

At World Parks Congress, Target Is Set for High-Seas MPAs: Five to Be Designated by 2008

At least five ecologically significant MPAs should be designated on the high seas by 2008, according to delegates to the World Parks Congress, a once-a-decade meeting of government officials, scientists, and conservationists held last month in Durban, South Africa. Delegates also called on the United Nations General Assembly to consider placing a moratorium on bottom trawling in certain high-seas areas — seamounts and cold-water coral reefs — until longer-term measures are in place to protect these sites. The IUCN-sponsored Congress traditionally sets an agenda for global protected area management.

The above recommendations, agreed to by participants in marine-theme workshops at the Congress, are nonbinding on governments. However, the attention paid at the Congress to high-seas MPAs seemed to signal a gain in momentum, at least in the conservation community, in favor of protecting ocean areas outside of national jurisdiction. The high-seas MPA target was the only specific recommendation cited by IUCN Director General Achim Steiner in his Congress-closing press conference. And several recent reports and conferences have focused on the need, and potential mechanisms, for protection of high-seas ecosystems impacted by unregulated fishing and other human activities (see box, page 2).

Cases exist of MPAs that include areas beyond national jurisdiction. For example, more than half of the Pelagos Sanctuary for Mediterranean Marine Mammals — formally recognized by the 17 contracting parties to the Barcelona Convention — lies in international waters (*MPA News* 5:3). Nonetheless, there are no formally adopted, high-seas MPAs recognized by the broad international community: in other words, a ship under the flag of a non-party to the Barcelona Convention is not required to abide by Pelagos Sanctuary regulations. Although several international legal regimes exist that could help to establish a system of high-seas MPAs, there is no proven framework yet for moving forward.

Those in favor of high-seas MPAs are working to change that. This month, *MPA News* asks three experts about the high-seas recommendations they helped

draft at the Congress, the obstacles to designating and managing high-seas MPAs, and how to meet those challenges. The experts are:

Kristina Gjerde, high seas policy advisor to IUCN's Global Marine Program and 2003 recipient of a Pew Marine Conservation Fellowship (<http://www.pewmarine.org>) for her high-seas research and conservation work;

Graeme Kelleher, leader of the High Seas Working Group for the IUCN World Commission on Protected Areas and co-editor of *A Global Representative System of Marine Protected Areas* (IUCN 1995); and

Carl Gustaf Lundin, head of the IUCN Global Marine Program.

Can the target of five high-seas MPAs by 2008 be met?

This was a compromise, says Kristina Gjerde. "Some suggested a target of 25 high-seas MPAs by 2008; others thought we would be lucky to get two that were effectively managed," she says. "In the end we chose something that was both ambitious and doable." The target is ambitious, she says, because it will take time to raise awareness, engage stakeholders, develop management plans, and seek the endorsement of the international community. It is doable because regional legal regimes already exist — including the Barcelona Convention, the OSPAR Convention for the North East Atlantic, and some regional fisheries agreements — that authorize establishment of MPAs beyond national jurisdiction. Furthermore, nations are capable of establishing new agreements (binding or nonbinding) if necessary, she says. "Steps can be taken today to start the process of creating high-seas MPAs without having to await development of a new legal framework that could be years in the making," she says.

"I must admit that I believe it will be a miracle if we attain the goal by 2008," says Graeme Kelleher. However, he adds, growing scientific and governmental appreciation for deep-sea ecosystems and their protection has produced a groundswell of support for the idea of high-seas MPAs. He cites a line from Shakespeare's *Julius*

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Caesar: There is a tide in the affairs of men, which taken at the flood leads on to fortune. “The flood is occurring regarding the high seas,” says Kelleher.

In what ways would a UN moratorium on deep-sea trawling on seamounts and cold-water coral reefs be similar to the 1989 UN moratorium on high-seas large-scale driftnets?

The marine-theme recommendation that the UN consider an immediate moratorium on deep-sea bottom trawling was largely inspired by the driftnet moratorium. Gjerde says there are two main similarities. “First, it is calling for a global moratorium on a practice that causes widespread destruction of unique ecosystems, communities, and species,” she says. “Second, it is seeking to fill a gap in international law and regional fisheries management, because many areas of the world’s oceans lack effective regulations to ensure deep-sea fisheries are conducted on a sustainable and precautionary basis.”

She points out that the deep-sea bottom-trawling moratorium would be intended only as a temporary measure. It would not be a permanent ban, as the driftnet moratorium eventually became in 1992. While the deep-sea trawling moratorium is in place, says Gjerde, governments can work to install effective and accountable regional fisheries management organiza-

tions; determine sustainable catch levels; and develop mechanisms to ensure that best management practices and gear requirements are applied. “We also need to have a system of marine protected area networks developed that can provide insurance in case we still don’t get it right,” she says.

What are the obstacles to designating high-seas MPAs?

Adding to the challenge of there being no established framework for designating broadly recognized high-seas MPAs, other obstacles also exist. “The main obstacle will be subtle or overt opposition from governments, driven mainly by two factors,” says Kelleher. “One is the high-seas fishing industry’s refusal to adopt sustainable harvesting techniques, based on the beliefs that the resources of the seas are virtually infinite and that fishers have, and should have, absolute freedom.” The second factor, he says, is that some governments want unrestricted access to the high seas for navigational and defense purposes, or to high-seas resources for economic purposes. He says the US government is foremost in this opinion, and carries the threat of rejecting attempts to inhibit such freedoms.

Gjerde says it will be key to build global awareness and support for high-seas biodiversity conservation, including through addressing objections of recalcitrant governments and engaging stakeholders, including the fishing industry. “Once key players understand the need for immediate and urgent action to redress current threats to high-seas biodiversity and productivity, and understand the benefits of MPAs as a tool for these purposes, most opposition will evaporate,” she says.

How will high-seas MPAs be enforced?

Effective enforcement of MPAs on the high seas will be a challenge. Existing coastal and nearshore MPAs chronically suffer from inadequate enforcement in many parts of the world, despite their closeness to land and potential supervision. Enforcing regulations for high-seas MPAs that are hundreds of miles from the nearest coastline could be exponentially more difficult. “I think that management will, at least initially, have to be built on international agreement rather than ‘conventional’ enforcement,” says Kelleher. In other words, the system will have to rely on compliance in the early years. He says a major impediment to this largely voluntary compliance will be the use of flags of convenience by fishing vessels looking to skirt international agreement. “Abolition of this [flags of convenience] system would be enormously beneficial,” he says.

Gjerde agrees. “As long as some states, companies, and vessels are willing and able to ignore their obligations to protect and preserve the marine environment and

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Interest in high-seas MPAs

Relatively recent discoveries of cold-water coral reefs, seamounts, and other high-seas ecosystems have sparked interest among researchers and conservationists in protecting these sites. In the past two years, several reports and conferences have focused on high-seas ecosystems and their protection. Below are some of the reports:

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, Málaga, Spain. (IUCN 2003) <http://www.iucn.org/themes/marine/pdf/GjerdeBreideHSMMPA.pdf>

International Ocean Governance: Using International Law and Organizations to Manage Marine Resources Sustainably. (IUCN 2001) <http://www.iucn.org/themes/marine/pdf/IUCN%20book.pdf> (An updated 2003 edition of this report is also available from IUCN, but is not yet downloadable from the web.)


The Status of Natural Resources on the High Seas: An Environmental Perspective. (WWF/IUCN 2001) <http://www.iucn.org/themes/marine/pdf/highseas.pdf>

In addition, a strategy document on promoting the development of a global representative system of high-seas MPA is currently in revision. A summary version of the strategy, as agreed by marine-theme participants at the World Parks Congress, is available on the web at <http://www.iucn.org/themes/marine/pdf/10ystrat.pdf>

conserve resources, it will be difficult to secure effective compliance,” she says. She adds that public, economic, and diplomatic pressure may need to be brought to bear, as well as new compliance mechanisms to implement the UN Convention on the Law of the Sea and the UN Fish Stocks Agreement. Negotiating such mechanisms “may take more than five years,” she says.

Carl Lundin, however, says that enforcement of high-seas MPAs over the long term may be quite feasible. He envisions a combination of naval involvement and satellite technology as providing the keys to effective management. “A lot of navies in the world are underutilized and are willing to look at environmental issues as a way to justify their existence,” he says. In at least two instances earlier this year, South African and Australian militaries teamed in pursuit of fishing vessels accused of harvesting toothfish illegally. Lundin, who has worked with the Uruguayan and Argentine navies on environmental enforcement issues, sees this as the beginning of a positive trend. “It is clear that in countries like Indonesia, Costa Rica, and South Africa, there is an interest in using naval resources for fisheries enforcement, including closed areas and pirate fishing,” he says. “The willingness of these navies and other countries’ to take on this assignment on the high seas would obviously be dependent on the development of legal and financing mechanisms to make it possible.”

Solving the second half of the enforcement puzzle, he says, will be the mass deployment of satellite transponders on the high-seas fishing fleet. Such transponders

are already in use for many fisheries in national waters (MPA News 2:5). How the technology works: a small transmitter unit on each vessel sends a signal back to shore via satellite, notifying managers where the vessel is located and, indirectly, what its fishing activity is. When managers witness illegal activity, such as fishing in a closed area, they can send out an enforcement vessel. Citing evidence that transponders provide improved enforcement at lower cost compared to having an enforcement vessel stationed full-time in a closed area, Lundin foresees deployment of the technology on the world high-seas fishing fleet within the next 10 years. “Once this is in place, fishing fleets will change their behavior quickly,” he says. 

Legal regimes that could help establish a system of high-seas MPAs

A multitude of international agreements either offer some direct authority to manage resources outside national jurisdiction or provide elements that could otherwise be useful in helping establish a global, representative system of MPA networks. Among the agreements offering direct authority are the UN Convention on the Law of the Sea, the UN Fish Stocks Agreement, the International Seabed Authority Agreement, the Convention on Biological Diversity, and some regional fisheries management organizations. Agreements that may serve as useful resources in other ways include the Convention on Migratory Species, the World Heritage Convention, and the Convention on International Trade in Endangered Species of Fauna and Flora (CITES), among others.

Source: *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, Málaga, Spain.* (IUCN 2003)

Other marine outcomes from the World Parks Congress

Targets for high-seas MPAs were among several MPA-related outcomes from the World Parks Congress, held September 8-17 in Durban, South Africa. The Congress’s Durban Accord and Action Plan expressed concern that less than 1% of the world’s oceans, seas, and coasts have protected status — in contrast to 12% of the world’s land area — and reiterated the World Summit on Sustainable Development goal of a global system of MPA networks by 2012 (MPA News 4:3).

Delegates to the Congress’s marine-theme workshops called for such MPA networks to include at least 20-30% of each marine and coastal habitat in “strictly protected areas”.

There was also a proposal submitted to amend the IUCN definition of the term *marine protected area*,

removing the current reference to intertidal terrain. If such a change were approved by IUCN, sites with intertidal terrain but no subtidal terrain would no longer be counted as MPAs.

For the full text of the recommendations on building a global system of marine and coastal protected area networks (Recommendation 5.22), visit <http://www.iucn.org/themes/wcpa/wpc2003/pdfs/outputs/recommendations/approved/english/html/r22.htm>

For the full text of the recommendations on high-seas MPAs (Recommendation 5.23), visit <http://www.iucn.org/themes/wcpa/wpc2003/pdfs/outputs/recommendations/approved/english/html/r23.htm>

Links to other outputs of the Congress are at <http://www.iucn.org/themes/wcpa/wpc2003/index.htm>

Revisiting a Capacity-Building Project for MPA Managers in the Western Indian Ocean

Many managers of marine protected areas have limited formal training in MPA management. In the Western Indian Ocean (WIO), for example, it is often the case that MPA managers have received their training at wildlife management colleges, with little instruction in marine issues.

In August 2000, *MPA News* reported on a course offered in Kenya to train MPA managers in the WIO region, part of a project to build managerial capacity in MPAs (*MPA News* 2:2). The course, delivered a second time in 2002 and scheduled again in 2004, now features a comprehensive, up-to-date training manual, covering nearly every aspect of MPA management, from marine ecology and monitoring to public relations and financial management. This month, *MPA News* revisits the training course and how it has been built to address participants' needs.

Designed to encourage personal development

The two-week course is divided into 10 modules. Most of the modules were developed by experts from the

region and have incorporated regional experiences and case studies, in addition to analytical and problem-solving exercises. The training course features lectures, facilitated discussions, and small-group activities, all supported by handouts and other materials in the manual. (Course planners included personnel from the Coastal Zone Management Center of the Netherlands, the Institute of Marine Sciences at the University of Dar es Salaam [Tanzania], the Western Indian Ocean Marine Sciences Association [WIOMSA], and the World Bank.)

"These modules are meant to introduce some main concepts and tools that managers may find useful and try to apply in their day-to-day work

Excerpt from the training manual: Tips for conflict resolution

The training manual for MPA managers in the Western Indian Ocean provides readers with tips on developing useful skills. Such skills include conflict resolution, which can be helpful in managing stakeholder involvement in an MPA. The following tips were excerpted by *MPA News* from *Training for the Sustainable Management of Marine Protected Areas: A Training Manual for MPA Managers*:

1. Identify the causes of conflict:
 - Use active listening. One of the biggest causes of conflict is that people do not listen to each other. Establish eye contact and don't interrupt. We are not only showing respect when we listen; we are finding out information that can help us resolve the conflict.
 - Ask questions that reveal a willingness to understand, such as "What is it about the situation that bothers you?"
2. Create an effective atmosphere. Choose a neutral venue and set times to suit all parties.
3. Focus on the problem, not on defeating the other party. Look for shared needs and concerns and find common ground.
4. The major breakthrough in conflict occurs when both parties see the conflict as a problem for both of them to solve ("our problem").

situations," says Julius Francis of WIOMSA, who leads the project. "As with all adult-learning programs, application is the most important part of learning."

In that light, the course is designed not only to teach concepts but also to help participants develop their own "personal action plans". Each personal action plan identifies the issues facing a participant's MPA and a course of action for addressing those issues, using lessons learned from the course. Field excursions organized through the course and the exchange of personal experiences add further benefits.

Next year, in collaboration with the IUCN Eastern Africa Regional Office, the course planners will release a toolkit intended to supplement the training manual. Designed to be a reference guide for finding more detailed information, the toolkit will provide links to

Funding the course

When the MPA management-training course was first held in 2000, all costs — including the travel and lodging of participants — were covered by the Coastal Zone Management Center (CZMC) of the Netherlands through a grant from the World Bank/Netherlands Partnership Programme. For the course in 2002, the core costs (i.e., trainers and organizers) were covered by the CZMC and the Eastern Africa component of the UN Environment Programme/International Coral Reef Action Network (ICRAN). The cost of participants was shared among the CZMC and various other organizations. Discussions on funding for the third course, to be held in 2004, are underway between organizers and potential funding agencies.


The 2000 course was held at the Malindi Marine Park, Kenya. The 2002 course was at the Greater St. Lucia Wetland Park, South Africa.

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sources such as websites, publications, and organizations that can assist practitioners, as well as offer additional case studies on successes and failures of various management techniques.

In 2000, Francis told *MPA News* that organizers were considering developing a communications network for regional MPA managers, but that few of the parks in the region had reliable telephones or owned a computer. Now, he says, that has changed, with accessibility to the internet significantly increased through the region. He expects discussions on the goal of electronically networking managers to resume soon.

One challenge that remains for the project is that of the region's multiple languages. There are four main languages in the WIO region, but the training course and manual are in English only. The two courses held so far have still attracted managers from French- and Portuguese-speaking nations, but there has been interest expressed in offering the course and manual in other languages. 

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For a copy of the training manual

A limited number of paper copies of the 267-page training manual are available for distribution outside the WIO region. A CD-ROM version of the manual is expected to be available later in 2003. For more information: Julius Francis, WIOMSA. Tel: +255 24 2233472; E-mail: julius@wiomsa.org

Notes & News

Report cites marine reserves as way to protect marine ornamental species

Marine reserves, temporal closures, and other management measures should be implemented to protect stocks of marine ornamental species and ensure the long-term sustainable use of coral reefs, according to a new report published by the World Conservation Monitoring Centre of the UN Environment Programme. *From Ocean to Aquarium: The Global Trade in Marine Ornamentals* documents the extent of the global industry in saltwater aquarium creatures (US\$200-\$330 million annually), and recommends ways to avoid the causing of irreversible damage to coral reefs during fish and coral collection. The great majority of marine aquaria are stocked from wild caught species. The 66-page report is available online in PDF format at http://www.unep-wcmc.org/resources/publications/UNEP_WCMC_bio_series/17.htm.

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US MPA Advisory Committee to meet in November

A multistakeholder committee to advise the US government on implementation of national MPA efforts will seek public comments at its second meeting, to be held November 17-19, 2003, in San Francisco, California. The 30-member committee consists of nonfederal representatives from science, resource management, environmental organizations, and industry, and is supported by the US National Marine Protected Areas Center. For more information, visit <http://mpa.gov/mpabusines/fac.html>.

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Madagascar to designate three MPAs; Senegal designates four

Coinciding with the World Parks Congress last month, leaders of Madagascar and Senegal announced designation efforts for new MPAs in their national waters. President Ravalomanana of Madagascar declared intent to increase his nation's protected areas system — including forest, wetland, and marine ecosystems — from 17,000 km² to 60,000 km² within five years. Approximately 10,000 km² of that total will be marine and wetland protected areas, which are expected to include Nosy Hara archipelago; the littoral zone of Toliara (including the Great Reef, one of the region's largest barrier reefs, and Nosy Ve islet, a community-managed historic and sacred conservation site); and the Sahamalaza peninsula and Radama islands. Initiatives to identify and study these potential MPAs have been underway for more than five years involving UNESCO, FAO, the National Environment Office, the National Parks Service (ANGAP), the Support Service for Environmental Management (SAGE), the Institute of Marine Science and Resources, and international NGOs (WWF, Conservation International, and the Wildlife Conservation Society).

The government of Senegal has designated four new MPAs totaling 755 km², in cooperation with local coastal communities and several conservation, research, and marine resources management organizations. The goal of these new MPAs is to protect important fish-spawning and nursery areas in support of sustainable fisheries management, although management plans have not yet been established for the sites.

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Editor's note: The following letter is from Pierre Kleiber, a fishery biologist based in Honolulu, Hawai'i (USA). He writes in response to two articles that have recently appeared in *MPA News*: one on the decline in population of large oceanic predators (*MPA News* 4:11) and one on the use of biodiversity hotspots as a basis for open-ocean reserves for these predators (5:3). Both articles focused on research by Boris Worm of Kiel University (Germany) and Ransom Myers of Dalhousie University (Canada).

Letter to the Editor

Dear MPA News:

It is questionable at this point in time whether reserves are necessary or desirable for predators in the pelagic, "blue" ocean. The presumption that there has been a universal, drastic decline of large marine fishes is based on statistical analyses of raw catch-per-unit-effort data, based on incomplete and improperly lumped data across species, among other errors. A detailed response to the Myers/Worm analysis can be found at http://www.soest.hawaii.edu/PFRP/large_pelagic_predators.html.

As for marine turtles, it is evident that several populations are in decline, but it is not clear that high-seas fisheries are significantly responsible for the decline. Much evidence points to disruption of nesting beaches and directed harvest of eggs and adults as primary causes.

High-seas marine reserves might be considered as an option in case of need. However, in the case of most large predatory fishes, we are not at that stage yet, and management of high-seas fisheries to aid turtle populations is unlikely to be of any use.

If a need to consider marine reserves arises, I would hope that it would involve a more sophisticated analysis

than the one performed by Worm and Myers. The authors simply estimate possible changes in total catch of a range of species. To assess the possible efficacy of a reserve, the projected catch needs to be split into catch by species, age, and location as part of an age and spatially structured population dynamics model in order to estimate what the response of the population would be.

In writings of Worm and Myers, there is the notion of a pre-industrial "pristine" ocean as an ideal to which we should either aspire or at least juxtapose the current conditions. But there is evidence that century-long cycles of five-fold changes in abundance have existed for at least one large tuna species (bluefin) for long before the advent of modern industrial fishing. It is likely that other fish populations have undergone similar fluctuations. So "pristine" is in fact undefinable. What are needed are analyses of where we are, compared to where we want (or can hope) to be, and how to get from here to there.

Pierre Kleiber

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Conference Calendar

November 10-14, 2003 — **56th Annual Meeting of the Gulf and Caribbean Fisheries Institute (GCFI)**. Tortola, British Virgin Islands. Featuring sessions on MPAs and the management of marine fisheries. Web: www.gcfi.org/56th/56th_gcfi_tortola.htm

November 10-14, 2003 — **Third International Conference of the Panafrican Fish and Fisheries Association**. Cotonou, Benin. Discussing the management of African fisheries, including threats to biodiversity, conservation, and economic issues. Web: membres.lycos.fr/hydrobiofsa/colloqueparadiEngl.htm

November 12-14, 2003 — **Global Conference on Oceans, Coasts, and Islands**. Paris, France. Bringing together ocean leaders from governments, international agencies, NGOs, and the private sector; theme is "Mobilizing for Implementation of the Commitments Made at the 2002 World Summit on Sustainable Development". Web: www.globaloceans.org/globalconference/index.html

November 18-21, 2003 — **6th International Conference on the Environmental Management of Enclosed Coastal Seas**. Bangkok, Thailand. Covering environmental protection and preservation of coastal seas; session themes relate to science, management and education in the coastal zone. Web: www.emecs2003.com

November 20-23, 2003 — **2003 China International Recreational Fisheries and Aquarium Congress & Exhibition**. Shenzhen, China. Theme is "New Directions for the Sustainable Development of Fishery Resources and Aquaculture". Web: www.cnfm.gov.cn/recreational/RecreationalFisheries.htm

December 1-5, 2003 — **Deep Sea Conference 2003**. Queenstown, New Zealand. Discussing governance and management of deep-sea fisheries. Web: www.deepsea.govt.nz/

For more conferences: www.mpanews.org