

**Summary Report of the Vilm Expert Workshop on Managing Risks to Biodiversity and the Environment on the High Sea, Including Tools such as Marine Protected Areas -- Scientific Requirements and Legal Aspects -- Isle of Vilm, Germany, 27 February – 4 March 2001**

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**Prepared for the Workshop on the Governance of High Seas Biodiversity Conservation, Cairns, Australia, 16-20 June 2003**

**Abstract**

The Experts' Workshop sponsored by the German Federal Agency for Nature Conservation from 27 February to March 2001 on the Isle of Vilm (the Vilm Workshop) met to discuss scientific requirements and legal aspects of high seas marine protected areas as a tool to improve protection of biodiversity and ecosystem processes beyond national jurisdiction. The analytical framework and Statement of Conclusions developed at Vilm may provide a useful starting point for future deliberations on the governance of high seas biodiversity conservation. The "Vilm methodology" identifies questions useful in scoping current institutional and governance gaps, such as what is the most appropriate forum to seek management measures to address a particular threat to high seas ecosystems or species, and under what circumstances is a new instrument or institution needed. The Statement of Conclusions confirm *inter alia*, that the United Nations Convention on the Law of the Sea (UNCLOS) provides the framework for all action to conserve biodiversity and other components of the marine environment of the high seas; any mechanism or process concerning the high seas must respect the rights of legitimate users and balance those rights against the obligation to protect and preserve rare and fragile ecosystems and conserve living resources; and to achieve full effect and avoid the free rider problem, consultations on area-specific protective measures should include all relevant coastal states and user states. It further highlights the important role that the United Nations Informal Consultative Process on Oceans and Law of the Sea might serve as a forum for early discussion of these issues.

The Vilm Workshop provided a significant impetus to efforts to develop measures to manage risks to biodiversity and the environment on the high seas. By introducing the concept of high seas marine protected areas and educating international lawyers of its meaning and intent, it paved the way for later discussions on high seas marine protected areas. By highlighting the crisis facing the deep ocean and high seas, it also helped to establish why urgent action, including marine protected areas, are needed beyond national jurisdiction. However it left unanswered the questions of how high seas marine protected areas might be constructed from a legal perspective and how they might work in practice. The Experts Workshop on High Seas Marine Protected Areas organized by IUCN, WCPA and WWF (Malaga, Spain) in January 2003 made a good start at addressing these issues. The Cairns Workshop on the Governance of High Seas Biodiversity Conservation provides a crucial opportunity to discuss the wider issues of global oceans governance, the prerequisites for ecosystem-based management, and how site protection might work in practice through a "virtual" computer demonstration model.

## Background

The Vilm Experts Workshop was the first workshop devoted to exploring the legal aspects of high seas marine protected areas. Through generous support from the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety<sup>1</sup> thirty three experts, including eighteen lawyers, from thirteen countries and international institutions gathered to identify conservation needs and priorities on the high seas; review existing activities that aim to conserve valuable sites on the high seas and develop ideas on how to achieve a sound protection regime in the high seas<sup>2</sup>.

Two concerned scientists directly involved with deep-sea research, Prof. Dr. Hjalmar Thiel, and Dr. Anthony Koslow, were the main organizers of the workshop. These two scientists were inspired by their own research revealing tremendous biological diversity in the deep sea and evidence of ongoing destruction of unique faunal communities in areas beyond the jurisdiction or control of any one nation. Unsustainable fishing techniques such as bottom trawling pose the most immediate threat, but the impacts of overfishing, shipping, mineral and energy exploration and exploitation, waste dumping, noise pollution and even some types of scientific research may also threaten high seas biodiversity and ecosystem processes.

One of the main goals of the Vilm Workshop was to stimulate discussions at the United Nations Informal Consultative Process on Oceans and the Law of the Sea (ICP) regarding the need for improved oceans governance mechanisms to ensure high seas biodiversity conservation<sup>3</sup>. Australia had already raised these issues at the seventh session of the Commission on Sustainable Development in 1999. This had been followed by a resolution adopted at IUCN's World Conservation Congress in 2000 calling on governments, international agencies and non-governmental organizations to identify areas on the high seas suitable for collaborative management action, and to reach agreement by consensus on regimes for their conservation and management.

## Presentations and Discussions

The Vilm Workshop began with scientists presenting evidence of high seas ecosystems and species at risk. To most of the international lawyers at the Vilm Workshop, the scientific presentations revealed a new world of startling complexity and fragility. This was the first time many became aware of the rich diversity of seamount communities, the presence of coral reefs in cold murky waters a thousand meters deep, the existence of deep water fish species that could live for more than 100 years, and the fact that these were all threatened by expanding fishing activities plunging ever deeper and further offshore. We also heard about growing interest in hydrothermal vents from the energy, mining, bioprospecting and

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<sup>1</sup> Additional assistance to participants was provided by IUCN, Australia, Republic of Ireland, United Kingdom and the Secretariat of the Convention on Biological Diversity. Representatives from the IMO and FAO were invited, but unable to attend.

<sup>2</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. The proceedings (BfN Skripten 43) are available online at [www.bfn.de/09/090203.htm](http://www.bfn.de/09/090203.htm). See also 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.

<sup>3</sup> As lead country for marine protected areas under the OSPAR Convention, Germany was also interested in learning how high seas marine protected areas might be applied within the OSPAR Maritime Area extending into the high seas.

deep sea tourism industries: commercial prospects, and the potential for damage, are rapidly expanding.

We further learned how species dwelling in or dependent upon the open ocean such as tuna, migratory baleen whales and seabirds could benefit from marine protected areas, as well as the challenges of identifying critical habitat and managing human activities that could not be contained by protected areas. Additionally we learned of efforts within the scientific community to regulate research activities at hydrothermal vents so as not to compromise a site's integrity or another scientist's research. Finally we heard that scientists were seeking long-term protection for their research and monitoring sites to prevent disturbance from human activities such as exploration and exploitation of mineral or energy resources, waste dumping and fishing<sup>4</sup>.

In the second series of presentations, representatives from Australia, the Commission for the 1992 Convention on the Protection of the Marine Environment of the North East Atlantic (OSPAR Convention); the Convention on Biological Diversity, the World Conservation Union (IUCN), WWF International and the United Nations Informal Consultative Process on Oceans and the Law of the Seas provided updates on their activities pertinent to protection of biodiversity and ecosystem processes on the high seas. The representative from Australia challenged us to establish why marine protected areas are needed beyond national jurisdiction, how they might be constructed from a legal perspective, and how they might work in practice. Discussions highlighted the value of the United Nations Informal Consultative Process as a forum for improving coordination and cooperation on ocean issues and the potential role of the Convention on Biological Diversity as a forum for promoting marine protected areas and encouraging regulation of processes and activities under national jurisdiction or control affecting biodiversity beyond national jurisdiction.

The third series of presentations turned the meeting over to the lawyers. The experts explored the legal basis for high seas marine protected areas in the context of the present international legal framework and future options for its development<sup>5</sup>. While all agreed that UNCLOS provided the framework to pursue action to conserve biodiversity and other components of the high seas environment, there was extensive debate over several issues.

The concept of high seas marine protected area was at first regarded by some as a prima facie conflict with the United Nations Law of the Sea Convention. It was suggested that the concepts of freedom of the seas and free access are inextricably linked with the very definition of the term "high seas". Protected areas where uses were restricted would represent an inappropriate assertion of jurisdiction and control over an area subject to high seas freedoms. This school of thought further suggested that all or almost all of the risks presented by human activities to high seas biodiversity and other components of the marine environment could be managed through existing international instruments and organizations. Thus no new approaches were necessary.

Those with experience in marine management pointed out marine protected areas could be a flexible tool ranging from highly protected marine reserves to large zoned areas managed to

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<sup>4</sup> The laying of submarine cables has also turned out to also be an unexpected threat to long-term research sites. After a cable was as placed through a well known research site in the Atlantic, scientists were denied permission to enter by the cable company (statement by Professor Dr H. Thiel at Experts Workshop on High Seas Marine Protected Areas, Malaga Spain, 15-17 January 2003). See Gjerde, K. Ed.) *Towards a Strategy for High Seas Marine Protected Areas: Proceedings of the IUCN, WCPA, WWF High Seas MPA Workshop, Malaga, Spain, 15-17 January 2003* (IUCN, WCPA, WWF, 2003)(available on line at [www.iucn.org/themes/marine](http://www.iucn.org/themes/marine))).

<sup>5</sup> See, e.g. Warner, R. "Marine Protected Areas Beyond National Jurisdiction – Existing Legal Principles and Future Legal Frameworks", *Vilm Workshop Proceedings*, supra, note 2, (pp. 149-168) for a comprehensive overview of the legal basis and future directions for high seas MPAs (also available online at [www.ea.gov.au/marine](http://www.ea.gov.au/marine))).

accommodate sustainable uses. The obligations under the United Nations Convention on the Law of the Sea (UNCLOS) to protect and preserve the marine environment, including rare and fragile ecosystems, and the duty to cooperate to conserve the living resources of the high seas were not disputed (UNCLOS Articles 192, 194.5 and 116-120). The debate arose over the relationship of these duties with the so-called “freedoms of the sea” (e.g. fishing, navigation, cable-laying, military activities), and over which should take priority. It was recognized that UNCLOS encourages cooperation at the global and regional level to establish rules and standards to implement its environmental and conservation obligations and that many of the traditional high seas freedoms are already extensively regulated to limit their environmental impact. It was ultimately agreed that any mechanism or process concerning the high seas must therefore respect the rights of legitimate users and balance those rights against the obligation to protect and preserve rare and fragile ecosystems and conserve living resources.

Though most eventually agreed that under certain circumstances high seas MPAs might be established under UNCLOS, for some lawyers a certain degree of discomfort remained regarding the term “marine protected areas”. Thus rather than analyzing the legal aspects of high seas MPAs as had been planned, workshop discussions were channeled to creating an analytical framework for determining whether and what kind of measures were needed to manage risks to biodiversity and other components of the marine environment.

### Vilm Methodology

The analytical framework developed at Vilm may provide a useful starting point for deliberations regarding governance and institutional gaps. This “Vilm methodology” can assist in finding the most appropriate forum to seek management measures to address a particular threat to high seas ecosystems or species, and identifying whether a new instrument or institution may be needed. This approach focuses first on reviewing vulnerable aspects of ecosystems, and second, on identifying significant risks posed to those aspects arising from specific sectors/human activities. Before concluding that a new instrument or institution is required, certain questions should be considered:

1. What is the problem to be addressed”
2. Is or has this issue been addressed by the international community?
  - a. Are there existing international instruments addressing the identified problem?
    - i. If yes:
      1. Are there any general principles that are applicable?
      2. Do the provisions of the instruments provide the means for resolving the problem? If not, should another instrument be developed or should an instrument be amended?
      3. Is an instrument being effectively implemented and enforced? If not, why not?
    - ii. If not:
      1. Is there an international instrument that could be amended to address this issue or should a new one be developed?
      2. In what setting should any work on new provision or a new instrument be negotiated? (Considerations include: timeliness, ability to include all States interested in the biodiversity and other components of the marine environment of the high seas, and whether action should be taken at a regional or global level)
  - b. Is there an international institution that deals with this issue?
    - i. If yes:
      1. Is it addressing the specific threat to the biodiversity and other components of the marine environment of the high seas?

2. If not, are there means to generate appropriate action?
  3. Is the action being taken effective to address the threat?
- ii. If not, in what setting should a new international instrument be negotiated? (see above)<sup>6</sup>

In applying this methodology to seamounts, the Vilm workshop identified deep sea bottom trawling as the primary risk to seamount communities. The relevant international instrument is UNCLOS with its obligations in Articles 192, 194.5 and 119 for states to protect and preserve the marine environment, including rare and fragile ecosystems, and to conserve living marine resources and associated species. These obligations should serve as the framework for action by *inter alia*, regional fisheries management organizations. However, few regional fisheries management organizations cover deep-water fisheries, and where they do, there are often significant problems with competing priorities. No global legal instrument addresses deep-water fisheries. The UN Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks applies only to certain highly migratory and straddling fish stocks, though its principles could usefully be applied to deep-water fish stocks.

Thus the first line of defense would be regional fisheries management organizations or regional seas organizations. In the absence of competent or effective regional organizations, global organizations may need to consider the need for appropriate risk management measures. To achieve full effectiveness and avoid the problem of free riders, it is critical to include coastal states and user states.

International organizations that may address aspects of activities affecting seamounts include:

- The Convention on Biological Diversity for threats to seamount biodiversity arising from activities or processes under the jurisdiction and control of contracting parties
- The UN Food and Agriculture Organization for promoting sustainable, ecosystem-based management of living marine resources associated with seamounts
- International Seabed Authority for regulating potential impacts of deep seabed mining activities on or around seamounts in the Area
- Intergovernmental Oceanographic Commission in relation to stimulating research on seamount ecosystems and biodiversity

The possibility of a UN General Assembly resolution regarding seamount fisheries, based on the model of the UN driftnets resolution, was also raised.

In some instances, there may be a need to adopt complementary measures by a number of intergovernmental organizations.

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<sup>6</sup> Extract from the Summary Record in the *Vilm Workshop Proceedings*, supra note 2, (page 29). Subsequently two additional questions were added: c) What measures should or could be taken to address the threat in the short, medium and long term? And d) Are any existing conservation and management measures being monitored and analyzed for their effectiveness? Reprinted in Young, T.R., *Developing a Legal Strategy for High Seas Marine Protected Areas*, legal background paper for the Malaga High Seas MPA Workshop, supra, note 4.

There was no time left at Vilm for analysis of the best setting for negotiation of a new provision or a new instrument with respect to seamounts. It would clearly be a worthwhile undertaking: considerations such as timeliness, ability to include all states interested in the biodiversity and other components of the marine environment of the high seas, and the appropriate level for action (regional or global) may well determine the effectiveness of the initiative.

## Vilm Workshop Conclusions

The Statement of Conclusion generated by the Vilm Workshop may also provide a useful starting point for future deliberations on governance and institutional aspects of high seas biodiversity conservation. The main conclusions of relevance include:

- i) The Law of the Sea Convention provides the framework for all action to conserve biodiversity and other components of the marine environment of the high seas.
- ii) Existing international and regional organizations can deal with many of these issues but further action is required on an urgent basis.
- iii) Any mechanism or process concerning the high seas must therefore respect the rights of legitimate users and balance those rights against the obligation to protect and preserve rare and fragile ecosystems and conserve living resources.
- iv) Action at the regional level, either through regional fisheries organizations or regional seas organizations may be the most suitable place to begin, provided such organizations have the competence, resources and political will to take effective action.
- v) Relevant international organizations include:
  - The Convention on Biological Diversity with respect to biodiversity
  - The Food and Agricultural Organization for living marine resources
  - The International Seabed Authority for mineral resources in areas beyond national jurisdiction
  - The International Oceanographic Commission in relation to scientific reference areas or impacts of scientific investigation
  - The International Maritime Organization in relation to shipping
  - The United Nations General Assembly for issues requiring more comprehensive global action
- vi) To achieve full effect and avoid the free rider problem, consultations on risk management measures should include coastal states and user states.
- vii) The United Nations Informal Consultative Process could serve as the central forum for discussion of these issues.
- viii) Additional alternatives identified by the Workshop that might be achieved through, for example, a UN Assembly Resolution or special intergovernmental conference included negotiations to:
  - amend or apply an existing international agreement to encompass high seas areas or additional high seas activities; or
  - establish a new international agreement to cover all problems of a particular nature.

The relevance of the IMO-developed concept of Particularly Sensitive Sea Areas<sup>7</sup> was brought out in discussions for several reasons. First, IMO measures to regulate international

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<sup>7</sup> A Particularly Sensitive Sea Area is defined in the IMO Guidelines for Identification and Designation of Particularly Sensitive Seas Areas, (A. Res. 922(27)) as “an area that needs special protection through action by

shipping may also be applied to areas beyond national jurisdiction and thus could be used to protect sensitive high seas areas. Second, IMO procedures for identification and designation of PSSAs may be relevant as a model of an internationally agreed procedure to regulate activities subject to “freedom of the sea” to protect specific areas. Third, designation of a PSSA does not provide the site with any legally binding protective status; rather it is an awareness building tool that also provides a framework from which to select the most appropriate IMO measures. Similarly, designation of an area as a “MPA” or other term could be used as an awareness-building tool and a platform to select an array of protective measures based on other instruments that may or may not be legally binding<sup>8</sup>.

## Observations

The analytical framework and conclusions produced at the Vilm Workshop provide a balanced, albeit conservative, approach to developing measures to manage known risks to biodiversity and the environment on the high seas. However, the more integrated and precautionary approach that a marine protected area or other area-based mechanism can provide is clearly lacking. While MPAs are not a replacement for a sustainable management framework, they can provide extra protection to areas deemed significant, representative and/or vulnerable while a more comprehensive ecosystem-based approach is developed.

Since the 2001 Vilm Workshop, the urgent need for conservation of vulnerable high seas ecosystems and species including through tools such as MPAs has been recognized at the World Summit on Sustainable Development, the United Nations General Assembly and the Convention on Biological Diversity’s Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA). In March 2003, the eighth meeting of SBSTTA agreed to recommend to the Conference of Parties (COP) of the Convention on Biological Diversity that “there is an urgent need to establish in areas beyond national jurisdiction further marine and coastal [sic] protected areas consistent with international law and based on scientific information”<sup>9</sup>. Areas such as seamounts, hydrothermal vents, cold water corals and open ocean are specifically mentioned. Moreover, they also recommended that the COP request the CBD Executive Secretary to work with other international bodies<sup>10</sup> “to identify appropriate mechanisms for the establishment and effective management of marine protected areas beyond national jurisdiction”.

The Vilm Workshop helped pave the way for later discussions on high seas marine protected areas by introducing the concept and educating international lawyers of its meaning and intent. It also helped to establish why tools such as marine protected areas are urgently needed beyond national jurisdiction. It left unanswered, however, the questions of how high seas marine protected areas might be constructed from a legal perspective and how they might work in practice. The Malaga High Seas MPA Workshop in January 2003 made a good start at addressing some of these issues, but many remain. The Cairns Workshop provides a crucial opportunity to discuss the wider issues of global oceans governance, the

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IMO because of its significance for recognized ecological, socio-economic or scientific reasons and which may be vulnerable to damage by international shipping activities”. PSSA designation is not necessary to regulate international shipping in a given area. Rather it provides a framework for assessing the risk posed by shipping, determining the most appropriate measures, and notifying the international maritime community of the importance of taking extra care.

<sup>8</sup> See, e.g. Gjerde, K. 2001. “Protecting Particularly Sensitive Sea Areas from Shipping: A Review of IMO’s New PSSA Guidelines” in *Vilm Workshop Proceedings*, *supra* note 2, pp. 123-134; and Warner, R. 2001, *id.*

<sup>9</sup> *Marine and Coastal Biodiversity: Review, Further Elaboration and Refinement of the Programme of Work: Marine and coastal protected areas* (UNEP/CBD/SBSTTA/8/L.11, para. 19-20).

<sup>10</sup> Specifically mentioned international bodies include the United Nations Division for Ocean Affairs and the Law of the Sea, the International Seabed Authority, the International Maritime Organization, regional seas conventions and action plans, the Food and Agriculture Organization of the United Nations, regional fisheries organizations, the Intergovernmental Oceanographic Commission of UNESCO, and other relevant organizations.

prerequisites for ecosystem-based management, and how site protection might work in practice through a “virtual” computer demonstration model.

There are now good reasons to hope that this gathering international momentum and concern for high seas biodiversity conservation will soon result in concrete action.