodiversity, the experts recommended programs for education, training and capacity building at the regional and national level, including assistance with the identification of potential areas that could be candidates for High Seas MPAs and development of policies to promote the use of MPAs in the context of ecosystem-based management.

#### **Examples of other aims or objectives for HSMPAs discussed**

In addition to the overall objective of conservation and sustainable use of high sea biodiversity and productivity through marine protected areas, the experts noted that marine protected areas could have other values, including protecting important long-term scientific study sites and protecting historic and archaeological sites pursuant to UNESCO Underwater Cultural Heritage Convention.

#### **Areas for immediate urgent action while developing global network**

In light of the emerging and increasing threats to the high seas, the experts urged immediate action to manage and conserve vulnerable ecosystems as requested by the UN General Assembly in its 12 December 2002 Resolution on Oceans and the Law of the Sea, and to improve implementation of the legal framework for oceans governance.

## **2.7 Annexes**

Annex 1: Workshop Agenda

Annex 2: List of Participants

Annex 3: Scientific Background Paper: *Protecting the Natural Resources of the High Sea: the need for high sea MPAs and possible priority areas suitable for management as MPAs*, Gubbay, S., 2003.

Annex 4: Legal Background Paper: *Developing a Legal Strategy for High Seas Marine Protected Areas*

Annex 5: Action Plans as developed at Workshop

Annex 6: Expert Presentations and Papers

Annex 7: Glossary of Acronyms

The following annexes will be made available as separate downloads

**Annex 1**

**Annex 3**

**Annex 4**

**Annex 6**

Please scroll down for other available annexes.

## Annex 2

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15-17 January 2003

Malaga, Spain

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## Draft Action Plan – HSMPA Workshop, Malaga, 14-17 January, 2003

**Draft Action Plan  
Group A Global instruments (General)**

**Goal: To promote high seas biodiversity conservation using MPAs**

**Objective: a coherent and transparent framework for establishment of HSMPAs**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>  | <b>Target Audience</b>   | <b>Actors</b>                                  | <b>Schedule</b>   | <b>Resource Needs</b>                               | <b>Funding Possibilities</b> |
|---|---|---|--|--|---|---|------------------------------|
| 1 | At the UN Informal Consultative Process meeting in June 2003: a) highlight role and value of MPAs to protect “vulnerable marine areas”, including in high seas areas; b) highlight value of information gleaned from preparation of nautical charts to identify particularly sensitive benthic habitats; and c) promote concerted action to address risks to seamounts and other aspects of biodiversity. | (a) assist in pre-meeting activities, (b) submit report of IUCN WWF workshop 2003, (c) organize side event, | Intergovernmental Organizations, Governments, Maritime Community, Fishing Industry   | IUCN, WWF, Greenpeace                          | (a) Start time: February 2003; (b) Before June 2003; Key dates: ICP June 2-6 2003 |   |                              |
| 2 | Obtain formal endorsement from World Parks Congress to develop criteria and guidelines on HSMPAs  | Develop a proposal to WPC   | WCPA, WPC participants and organizations they represent  | IUCN Marine, WCPA Marine, IUCN CEL, Greenpeace | Now to September  | Staff time, workshop participant time, travel costs | Kaplan Fund/Govts            |
| 3 | Encourage adoption of mutually consistent criteria and guidelines for establishment of HSMPAs, through CBD, regional seas agreements and possibly other biodiversity-related conventions and instruments  | Prepare draft criteria and guidelines   | Convention on Biological Diversity, Convention on Migratory Species, United Nations General Assembly and DOALOS, IUCN, WCPA, WWF | IUCN, WCPA, WWF and other partners             | After WPC within 2 years  | Staff time, workshop participant time, travel costs | Kaplan Fund/Govts            |

|   | <b>Action Steps</b>  | <b>Sub Steps</b>  | <b>Target Audience</b>                               | <b>Actors</b>  | <b>Schedule</b>  | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|---|--|---|--|--|--|-----------------------|------------------------------|
| 4 | Explore the utility and feasibility of the following options as global frameworks for establishment of HSMPAs: -- establish HSMPAs and a network through the MAB Program; --establish a specific mandate under CBD for establishment of HSMPAs; --establish a specific mandate under UNCLOS for establishment of HSMPAs, based on the model of the UN FSA as an implementing agreement for UNCLOS. | Promote and participate in CBD, DOALAS, IMO etc discussions to identify appropriate mechanisms and responsibilities for establishing MPAs in areas beyond national jurisdiction | Governments, CBD, IMO, DOALOS, ICP,                  | NGOs including IUCN, WWF, Greenpeace, and scientists | Ongoing<br>Key dates: SBSTTA Meeting March 2003; ICP June 2003; CBD Conference of Parties March 2004 |                       |                              |
| 5 | Encourage the Convention on Migratory Species to explore the application of HSMPAS to protect migratory species  |   | Governments, CMS                                     | NGOs including IUCN, WWF, Greenpeace and scientists  |  |                       |                              |
| 6 | Call for regular reporting on HSMPAs in a discrete section of the DOALOS annual report   |   | Govts and NGOs                                       | DOALAS, Govts, IGOs                                  | Now.   |                       |                              |
| 7 | Develop a single framework document listing HSMPAs according to purposes/activities addressed and indicating mechanism(s) through which each was established and/or recognized a) by global body, b) by regional body; c) by multilateral agreement  |   | IUCN, WCMC, IMO, UNEP, CBD, CMS other sectoral users | NGOs including IUCN, WCMC                            | Once HSMPAs established  |                       | inchoate                     |

|    | <b>Action Steps</b>  | <b>Sub Steps</b>   | <b>Target Audience</b>                               | <b>Actors</b>              | <b>Schedule</b> | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|----|--|--|--|----------------------------|-----------------|-----------------------|------------------------------|
| 8  | Encourage recognition and/or adoption of the framework by UNCLOS/SPLOS/CBD, and through these mechanisms encourage accession by other States to applicable agreements.   |  | IUCN, WCMC, IMO, UNEP, CBD, CMS other sectoral users | NGOs including IUCN, WCMC. |                 |                       |                              |
| 9  | Call for ICP to consider possible need for coordination among international instruments regarding HSMPAs every 3 years.  | All the above  |  | NGOs including IUCN, WCMC  | Contingent      |                       |                              |
| 10 | Investigate assessment methods for determining the suitability of potential HSMPA sites using biogeographical criteria   | a) Collect relevant biogeographic information including currents, depth and bottom details.<br>(b) Explore partnerships with Defense departments and military. | SAC, IUCN, WWF, WCPA, Conservation International?    |                            |                 |                       |                              |
| 11 | Develop a GIS database of a) potentially important high seas areas for biodiversity conservation; b) HSMPAs (as established) classified by location and activities addressed; and c) provide for identification/overlay of regional agreements | Develop map of a) and b).  | Govts and NGOs, public                               | NGOs, WCMC, IGOs           |                 |                       |                              |

**Draft Action Plan  
Group A Global instruments (General)**

**Objective: To promote adoption of ecosystem based management framework for global fisheries that promotes and endorses a system of HSMPAs.**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>   | <b>Target Audience</b>                              | <b>Actors</b>                      | <b>Schedule</b> | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|---|---|--|---|------------------------------------|-----------------|-----------------------|------------------------------|
| 1 | Promote update of all regional fisheries agreements to reflect precautionary and ecosystem approach, and other principles and measures of the UN Fish Stocks Agreement and FAO Code of Conduct, including no take areas | Review existing mandates of RFMOs including to determine whether they cover deep sea fisheries and assess extent of implementation | IGOs, Govts, NGOs, Industry and public              | NGOs, Industry, Govt, FAO          |                 |                       |                              |
| 2 | Establish RFMOs to cover unregulated fisheries e.g. benthic based on principles of the UN FSA and Code, and EBM   |  | ICP, DOALAS, FAO, CMS, CBD, & RFMOs, Fishing states | Govts., NGOs, Scientists, Industry |                 |                       |                              |
| 3 | Promote certification of RFMOs based on implementation of FSA and Code (Scorecard) and EBM.   |  | ICP, DOALAS, FAO, CMS, CBD, & RFMOs, Fishing states | NGOs.                              |                 |                       |                              |
| 4 | Encourage RFMOs to utilize their authority to declare closed areas to promote biodiversity protection and sustainable use and to control destructive fishing practices and the use of destructive fishing gear          | Build case for value of MPAs for fisheries in addition to value for biodiversity conservation                                      | ICP, DOALAS, FAO, CMS, CBD, & RFMOs, Fishing states | Govts and NGOs.                    |                 |                       |                              |

|   | <b>Action Steps</b>  | <b>Sub Steps</b>  | <b>Target Audience</b>  | <b>Actors</b>  | <b>Schedule</b>         | <b>Resource Needs</b>                             | <b>Funding Possibilities</b> |
|---|--|---|---|--|-------------------------|---|------------------------------|
| 5 | Encourage like-minded fishing states to refrain from fishing in critical and sensitive areas and to avoid destructive fishing practices and gear; provide for accession by other fishing states  |   | FAO, RFMOs, Govts, Fishing States, Fishing Industry                 |  |                         |   |                              |
| 6 | Encourage non-fisheries regional associations to protect critical and sensitive habitat for marine fisheries, associated species & other biological resources from activities within their mandate, in coop with RFMOs                 | Through regional seas agreements or by groups of like minded states when the areas falls outside the RSA; Provide for accession by extraregional and range states | ICP, DOALAS, FAO, CMS, CBD, & RFMOs, Fishing states, CMS Agreements | CMS Agreements                                       |                         |   |                              |
| 7 | Consider promoting UN GA Resolution for moratorium on unregulated fishing (on seamounts) until an effective management regime is in place. Call on States to control destructive fishing practices and use of destructive fishing gear |   | ICP, DOALAS, FAO, CMS, CBD, & RFMOs, Fishing states, CMS Agreements | Govts., NGOs, Scientists, Industry, Greenpeace       |                         |   |                              |
| 8 | Eliminate perverse subsidies that increase fishing efforts particularly in sensitive areas   |   | WTO, FAO, EU, Governments (e.g. Korea, Japan)                       | NGOs WWF, IUCN, friendly govts.                      | WTO schedule, CFE, USA? | Staff time and travel costs. Idea promotion costs |                              |
| 9 | Promote cooperation among RFMOs, fishing states, and regional and global conventions to protect threatened and or migratory non target species   |   | ICP, DOALAS, FAO, CMS, CBD, & RFMOs, Fishing states                 | NGOs, ICP, CMS, CBD, DOALOS & RFMOs, Fishing states, |                         |   |                              |

**Draft Action Plan  
Group A Global instruments (General)**

**Objective: To promote establishment of effective public relations, education and information-exchange programs**

|   | <b>Action Steps</b>  | <b>Sub Steps</b>  | <b>Target Audience</b>   | <b>Actors</b>  | <b>Schedule</b>  | <b>Resource Needs</b>   | <b>Funding Possibilities</b> |
|---|--|---|--|--|--|-------------------------|------------------------------|
| 1 | Create a high seas web site to provide a nexus for information exchange and access   | Appoint a subcommittee to develop demonstration site and final site         | Intergovernmental organizations<br>Governments<br>NGOs<br>Scientists<br>Industry<br>General Public | Subcommittee consisting of e.g. Kaplan Fund, IUCN, WWF, Greenpeace, Scientists, Educational institutions |  |                         | Kaplan Fund.                 |
| 2 | Ambassador for deep sea biodiversity (high profile)  | Form a short list and informally approach candidates                        | same as above  | WWF, IUCN, WCPA  | immediate  | ambassador travel costs |                              |
| 3 | Consider establishment of mechanism similar to the International Coral Reef Initiative to pursue the protection of cold water corals using MPAs. | Develop a proposal to submit to the Deep Sea Coral Symposium September 2003 | UK, Ireland and other govts  | Scientists, NGOs Govt agencies, WWF, IUCN, WCPA  | Key date: Deep Water Coral Symposium September 9-12, Erlangen, Germany |                         | GEF?, UN Foundation          |
| 4 | Recommend the establishment of an expert working group by Species Survival Commission to assess rare and vulnerable species in seamounts.        | Identification of potential group leader; proposal to IUCN                  |  | WWF, IUCN, WCPA, IUCN SSC, Greenpeace  |  |                         |                              |



**Draft Action Plan  
Group A Global instruments (General)**

**Objective: Protection of high seas biodiversity from the impact of mining related activities using MPAs**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>  | <b>Target Audience</b>  | <b>Actors</b>  | <b>Schedule</b>   | <b>Resource Needs</b>  | <b>Funding Possibilities</b> |
|---|---|---|---|--|---|--|------------------------------|
| 1 | Encourage development of mining regulations to better identify and protect sensitive and critical areas including early identification of no mining areas   | Greater involvement of the environmental community in the ongoing work of the ISA | ISA, Governments, Industry  | NGOs, Governments, Educational institutions, and Scientists      | Now and in future. Next meeting August, 2003.   | Staff time and travel costs  | GEF and Kaplan Fund.         |
| 2 | Encourage states collectively either as groups of like minded states or through regional organizations to identify and designate sensitive critical areas where they will refrain from mining activities; Provide for accession by other states |   | OSPAR member states and other like minded states                            | NGOs, Governments, Educational institutions, and Scientists      | Now and in future: End January 2003<br>OSPAR Biodiversity Committee;<br>OSPAR Ministerial Meeting June 2003 | Staff time and travel costs and ambassadors costs. Idea promotion costs. | OSPAR?                       |
| 3 | Secure endorsement by ISA of no mining areas in response to collective proposals agreed by like minded states or by regional organizations.   | Completion of step above  | ISA, Governments, Industry  | NGOs, Governments, Educational institutions, and Scientists      | Date determined by date from step 3 above.  | Staff time and travel costs. Idea promotion costs.                       | ISA                          |
| 4 | Encourage activities of ISA to promote, coordinate and publicize scientific and environmental information relating to deep sea minerals and biodiversity  | Publicize information and the role of ISA.  | General Public, NGOs, Governments, Educational institutions, and Scientists | ISA, Governments, Industry, Scientists, Educational institutions |   |  | ISA                          |

**Draft Action Plan  
Group A Global instruments (General)**

**Objective: To promote scientific research consistent with biodiversity protection.**

|   | <b>Action Steps</b>  | <b>Sub Steps</b>   | <b>Target Audience</b>   | <b>Actors</b>  | <b>Schedule</b>  | <b>Resource Needs</b>        | <b>Funding Possibilities</b>                         |
|---|--|--|--|--|--|------------------------------|--|
| 1 | Encourage the establishment of protected areas to foster scientific research and maintain scientific value   | Encourage zoning in existing research sites consistent with IUCN guidelines including observational, manipulative, and long term study sites | Scientists, Governments, IOC, funding institutions, corporate sector, ICP. | Scientists, Governments, IOC, funding institutions, corporate sector, ICP. | CBD/SBSTTA March 2003; ICP in June, 2003; IOC March 2003 | Staff time and travel costs. | Governments (secondment), UN Foundation, Kaplan Fund |
| 2 | Promote development of code of conduct to reduce adverse impacts of scientific research on biodiversity consistent with the objective of the designated MAP. | Develop at international level. Develop at the regional level. Develop at level of scientific community                                      | Scientists, Governments, IOC, funding institutions, corporate sector, ICP. | Scientists, Scientific bodies (e.g. MOMAR; Interridge) and Governments.    | IOC; InterRidge and MOMAR Meetings [when]                | Staff time and travel costs. | Governments, IOC.                                    |

**Draft Action Plan  
Group A Global instruments (General)**

**Objective: To promote food security**

|   | <b>Action Steps</b>   | <b>Sub Steps</b> | <b>Target Audience</b>                             | <b>Actors</b>   | <b>Schedule</b>                              | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|---|---|------------------|--|---|--|-----------------------|------------------------------|
| 1 | Promote establishment of high seas no-take areas to enhance marine species productivity, protect critical habitat, and enhance recruitment of species outside the area (seed effect, spill over effect) |                  | Govts, fishing industry, RFMOs, scientists, public | Govts, fishing industry, RFMOs, scientists, NGOs including Greenpeace, general public | schedule: target 1-2 RFMOs in 3-year horizon | RFMOs & GEF           |                              |

**Draft Action Plan  
Group B Global Fisheries Instruments**

**Goal: Maximize Benefits of High Seas Living Resource**

**Objective: ...through Promoting Sustainable Fisheries and Protecting Biodiversity**

|   | <b>Action Steps</b>  | <b>Sub Steps</b>  | <b>Target Audience</b>  | <b>Actors</b>  | <b>Schedule</b>   | <b>Resource Needs</b>                          | <b>Funding Possibilities</b>                   |
|---|--|---|---|--|---|--|--|
| 1 | Identify potential candidate areas where MPA will improve or enhance fishery management and/or protect marine biodiversity | <p>Site surveys (tying in with Scripps)</p> <p>Feasibility (enforcement)</p> <p>Address sea mounts, deep coral, canyons, etc (see Scientific Bkgd Paper.)</p> <p>Identify/develop criteria (starting from Scientific Bkgd Paper)</p> <p>Pilot studies in various areas<br/>Develop a baseline of characteristic ecosystems in deep ocean /high seas (starting from recommendations of the Scientific paper)</p> <p>Encourage similar approach to deep sea areas within the EEZs</p> | <p>CBD, Fisheries Ministries, Scientific Community, General public/Media, Fishing industry, FAO, Environmental Ministries, Foreign Ministries, other IGOS, Global Oceans Assessment</p> <p>Government research agencies, Census of Marine Life, UN Oceans Reporting system 2004 (from UNGA Resolution)</p> <p>Relevant national governments</p> | WWF/IUCN, IGOs, WCPA, WPC, Greenpeace, Interested science/policy bodies, RFMOs, UNEP, Global Oceans Assessment Process | Agree criteria by 9/03 for WCPA for endorsement then feed into relevant processes | Will become apparent, from the agreed criteria | Will become apparent, from the agreed criteria |
| 2 | Explore the possible option of UN GA conferences on high seas conservation issues  |   | as above  | as above   |   |  |  |

|   | Action Steps   | Sub Steps   | Target Audience | Actors   | Schedule                             | Resource Needs | Funding Possibilities                    |
|---|--|---|-----------------|----------|--------------------------------------|----------------|--|
| 3 | Promote the adoption of the conservation and management provisions (articles 5 and 6) of the FSA as being applicable to all High Seas Fisheries (not only those that involve straddling or highly migratory fish stocks. |   | as above        | as above | Possible endorsement by UNGA in 2005 |                |  |
| 4 | Through the consultative process, establish HSMPA issues more firmly in UNICPO, UN Global Oceans Assessment Process, and UNGA (consideration of High Seas issues.)   | <p>Encourage inclusion of this issue in FAO Process of Addressing Deep Sea Fisheries</p> <p>Present the results of this workshop, especially regarding protecting "rare or fragile ecosystems..."</p> <p>Encourage scientists and research institutes to support and become involved</p> <p>Encourage like-minded states to speak out... EG EU</p> <p>Present documents on status of sea mount fisheries and biological ecology and productivity of seamounts and management considerations</p> |                 | as above | June 2003 (for FAO Process)          |                | FAO Descriptive Fisheries Reports [Unit] |

**Draft Action Plan  
Group B Global Fisheries Instruments**

**Objective: Promote the Protection of the Biodiversity of Seamounts, Cold Corals, Hydrothermal Vents and other sensitive deep-water habitats**

|   | <b>Action Steps</b>  | <b>Sub Steps</b>   | <b>Target Audience</b> | <b>Actors</b>  | <b>Schedule</b>                              | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|---|--|--|------------------------|--|--|-----------------------|------------------------------|
| 1 | Work to establish a formal process through UNICPO /UNGA to negotiate international action/agreement on high seas biodiversity protection and sustainable use, including HSMPAs |  |                        | IGOs, NGOs including IUCN, WCPA, WWF and Greenpeace, governments, UN Agencies, Scientists, Industry                                  | June 2003 (UNICPO) December 2003; ongoing    | As much as we can get | Let's explore them all       |
| 2 | Consider UNGA moratorium on HS Fishing on Seamounts  |  |                        | IGOs, NGOs including IUCN, WCPA, WWF and Greenpeace, governments, UN Agencies, Scientists, Industry                                  | 3-5 years                                    |                       |                              |
| 3 | Raise general awareness of threat to biodiversity posed by deep-sea fishing (and other activities?)  |  |                        | Media (BBC, Discovery, National Geographic, NY Times, websites); Scientist/marine institutes and aquariums<br>NGOs (Greenpeace 2004) | Develop in tandem with the political process |                       |                              |
| 4 | Engage Fishing and Seafood industry on benefits of protecting deep-sea biodiversity  |  |                        | e.g., ICFA, buyers, national fisheries organizations, retailers, chefs.  |  |                       |                              |
| 5 | Attend as many of the most relevant fisheries meetings as possible on focused/priority issues in MPAs  | CBD-SBSTTA 8, COFI, Cairns Conference, UNICPO, Regional meetings etc. Identify meetings over the longer term, based on issues/priorities |                        | Greenpeace   |  |                       |                              |

|    | Action Steps   | Sub Steps   | Target Audience   | Actors   | Schedule                                | Resource Needs | Funding Possibilities |
|----|--|---|---|--|---|----------------|-----------------------|
| 6  | Explore options for encouraging/supporting one or more forums for ongoing discussions for High seas governance issues following Queenstown and other meetings. | (e.g., approach an identified government for presentation of such a forum).   |   |  |   |                |                       |
| 7  | Conduct a study on options for sustainable financing of RFMOs  |   |   |  |   |                |                       |
| 8  | Conduct a study on options for sustainable financing of MPA management (e.g., a business plan for MPAs)  |   | RFMOs, UNICPO, National Governments, FAO                      | IUCN/WWF Coalition, EU (under common fisheries policy) | Torso by Spring 2003; Study this summer | \$50,000       | EU, World Bank        |
| 9  | Working to establish gear restrictions, with regard to certain sensitive areas   | Consider options of prohibiting/mitigating damage from fishing (skipper certification, bottom troll designs, incentives for non-destructive fishing.) | National Governments, RFMOs, industry.                        |  |   |                |                       |
| 10 | Encourage an inter-RFMO consultation on best practices of effective conservation in fisheries management.  | Build and disseminate a collection of case studies on effective RFMO management<br><br>Evaluate performance of RFMO in application of the FSA.        | UNGA (in review of the implementation of the FSA), FAO, RFMOs | Mike Lodge   | For 2004? (UNGA Review)                 |                |                       |
| 11 | Consider participation in the discussions regarding the ways of establishing property rights systems in regard to HS Fisheries issues.                         |   |   |  |   |                |                       |

**Draft Action Plan  
Group C Regional Arrangements**

**Goal: to provide a road map to establish High Seas Marine Protected Areas through regional mechanisms**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>  | <b>Target Audience</b>   | <b>Actors</b>   | <b>Schedule</b> | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|---|---|---|--|---|-----------------|-----------------------|------------------------------|
| 1 | Selection of Sites  | Collection of data on habitats, species, usage and threats<br><br>Definition of Criteria<br><br>Identification of Sites<br><br>Production of supporting documentation | Scientists<br>NGOs<br>Governments<br>Users   | Scientists<br>Governments<br>NGOs<br><br>Scientists<br>Governments<br>NGOs<br><br>Scientists<br><br>Scientists and NGOs | Continuous      |                       |                              |
| 2 | Identification of existing tools  |   | Governments<br>IGOs  | Legal Experts<br>NGOs<br>IGOs   |                 |                       |                              |
| 3 | Creation/Modification of tools (avoiding conflicts between legal instruments) |   | Decision makers<br>IGOs  | Legal Experts<br>NGOs<br>IGOs   |                 |                       |                              |
| 4 | Adopt a Strategy  | Identification of stakeholders<br><br>Identification of potential allies and opponents<br><br>Consensus building  | Stakeholders<br><br>Stakeholders and in particular Governments<br><br>Stakeholders | NGOs<br>IGOs<br>Scientists<br><br>NGOs<br>IGOs<br>Scientists<br><br>NGOs<br>IGOs<br>Scientists                          |                 |                       |                              |



|   | Action Steps                                     | Sub Steps                 | Target Audience  | Actors  | Schedule | Resource Needs | Funding Possibilities |
|---|--|---------------------------|--|---|----------|----------------|-----------------------|
| 5 | Awareness building                               | Information dissemination | Stakeholders in particular General public, Media and Governments | NGOs, IGOs, Scientists, Media Industry                |          |                |                       |
|   |  | Education/Extension       | Stakeholders in particular General public, Media and Governments | NGOs IGOs Scientists Media Industry                   |          |                |                       |
|   |  | Media campaigns/Publicity | Stakeholders in particular General public, Media and Governments | NGOs IGOs Scientists Media Industry                   |          |                |                       |
| 6 | Establishment of partnerships                    | Identify champions        | NGOs/IGOs Governments Scientists                                 |   |          |                |                       |
| 7 | "Market" the initiative including Trans-boundary |                           | Governments  | NGOs/IGOs   |          |                |                       |
| 8 | Advocacy/Lobby                                   |                           | Governments  | NGOs IGOs Scientists Governments Industry User Groups |          |                |                       |

|    | Action Steps                                 | Sub Steps   | Target Audience   | Actors   | Schedule | Resource Needs | Funding Possibilities |
|----|--|---|---|--|----------|----------------|-----------------------|
| 9  | Intergovernmental Advocacy                   | <p>Within regional mechanisms</p> <p>Internationally</p> <p>Identify "Ambassador" Government(s)</p>   | <p>Relevant regional mechanisms</p> <p>Relevant international mechanisms and other Governments</p> <p>Governments</p> | <p>Governments</p> <p>Governments</p> <p>Governments<br/>NGOs/IGOs</p> |          |                |                       |
| 10 | Obtain mandate to proceed                    | Governments   | Governments   |  |          |                |                       |
| 11 | Prepare a proposal                           |   | Relevant regional mechanisms  | Governments (with input and support from stakeholders)                 |          |                |                       |
| 12 | Make an Agreement                            | <p>Incorporate type 2 partnership</p> <p>Include development of management plan</p>                   |   | <p>Governments</p> <p>Governments</p>                                  |          |                |                       |
| 13 | Obtain international recognition and support | <p>Disseminate information in appropriate fora</p> <p>Put pressure in the relevant global systems</p> | <p>Appropriate fora</p> <p>Relevant Global Systems</p>  | <p>Governments<br/>NGOs/IGOs</p> <p>Governments<br/>NGOs/IGOs</p>      |          |                |                       |

**Draft Action Plan  
Group C Regional Arrangements**

**Goal: to get the Rainbow hydrothermal vent field established as a pilot HSMPA in the North Atlantic through regional mechanisms (e.g. the OSPAR Convention for the North East Atlantic)**

**Objective: undertake a process which will achieve protection.  
The pilot shall serve to develop the necessary tools, incl. cooperation and responsibilities to achieve protection for a wider selection of sites**

|   | <b>Action Steps</b>  | <b>Sub Steps</b>  | <b>Target Audience</b>  | <b>Actors</b>   | <b>Schedule</b>  | <b>Resource Needs</b>                        | <b>Funding Possibilities</b>   |
|---|--|---|---|---|--|--|--|
| 1 | Selection of site by problem                                     | Problem identification  | Scientists (NGOs, governments)<br><br>NGO<br><br>NGO + scientists<br><br>NGO + scientists | Scientists<br><br>Collection of data<br><br>selection criteria<br><br>documentation | <br><br>scientists, NGOs, governments<br><br>governments, NGOs | <br><br>1 week<br><br>ongoing<br><br>2 weeks | <br><br>1 person<br><br>1 person + buy-in from science<br><br>1 person + buy-in from science |
| 2 | Advocacy, lobby  | use existing contacts to governments, use international network | governments   | NGO all levels, supporting scientists   | opportunities, e.g. OSPAR meetings                             |  |  |
| 3 | Identification of legal tools + advice                           |   | governments   | legal expert, commissioned by NGO   | 1 month  | 1 consultancy                                | in-house funding or outside support?   |
| 4 | Development and implementation of strategy - make it a project - |   | to get everyone engaged   | NGO + supporting groups, institutions – network building                            | 1 year   | 1 project officer full time                  | sponsorship, matching contributions, EC funding  |
| 5 | Awareness building   |   |   |   |  |  |  |
| 6 | Partnerships   |   |   |   |  |  |  |
| 7 | Marketing the initiative   |   |   |   |  |  |  |
| 8 | Advocacy ...   |   |   |   |  |  |  |

**Draft Action Plan  
Group D Potential Priority Sites / Opportunities**

**Goal: Logatchev vent area**

**Objective: MPA within a representative network. Aim is to avoid disturbance of area, including from mining. Use a pilot to develop management schemes.**

|   | <b>Action Steps</b>  | <b>Sub Steps</b>  | <b>Target Audience</b>   | <b>Actors</b>                                    | <b>Schedule</b>  | <b>Resource Needs</b>  | <b>Funding Possibilities</b>                               |
|---|--|---|--|--|--|--|--|
| 1 | Identify relevant authorities and interested parties, including any with customary rights (e.g. ISA, IMO, neighbouring governments, UNICPOLOS) | Contact relevant parties ; includes vent scientists.(InterRidge also those working in this particular area) | Scientific community, NGO, IGO, shipping   | Vent scientists.                                 | Little (months)  |  | Foundations + internal                                     |
| 2 | Gather relevant information  | Plan funding strategy/cost projections  | Internal.  | Scientists & NGOs                                | Months (depends on existing availability of information – in this case, little time)   | Scientific consultancy fees  | Foundation, internal, scientific agencies (research funds) |
| 3 | Prepare discussion proposal  | Who are potential sponsors & donors?  | Potential sponsors + donors, including relevant governments and IGOs   | Scientists NGOs (Governments if relevant)        | Done in this case  | Funds for data assembly (and gap filling if relevant)                          | As above + Ministry?                                       |
| 4 | Examine available legal mechanisms (how to make it legally binding?)   | Identify sponsors & donors; engage legal advice   | Internal   | NGOs Legal consultants (Governments if relevant) | Legal analysis needed to ID mechanisms and tweak to suit needs – 6 months  | Legal consultancy fees.  | Foundation, NGOs   |
| 5 | Promotion: is a sub-step at every step, tailor-made, and begins even before step 1   | Consultation at many levels. Confidence building. Establish a Commission for consultation and information.  | Many, ranging from local stakeholders if applicable (e.g. fishers) through decision/policy makers, to fora such as UNICPOLOS.. | NGOs, etc  | Ongoing throughout whole sequence (and perhaps before start) – significant time and effort needed. (And continues after designation) | Communications machine – significant resources (varied). (Time travel, events) | NGOs   |

|    | Action Steps                              | Sub Steps  | Target Audience   | Actors   | Schedule  | Resource Needs  | Funding Possibilities                          |
|----|---|--|---|--|---|---|--|
| 6  | Consider political realities              | Identify political issues, consult whomever, lobbying/ advocacy?   | Politicians, sectors, identified stakeholders; see above.   | NGO, (in this case)  | At least a year (could be 3-5)  | Time and money for travel / events.                                     | NGOs   |
| 7  | Proposal for MPA designation              | Achieve funding.. Boundary demarcation, legal basis / mechanism of designation (unilateral ... etc. ... to UN)                   | As identified in 1,4,6.   | Governments if relevant, scientists, lawyers, NGOs (Consultant)  | 3-6 months  | Consultancy fees. Publication / distribution costs.                     | Research council, bilaterals, ministry         |
| 8  | Prepare management plan                   | As above, plus includes how to make the MPA binding and enforceable.   | As above  | Resource managers<br>Policy experts<br>Scientists<br>Lawyers   | 1-2 years   | Consultant + advice + stakeholder interactions + as above.              | As above, or depends on who is doing this step |
| 9  | Take plan forward to designation          | Sponsorship. Agreement with stakeholders at several levels. Submission. Review. Revision. Resubmission. Acceptance. Designation. | TBA   | Proposal put forward by group identified in step 7 ; Most influential proponent to lead ; others in support. | Depends!<br>Minimum 6 months. Depends on political and diplomatic pressure. | Time/travel for lobbying / advocacy, evaluation ; amount unpredictable. | NGO or Ministry or IGO                         |
| 10 | Designate, implement, manage, and enforce |  | NOTE: we didn't fill out details for 10+, which will be long-term, and all implied by outcomes of 7-10. |  |   |   |  |
| 11 | Monitoring and evaluation                 |  |   |  |   |   |  |
| 12 | Adaptive management                       |  |   |  |   |   |  |

**Draft Action Plan  
Group D Potential Priority Sites / Opportunities**

**Goal: Tasman Seamounts. (neighbouring governments possibly favourable)**

**Objective: MPA within a representative network, Aim is to use as a pilot to develop designation and governance arrangements and management schemes.**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>   | <b>Target Audience</b>   | <b>Actors</b>  | <b>Schedule</b>  | <b>Resource Needs</b>  | <b>Funding Possibilities</b>        |
|---|---|--|--|--|--|--|-------------------------------------|
| 1 | Identify relevant authorities and interested parties: 3 governments, fisheries, shipping...?                | Contact relevant parties; consult...   | NGO, IGO, fisheries, shipping  | Environment Australia, corresponding NZ and Fr ministries; Mfish, Outremer ? SPREP ? SOPAC? CSIRO, NGOs, IGOs. | Little (months)  |  | Governments                         |
| 2 | Gather relevant information   | Largely done ; there is almost none. Pooling of data.  | Internal.  | Scientists, Fishers ?  | Exploratory cruise needed? 1 yr leadup ; 1+ year interpretation.   | Cruise costs. Total 2+ years   | Governments                         |
| 3 | Prepare discussion proposal   | Who are potential sponsors & donors ?  | Potential sponsors + donors, including relevant governments and IGOs   | Scientists<br>NGOs<br>Governments  | 1 year   | Workshop + Funds for data assembly (and gap filling if relevant)               | Governments, NGOs, Science agencies |
| 4 | Examine available legal mechanisms (how to make it legally binding?) and discuss amongst interested parties | 3 countries might agree to place under legal protection under UNCLOS + negotiations with fisheries of those 3 + other relevant nations | Internal   | NGOs<br>Legal consultants<br>Governments   | Legal analysis needed to ID mechanisms and tweak to suit needs plus much international discussion – 1-2 years.                       | Legal consultancy fees<br>Negotiation costs                                    | Governments, NGOs                   |
| 5 | Promotion: is a sub-step at every step, tailor-made, and begins even before step 1                          | Consultation at many levels. Confidence building. Establish a Commission for consultation and information.                             | Many, ranging from local stakeholders if applicable (e.g. fishers) through decision/policy makers, to fora such as UNICPOLOS.. | NGO, etc.  | Ongoing throughout whole sequence (and perhaps before start) – significant time and effort needed. (And continues after designation) | Communications machine – significant resources (varied). (Time travel, events) | NGOs                                |

|    | Action Steps                              | Sub Steps   | Target Audience  | Actors   | Schedule   | Resource Needs   | Funding Possibilities   |
|----|---|---|--|--|--|--|-------------------------|
| 6  | Consider political realities              | Identify whether 1,2,3 or more governments should act   | Political stakeholders, citizens of several countries  | Govt agencies, NGOs, IGOs  | Could be 1-5 or more years   | Initiative meetings, international meetings, support for global processes. | Governments             |
| 7  | Proposal for MPA designation              | Stakeholder consultation, intergovernmental consultation, IGO consultation, drafting (Boundary demarcation, legal basis / mechanism of designation.                           | As at left + international community   | As at left ; scientists and lawyers including government (constitutional) lawyers in drafting. | 1 year ?   | Drafting, publication / distribution costs.                                | Governments             |
| 8  | Prepare management plan                   | As above  | As above   | As above   | 1-2 years  | Consultant + advice + stakeholder interactions + as above.                 | Governments             |
| 9  | Take plan forward to designation          | Agreement with stakeholders (initial core). (Review, Revision as necessary). Submission or designation as appropriate (See 4). Then seek additional nations to sign on later. | TBA  | Proposed by governments, probably to own parliaments. NGOs could lobby electorates.            | Minimum 6 months. Could be n years depending on political and diplomatic pressure. | Media advocacy (amount unpredictable).                                     | NGO or Ministry or IGO. |
| 10 | Designate, implement, manage, and enforce |   | NOTE : we didn't fill out details for 10+, which will be long-term, and all implied by outcomes of 7-10. |  |  |  |                         |
| 11 | Monitoring and evaluation                 |   |  |  |  |  |                         |
| 12 | Adaptive management                       |   |  |  |  |  |                         |

**Draft Action Plan  
Group D Potential Priority Sites / Opportunities**

**Goal: Grand Banks**

**Objective: Fisheries management crisis. Management needed outside Canadian EEZ as well as inside. Propose to protect cod breeding grounds and thus restore fishery.**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>   | <b>Target Audience</b>  | <b>Actors</b>  | <b>Schedule</b>              | <b>Resource Needs</b>                         | <b>Funding Possibilities</b>           |
|---|---|--|---|--|------------------------------|---|--|
| 1 | Identify relevant parties in Canada and USA (Govts, including provincial, local and federal;+ fishing industry, + EU) | ID relevant parties in Canada & USA  | As at left  | NGOs kick-start.<br>Industry ?<br>Govt ?   | Months                       |   | NGO                                    |
| 2 | Gather relevant information   | Plan funding strategy / cost projections.<br>Fisheries information - where, how much, stock assessments.<br>Economic case.<br>Ecological information.  | Internal  | NGOs / industry (consultants)<br>Govt (DFO) support  | Months - could be ca. 1 year | Costs of consultants & unhindered data access | NGOs, provincial and local authorities |
| 3 | Prepare discussion proposal   | Early stakeholders dialogue.<br>Publication (simple)   | Broad. Industry, general public, politicians (therefore different versions) | NGOs, with a coalition of other partners as and when they come on board - industry, provincial / local authorities | 2 months                     | Preparation / publication / distribution      | NGOs & coalition (see actors column)   |
| 4 | Examine available legal mechanisms (is this feasible? How to make it legally binding?)                                | Review existing national & international law bilateral or multilateral agreements<br>Regional fisheries organisations (e.g. NAFO)<br>Assessment report | The coalition (as defined above)  | Charlotte Breide.<br>Legal advisors  | 6 months                     | Legal consultancy fees.                       | Coalition                              |



|   | Action Steps   | Sub Steps   | Target Audience  | Actors  | Schedule   | Resource Needs   | Funding Possibilities |
|---|--|---|--|---|--|--|-----------------------|
| 5 | Promotion: is a sub-step at every step, tailor-made, and begins even before step 1 | Consultation at many levels. Confidence building. Establish a Commission for consultation and information.  | Many, ranging from local stakeholders if applicable (e.g. fishers) through decision / policy makers, to for a such as UNICPOLOS. | NGO, etc.   | Ongoing throughout whole sequence (and perhaps before start) - significant time and effort needed. (And continues after designation) | Communications machine - significant resources (varied). (Time travel, events) | NGOs                  |
| 6 | Consider political realities   | Identify political issues, consult whomever, lobbying / advocacy? Stress socio-economic impact in this case. EC.  | Politicians, sectors, identified stakeholders; see above. Particularly coastal communities.                                      | Coalition   | Unknown. May not be long. Could occur parallel to some of the above.   | Time and money for travel / events   | Coalition             |
| 7 | Proposal for MPA designation   | Achieve funding.. Workshops of all parties leading to: Aims/vision (restoration of coastal communities...), Boundary demarcation, legal basis / mechanism of designation          | Whoever is to enact it. (Probably Federal Govt of Canada)  | Coalition involvement but driven by authorities who will enact the proposal; probably Fed Govt. | 1 + years  | Departmental time  | Govt.                 |
| 8 | Prepare management plan  | As above, with particular emphasis on socio-economic aspects. Includes how to make the MPA binding and enforceable.   | As above   | As above  | Parallel to 7  | As above   | As above              |
| 9 | Take plan forward to designation   | Identify politically most expedient route. Agreement, all stakeholders, minimally the Can Fed Govt. Submission, etc., as in examples above, depending on what mechanism is chosen | Parliament   | Sponsoring authorities  | Depends on political and diplomatic pressure. Minimum 6 months.  | Time/travel for lobbying / advocacy, evaluation; amount unpredictable.         | Ministry              |

|    | Action Steps                              | Sub Steps | Target Audience  | Actors | Schedule | Resource Needs | Funding Possibilities |
|----|---|-----------|--|--------|----------|----------------|-----------------------|
| 10 | Designate, implement, manage, and enforce |           | NOTE : we didn't fill out details for 10+, which will be long-term, and all implied by outcomes of 7-10. |        |          |                |                       |
| 11 | Monitoring and evaluation                 |           |  |        |          |                |                       |
| 12 | Adaptive management                       |           |  |        |          |                |                       |

**Draft Action Plan  
Group D Potential Priority Sites / Opportunities**

**Goal: MPAs in Kerguelen Islands - Heard Islands & Macdonald Islands region.**

**Objective: Fisheries management crisis. Contiguous MPAs in French and Australian EEZs and HS extension; aim is management of fish stocks and protection of biodiversity in situation where exclusion zone in CCAMLR waters would be useful, to achieve ecological integrity, widen responsibility beyond that of the 2 nations with EEZs, and help control IUU fishing.**

|   | <b>Action Steps</b>   | <b>Sub Steps</b>   | <b>Target Audience</b>   | <b>Actors</b>                            | <b>Schedule</b>   | <b>Resource Needs</b>   | <b>Funding Possibilities</b>      |
|---|---|--|--|--|---|-------------------------|-----------------------------------|
| 1 | Identify relevant interested authorities and parties, including: France, Australia, South Africa, CCAMLR nations, Fishing companies, conservation NGOs and potentially the Valdevia Group (VG) (Argentina, Chile, East Antarctic Islands, France, South Africa, UK, Norway... | Broad agreement Aust- France, then bring in S Afr, etc. as at left                             | ASOC<br>CCAMLR<br>VG   | NGOs<br>Govts                            | 1+ year   |                         | NGOs to kick start<br>Then, Govts |
| 2 | Gather relevant information   | Plan funding strategy/cost projections. Excellent databanks available for this area            | Internal.  | As above                                 | Not long in this case   |                         |                                   |
| 3 | Prepare discussion proposal   |  | Aust, Fr, NGOs, plus as many others as possible (as above)<br>Citizenry of all these countries | NGOs in relevant countries + pick allies | ?? complicated !  |                         |                                   |
| 4 | Examine available legal mechanisms (how to make it legally binding?)  | Identify sponsors & donors ; engage legal advice. In this case, particular attention to CCAMLR | Internal   | NGOs<br>Legal consultants<br>Governments | Legal analysis needed to ID mechanisms and tweak to suit needs – 6 months | Legal consultancy fees. | Foundation, NGOs<br>Governments   |

|    | Action Steps   | Sub Steps  | Target Audience  | Actors   | Schedule   | Resource Needs   | Funding Possibilities |
|----|--|--|--|--|--|--|-----------------------|
| 5  | Promotion: is a sub-step at every step, tailor-made, and begins even before step 1 | Consultation at many levels. Confidence building. Establish a Commission for consultation and information.                       | Many, ranging from local stakeholders if applicable (e.g. fishers) through decision/policy makers, to fora such as UNICPOLOS.. | NGO, etc.  | Ongoing throughout whole sequence (and perhaps before start) – significant time and effort needed. (And continues after designation) | Communications machine – significant resources (varied). (Time travel, events) | NGOs                  |
| 6  | Consider political realities   | Consultation with all parties, examination of international political climate at the time  | Politicians, sectors, identified stakeholders; see above.  |  | could be 3-5 years – depends on support.   | Time and money for travel / events.  | Govts                 |
| 7  | Proposal for MPA designation   | Achieve funding.. Boundary demarcation, legal basis / mechanism of designation   | As at right  | Science groups. Antarctic agencies. Conservation. NGOs. Industry. VG   | 6-12 months  | Consultancy fees. Publication / distribution costs.                            | Govts                 |
| 8  | Prepare management plan  | As above, plus includes how to make the MPA binding and enforceable.   | As above. As many as possible involved.  | Resource managers. Policy experts. + as above  | 1-2 years  | Consultant + advice + stakeholder interactions + as above.                     | Govts                 |
| 9  | Take plan forward to designation   | Sponsorship. Agreement with stakeholders at several levels. Submission. Review. Revision. Resubmission. Acceptance. Designation. |  | Proposal put forward probably by consortium of national govts. Or by CCAMLR (depends on legal/political steps identified at steps 4,6) |  |  |                       |
| 10 | Designate, implement, manage, and enforce  |  | NOTE : we didn't fill out details for 10+, which will be long-term, and all implied by outcomes of 7-10.                       |  |  |  |                       |
| 11 | Monitoring and evaluation  |  |  |  |  |  |                       |
| 12 | Adaptive management  |  |  |  |  |  |                       |

**Draft Action Plan  
Group D Potential Priority Sites / Opportunities**

**Goal:** MPA over Great Meteor Seamount. Much science done there; variable diversity and endemism; seamount (not vent field). No threats.

**Objective:** A Unique Science Priority Area.

|   | <b>Action Steps</b>   | <b>Sub Steps</b> | <b>Target Audience</b> | <b>Actors</b> | <b>Schedule</b> | <b>Resource Needs</b> | <b>Funding Possibilities</b> |
|---|---|------------------|------------------------|---------------|-----------------|-----------------------|------------------------------|
| 1 | Steps are very similar to those for Logachev vent field, but this is a seamount field and the scientific community is less well defined at present and not represented by a body such as InterRidge, though this may change soon. |                  |                        |               |                 |                       |                              |

**Draft Action Plan  
Group D Potential Priority Sites / Opportunities**

**Goal:** to get the Rainbow hydrothermal vent field established as a pilot HSMPA in the North Atlantic

**Objective:** undertake a process which will achieve protection. The pilot shall serve to develop the necessary tools, incl. cooperation and responsibilities to achieve protection for a wider selection of sites.

|   | <b>Action Steps</b>   | <b>Sub Steps</b>   | <b>Target Audience</b>  | <b>Actors</b>   | <b>Schedule</b>                      | <b>Resource Needs</b>  | <b>Funding Possibilities</b>                    |
|---|---|--|---|---|--------------------------------------|--|---|
| 1 | Selection of site by problem                                    | Problem identification<br><br>Collection of data<br><br>Selection of criteria<br><br>Documentation | Scientists<br><br>NGO<br><br>NGO & Scientists<br><br>NGO & Scientists | scientists (NGOs, governments)<br><br>scientists (NGOs, governments)<br><br>governments, NGOs | 1 week<br><br>ongoing<br><br>2 weeks | 1 person<br>1 person & buy-in from science<br>1 person & buy-in from science | project hours                                   |
| 2 | Advocacy, lobby   | Use existing contacts to governments, use international network                                    | NGO all levels, supporting scientists                                 | Governments   | opportunities, e.g. OSPAR meetings   |  |   |
| 3 | Identification of legal tools & advice                          |  | Legal expert, commissioned by NGO                                     | Governments   | 1 month                              | 1 consultancy  | in-house funding or outside support             |
| 4 | Development & implementation of strategy<br>- make it a project |  | NGO & supporting groups, institutions<br>- network building           | to get everyone engaged   | 1 year                               | 1 project officer full time  | sponsorship, matching contributions, EC funding |
| 5 | Awareness building  |  |   |   |                                      |  |   |
| 6 | Partnerships  |  |   |   |                                      |  |   |
| 7 | "Marketing" the initiative                                      |  |   |   |                                      |  |   |
| 8 | Advocacy....  |  |   |   |                                      |  |   |

## Annex 7

### Glossary of Acronyms

|                 |  |
|-----------------|--|
| CBD             | Convention on Biological Diversity   |
| CITES           | Convention on International Trade in Endangered Species of Wild<br>Fauna and Flora |
| COP             | Conferences of the Parties   |
| EU              | The European Union   |
| EEZs            | Exclusive Economic Zone  |
| FAO             | Food and Agriculture Organisation  |
| FSA             | Fish Stock Agreement (UN)  |
| GIS database    | Geographic Information System database   |
| HSMPOs          | High Seas Marine Protected Areas   |
| ICP             | Informal Collective Process  |
| IGOs            | International Governmental Organisations   |
| IGOS            | Integrated Global Observing Strategy   |
| IMO             | International Maritime Organisation  |
| IOC             | International Oceanographic Commission   |
| IOI             | International Oceans Institute   |
| ISA             | International Seabed Authority   |
| IUCN            | The World Conservation Union   |
| MAP             | Man and Biosphere Programme  |
| MCOPA           | Marine and Coastal Protected Areas   |
| MPAs            | Marine Protected Areas   |
| NGOs            | Non governmental organisations   |
| OSPAR           | Oslo/Paris Convention for the North East Atlantic                                  |
| RFMOs           | Regional Fisheries Management Organizations  |
| SAC             | Sanctuary Advisory Council – or – Special Area of Conservation                     |
| SBSTTA          | Subsidiary Body on Scientific, Technical and Technological Advice                  |
| SPAMIs          | Special Areas of Mediterranean Importance  |
| SPLOS           | States Parties to the United Nations Convention on<br>the Law of the Sea           |
| UN              | United Nations   |
| UNCLOS          | United Nations Convention on the Law of the Sea                                    |
| UNDOALAS        | United Nations Division on Oceans Affairs and Law of the Sea                       |
| UNEP            | United Nations Environment Programme   |
| UNESCO          | United Nations Educational, Scientific and Cultural Organisation                   |
| UNFSA           | United Nations Fish Stocks Agreement   |
| UNGA            | United Nations General Assembly  |
| UNICPOLOS (ICP) | The United Nations Informative Consultative Process on the Law of the<br>Sea       |
| WCMC            | World Conservation Monitoring Centre   |
| WCPA            | World Commission on Protected Areas  |
| WSSD            | World Summit on Sustainable Development  |
| WPC             | World Park Congress  |
| WWF             | The World Wide Fund for Nature   |

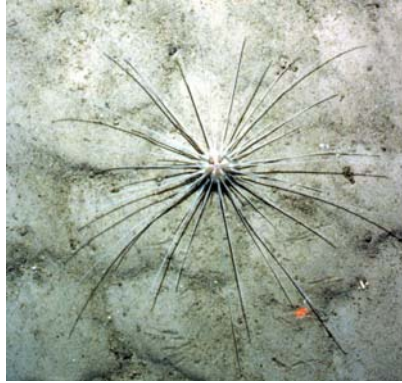


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*Founded in 1948, IUCN-The World Conservation Union brings together states, government agencies, and a diverse range of non-governmental organisations in a unique world partnership, over 980 members in all, spread across some 140 countries. The World Conservation Union builds on the strength of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional, and global levels.*

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*WCPA is the largest worldwide network of protected area managers and specialists. It comprises over 1'300 members in 140 countries. WCPA is one of six voluntary commissions of IUCN – The World Conservation Union, and is serviced by the Protected Areas Programme at the IUCN Headquarters in Gland, Switzerland.*

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