

International News and Analysis on Marine Protected Areas

"Particularly Sensitive Sea Areas": Using a Comprehensive Planning Tool to Protect Habitats from Shipping

Roughly 80% of international trade is carried by ship. Such traffic carries the risk of groundings, collisions, spills, and other incidents that threaten the ecological health of marine systems. The associated hazards to habitats and wildlife can pose a persistent concern for managers of marine protected areas, particularly those near major ports or shipping routes.

In several cases around the world, MPA practitioners have moved to reduce these threats by implementing focused regulatory instruments, such as shipping lanes, areas to be avoided, or discharge restrictions. But a broader, higher-profile tool remains available – the international designation of sites as Particularly Sensitive Sea Areas, or PSSAs – offering managers a comprehensive approach to seeking vigilance and awareness from the international shipping industry. Available since 1991, the PSSA tool has so far been approved for just two sites, but more are now in the designation pipeline. This month, MPA News examines the PSSA tool and how some practitioners intend to apply it.

Benefits of PSSA designation

The International Maritime Organization (IMO) – a United Nations agency focusing on international shipping – is responsible for designating various internationally recognized protective measures, including PSSAs. Member states submit proposals for PSSA designation to the IMO; if approved, the designated PSSA appears on international nautical charts.

The IMO defines a PSSA as "an area that needs special protection through action by IMO because of its significance for recognized ecological, socio-economic or scientific reasons, and which may be vulnerable to damage by international shipping activities." In short, PSSA designation offers three principal benefits:

• Providing global recognition of the special significance of a designated area though identification of PSSA status on international charts;

- Informing mariners of the importance of taking extra care when navigating through a region; and
- Giving coastal states the opportunity to adopt additional protective measures to best address the

particular risks associated with international shipping in the area.

The third benefit is a critical part of any PSSA designation because, by itself, PSSA status confers no direct regulatory benefits. Associated measures – such as areas to be avoided (ATBAs) and other regulatory actions – provide the actual legal basis for restrictions on shipping. For this reason, any application made to the IMO for PSSA designation is expected to identify at least one associated protective measure that addresses the risk posed to the area by international shipping activities.

Of course, managers need not pursue PSSA status in order to receive approval to implement the more focused measures: many more sites feature IMOapproved ATBAs, for example, than PSSAs. What's more, these measures appear on international charts just like PSSAs do, and may take only a few months to gain IMO approval, rather than the years it can take to secure PSSA designation.

So the question arises: Why should managers pursue PSSA status if the associated measures provide the real regulatory protection and take less time to achieve?

One answer may lie in the process. Kristina Gjerde, a member of the IUCN Commission on Environmental Law and an advisor to WWF International, says the procedure of preparing a PSSA proposal provides an invaluable opportunity to take a comprehensive approach to protect an area from the adverse impacts of shipping. "Consultations with local fishermen, recreational users, the environmental community, the shipping community, scientists, and other concerned citizens on the environmental conditions in the area may reveal new or different problems than those anticipated," Gjerde wrote in a briefing paper to WWF, which she made available to MPA News. "The wide range of protective measures available can be reviewed to determine which ones best meet the needs of the area at risk."

Notably, the PSSA instrument also allows for the IMO and member states to craft extraordinary measures, beyond existing IMO measures, to meet the special characteristics of a discrete area. Examples of measures

Table of Contents

"Particularly Sensitive Sea Areas": Using a Compre- hensive Planning Tool to Protect Habitats from Shipping1
Notes and News 3
Gaps to Be Addressed in Management: Advice from Caribbean MPAs
MPA Perspective: Ways to Ensure Marine Reserves Get a Fair Test 5
Letters from Readers 6

PSSAs

continued from page 1

not normally designated by the IMO could include speed restrictions, prohibitions on ballast water discharges near

IMO-approved protective measures to accompany a PSSA proposal

IMO tools that could serve as associated protective measures with a PSSA include:

- **Traffic separation schemes** used to separate opposing streams of traffic through the establishment of traffic lanes or separation zones.
- Areas to be avoided closure of an area to all ships or to certain sizes or classes of vessels.
- No anchoring areas established to protect areas with an unstable anchoring bottom or that may be damaged by anchor weight or slippage.
- Ship reporting systems used to determine the intended movement of a ship through a given area.
- **Discharge restrictions** regulating operational discharges from ships.

PSSAs, or air pollution emission limitations, according to Gjerde's paper. The Great Barrier Reef Marine Park (GBRMP) in Australia, one of two existing PSSAs, features a compulsory pilotage system along the park's inner shipping route for vessels over 70 meters in length – again, not normally an IMOdesignated measure but approved in the case of this particular PSSA.

Furthermore, PSSA designation in itself may send a message to the shipping community irrespective of associated protective measures: namely, that this site on the chart has been deemed one of the most sensitive sea areas in the world. In

the long run, it is possible that courts will come to expect a higher standard of conduct in such areas.

Existing and future PSSAs

The GBRMP received its PSSA designation in 1990. (Interestingly, the IMO did not formally adopt its own guidelines for the PSSA program until a year later.) The

PSSA designation not for all MPAs

Although PSSA designation could serve as a useful tool for many MPAs, it would be inappropriate or unnecessary to apply to all. MPAs with minimal shipping pressures, for example, would have little use for it, as would MPAs committed to implementing only a single protective measure, such as a no anchoring area.

Billy Causey, superintendent of the Florida Keys National Marine Sanctuary (US), would like to see the PSSA tool remain a relatively unique designation. "I think its value would diminish if it were used everywhere," he said. other existing PSSA is the coral-laden Sabana-Camaguey Archipelago in Cuba, approved in 1997.

Each site has incorporated protective measures to supplement its PSSA designation. The GBRMP, for example, complements its abovementioned pilotage system with a mandatory vessel reporting scheme, in which all vessels over 50 meters in length are required to report their position at specific points along the park's inner shipping route, between the reef and the coast. The system is integrated with a radar monitoring system at key entrances to the reef. The park's management also effectively prohibits the discharge of pollutants (except sewage) from ships within the Great Barrier Reef lagoon.

Why so few PSSAs have been designated in the past decade may be due to the length of time it takes to secure the designation. "It is a slow process to get a proposal approved at the [national] government level, even before bringing it to the IMO," said Gjerde. Once a proposal reaches the IMO, several committees must approve it before final designation. Gjerde adds that the original 1991 guidelines for the instrument were overly complex, and mixed PSSAs with the concept of Special Areas, a designation under MARPOL (the international convention for the prevention of pollution from ships). The IMO updated its PSSA guidelines last year to clarify the program and the proposal submission process.

Two sites are now awaiting their PSSA designation. The Florida Keys National Marine Sanctuary (FKNMS) in the US, and the archipelago of Malpelo off the Pacific coast of Colombia have already received IMO committee approval of their associated protective measures. Formal PSSA approval could come as soon as this month for both of them.

The waters around the Florida Keys are one of the most heavily trafficked shipping areas in the world. An estimated 40% of global shipping commerce passes within a day and a half sailing time of the FKNMS. Although the sanctuary has had protective measures in place for years – including a no anchoring zone and areas to be avoided – its management sees PSSA status as bringing an added level of protection. "PSSA status is going to help us enormously in getting the word out to the international shipping community about the particularly sensitive area that we have here in the Florida Keys," said Billy Causey, FKNMS superintendent. "It's one more tool to put in front of the shipping community."

Colombia's application for PSSA status for Malpelo has featured a unique application of the tool. The group of mostly uninhabited islands, located hundreds of miles from the Colombian mainland, suffers from illegal fishing. To solve this problem, Colombia approached the IMO for approval of PSSA status and an area to be avoided – in effect, creating an area off-limits to all vessels of a certain size, including the fishing boats Colombia hopes to control. When faced with the fact that the IMO had created PSSAs as a way to improve vessel safety – not to protect against illegal fishing – Colombia argued that many of the fishing vessels were traveling with no lights on, thus creating an unsafe shipping environment, according to people involved in the international discussions. With the backing of other South American nations, the argument has been successful.

More PSSA opportunities

Interest in PSSA status has not been confined to tropical areas. The highly productive Wadden Sea ecosystem, off the coasts of Denmark, Germany, and The Netherlands, experiences significant shipping traffic to several ports. It is now the focus of a three-nation effort to secure PSSA status. The Trilateral Governmental Conference, a transboundary coordinating body on Wadden Sea issues, voted last October to submit a PSSA application to the IMO, to be associated with existing protective measures. The sea is home to several marine protected areas, including the Wadden Sea Conservation Area, recommended for nomination as a World Heritage Site. (A PSSA feasibility study conducted for the Wadden Sea

Applying for PSSA designation

Only IMO member states can submit proposals for PSSA designation. Governments with a common interest in an area should submit a coordinated proposal. The application itself must contain:

• A summary of the objectives of the proposed PSSA identification, its location, the need for protection, and a proposal for associated protective measures.

• A detailed description of the area, together with a chart; an explanation of the significance of the area

ministers in 2001 is available in PDF format online at *http://cwss.www.de/news/documents/pssa/PSSA-report.pdf*.

PSSAs could some day be designated on the high seas, say some legal experts. Although it is unclear how exactly a proposal would be submitted for a high-seas MPA, the IMO may have the power to approve one. "As many of the protective measures in use through IMO extend beyond the limits of the territorial sea, the 200-mile exclusive economic zone, and into the high seas, it would appear that IMO has the competence to designate PSSAs on the high seas," said Gjerde. "PSSAs on the high seas could then be protected by IMO measures."

based on recognized criteria; and an explanation of the vulnerability of the area to damage from international shipping activities.

- A description of the proposed measures showing how they will provide the needed protection from threats of shipping damage.
- A review of the possible impact of any proposed measures on the safety and efficiency of navigation.

(**Source:** Adapted by MPA News from a paper presented at the Coastal Zone 2001 conference in Cleveland, Ohio [US], by Kristina Gjerde, a member of the IUCN International Commission on Environmental Law.)

For more information:

Kristina Gjerde, ul.

Piaskowa 12c, 05-510 Konstancin-Chylice, Poland. Tel: +48 22 754 1803, Email: *kgjerde@ it.com.pl*

Jamie Storrie (Project

Manager, Shipping), Great Barrier Reef Marine Park Authority, PO Box 1379, Townsville, QLD 4810, Australia. Tel: +61 7 4750 0700; E-mail: *jamies@ gbrmpa.gov.au* Web: *www.gbrmpa.gov.au*

Billy Causey, Florida Keys National Marine Sanctuary, P.O. Box 500368, Marathon, FL 33050, USA. Tel: +1 305 743 2437 x26; E-mail: billy.causey@noaa.gov, Web: www.fknms.nos.noss.gov.

Notes and News

Cocos Island update: Poacher fined, forfeits ship

In a decision handed down by the supreme court of Costa Rica, the owners of an Ecuadorian longliner, caught in August 2001 fishing illegally in the country's Cocos Island National Park (MPA News 3:4), have been fined US\$290,000 for the infraction and have had to forfeit the vessel to authorities. This marks the first time the country has applied vessel forfeiture as a penalty for poaching. The court also sentenced the captain of the vessel, the *San José I* to a multi-year jail term. The vessel was apprehended last year by a patrol boat of the Sea Shepherd Conservation Society, an international NGO that has provided free use of its boat to Cocos Island managers in enforcing park regulations. Still facing trial are two Colombian vessels caught fishing in the park in January 2002.

For more information: William Muñoz Quiros, Friends of Cocos Island Foundation, Apartado 276-1005 Barrio México, San José, Costa Rica. Tel: +506 256 7476; E-mail: *wmunoz@csu.co.cr*; Web: *www.cocosisland.org/english*.

MPAs needed for European corals, say researchers Citing evidence of trawling-related damage to deepwater

corals in the Northeast Atlantic, European researchers have called for designation of conservation areas to protect remaining coral habitat. In a paper published in the 7 March 2002 issue of the Proceedings of the Royal Society of London B, a team of scientists from the UK, France, and Norway document coral bycatch from trawling along the West Ireland continental shelf-break area, and analyze video of trawled and untrawled reefs off Norway. Live coral caught in the trawls was measured with radiocarbon dating to be roughly 500 years old, while clumps of reef structure were 4000-5000 years old. "Our findings emphasize that conservation areas are urgently needed to protect coral reefs within the exclusive economic zone of EU waters," say the authors. In the past two years, Norway has closed two reefs to bottom trawling, while allowing fishing in the above water column to continue (MPA News 3:5).

For more information: Jason Hall-Spencer (lead author), Institute of Biomedical Sciences, Department of Environmental and Evolutionary Biology, University of Glasgow, Glasgow G12 8QQ, UK. E-mail: *gbfa20@udd.gla.ac.uk*.

More on the "Human System Connectivity..." workshop

The workshop "Human System Connectivity: A Need for MPA Management Effectiveness" was managed by Patrick McConney of the Caribbean Conservation Association: Leah Bunce of the National Oceanic and Atmospheric Administration; and Georgina Bustamante of The Nature Conservancy. Roughly 25 participants contributed to the outputs of the workshop. The workshop report is available from Patrick McConney at *ccacammp@* caribsurf.com.

The GCFI symposium also featured a work-shop on MPA science.

titled "Improving Applications of Science in MPA Design and Management". The report for this workshop is available on the GCFI website (www.gcfi.org) in Microsoft Word format. Spanish translations of both workshop reports will soon be available.

For more information:

Patrick McConney, Senior Program Officer, Coastal and Marine Management Program (CaMMP), Caribbean Conservation Association (CCA), Bush Hill, The Garrison, St. Michael, Barbados. Tel +1 246 426 5373; E-mail: cacammp@ caribsurf.com.

Gaps to Be Addressed in Management: Advice from Caribbean MPAs

Last November at the 54th annual meeting of the Gulf and Caribbean Fisheries Institute, scientists and MPA practitioners convened a workshop to discuss the role of socioeconomic concerns in successful MPAs. Titled "Human System Connectivity: A Need for MPA Management Effectiveness", the workshop addressed gaps in the management of Caribbean MPAs, namely in the development of manager and stakeholder capacity and inter-group communication. Participants, including resource users and NGOs, said filling these gaps would help MPAs to achieve their goals of protection and sustainable resource use.

The workshop report provides a list of tips for how practitioners can fill such gaps. In light of the list's potential usefulness to practitioners both inside and outside of the Caribbean region, MPA News has adapted its highlights below:

1. Improve managers' communication skills and knowledge of tools for coordination/participation:

 Train managers in communication skills, business operations, conflict management, facilitation, and community participation through workshops and training courses, such as those offered by the United Nations Environment Programme and other institutions. This is particularly necessary for managers with natural science backgrounds.

2. Strategize MPA issue awareness programs in a proactive manner:

- Develop a regional database of managers and decisionmakers.
- Invite decisionmakers to special events to get them personally involved.
- Develop basic education materials targeted for specific audiences like fishermen, divers, developers, and high-level policymakers.

3. Build stakeholder analysis skills:

- Understand stakeholder needs such as the continued ability to derive a livelihood from the protected area, if possible – via improved stakeholder assessments.
- Train managers in how to conduct stakeholder analyses themselves.

4. Provide incentives for community representatives participating in the planning process to report back to their constituencies:

- Clarify representatives' responsibilities and publicize their identities.
- Select effective representatives by having clear criteria for selection and a transparent selection process based on understood roles and responsibilities.

• Build capacity of representatives (e.g. how to conduct meetings) and provide them with necessary tools, equipment and rewards.

5. Provide innovative economic incentives and opportunities for resource users:

- Use an eco-enterprise fund to develop new businesses/cottage industries to generate income for the MPA and alternative livelihoods for community members based on local experiences and skills.
- Develop an eco-labeling system for marine products, such as fish and lobster "sustainably" harvested from the MPA.

6. Engage more fishermen and other resource users in research and monitoring programs to foster their interest in conservation:

- Employ resource users as data collectors and analysts wherever feasible.
- Allow users to design their own data-collection programs within guidelines.
- Publicize research results in ways to reach the widest possible audience.

7. Enhance communication between natural and social scientists:

- Educate natural scientists on the need to link and work with social scientists.
- Promote interdisciplinary work and hold interdisciplinary workshops to share information, with attendance as a funding or permit clause.
- Require natural and social scientists to meet together with the community in the beginning to understand needs and share perspectives.

8. Improve practical experience exchanges for MPA managers and resource users:

- Clarify the goals of experience exchanges and study tour projects.
- Show benefits of exchanges based on experiences that worked and compile testimonials of success for future proposals.
- Work with stakeholders to develop exchange proposals. Major NGOs can help prepare successful funding proposals for site managers and local conservation NGOs.

9. Expand coordination and communication among sites using different mechanisms and vehicles, both national and international:

- Focus on a few networks to improve coordination rather than start new ones.
- Establish region-wide planning for site selection to ensure better coordination.

MPA Perspective: Ways to Ensure Marine Reserves Get a Fair Test

By Brock Bernstein, National Fisheries Conservation Center

I know a fisherman who doesn't think marine reserves are needed. He's skeptical of their ability to improve fishery yields and says he just wishes they'd go away. In spite of that, he's willing to contribute his knowledge to help improve their design and lessen their immediate impacts on fishermen. But like many others who share both his point of view and his deep knowledge of the ocean, he has been frustrated by a welter of problems that leave fishermen feeling marginalized and even targeted as the movement toward marine reserves gains momentum.

Marine reserves are being proposed, at the local, state, and federal level, as the solution to a variety of problems facing fisheries management and resource conservation. Proponents often describe marine reserves as a cure for overfishing, overuse, and environmental change. To be sure, there is strong evidence that marine reserves lead to greater numbers, larger size, and higher diversity of fish populations in completely protected areas, particularly where controls on fishing outside the reserve are weak or nonexistent. And there is little doubt that a good way to protect biodiversity is to fence an area off and protect it from all exploitation, as is done with national parks.

However – and this is a very large "however" – there are serious practical, scientific, and administrative issues to be faced. These must be dealt with fairly and thoroughly if reserves are to have any chance of achieving their intended benefits for all parties – fishermen included – without creating unnecessary economic hardship for fishermen and the coastal communities that depend on them.

1. Include fishermen from the start. The agencies managing the planning processes must streamline and coordinate their efforts. There are unfortunately too many examples of overlapping and uncoordinated efforts that put fishermen in the untenable position of either attending numerous meetings - and losing substantial amounts of income - or going fishing and missing the chance to protect their interests. These agencies must also think hard about how to provide fishermen and other interested parties with opportunities to get usefully engaged in these processes early and often. Decades of experience with siting parks, conservation areas, and large facilities such as power plants show that success is impossible without the full participation of affected groups from the very beginning of the planning process.

2. Leave time to get a thorough "people picture".

Planning timelines must leave room for adequate socioeconomic studies, and these must be fully funded. Existing data are usually not detailed enough to be used in evaluating tradeoffs among different proposals, and it is unrealistic to ask fishermen and other affected groups to buy into additional restrictions on their activities without reliable estimates of costs and benefits. In addition, the data needed for socioeconomic studies can often be obtained only with the willing cooperation of the fishing industry, and such cooperative relationships take time to build.

3. Fisheries scientists/managers and reserves

scientists need to talk. Reserves, even those designed strictly for conservation purposes, do affect fishing, and this impact needs to be accounted for in fisheries management plans. Reserves developed for the purpose of enhancing fisheries are in fact another form of effort control. Questions about how this should be traded off against more traditional forms of effort control have not yet been tackled. This will take repeated and purposeful discussions between the two groups of scientists.

4. Measure what works, fix what doesn't. Adaptive management principles must be embedded in reserve design and management. This means a commitment to stating specific goals, objectives, and benchmarks; implementing monitoring and evaluation plans to measure progress toward them; and changing reserve designs if progress is not occurring as expected.

5. Support fishermen's participation. Fishermen need support to organize their involvement in discussions about whether and where reserves should be implemented. All fishermen can't be at every meeting and negotiating session. They need representatives they can trust, who are knowledgeable, and who can hold their own in discussion and argument with scientists, conservation advocates, and managers. These representatives, especially if they are active fishermen, need financial support to enable them to attend meetings, which often means losing income. They also need the logistical and financial support to go back to their constituencies and explain the progress of discussions, get feedback on proposed solutions, and develop agreements.

Many fishermen see reserves as the pet project of conservation groups and would just as soon see them disappear. That's not going to happen. There's enough evidence and momentum behind the reserve idea to ensure that it will get a serious trial, and there are potential benefits for fishermen to be had. For reserves to get a fair test, and for this to happen in a way that reduces the short-term pain for fishermen and maximizes the possibility of medium- to long-term benefits, the five issues above need to be addressed head-on. Fishermen can do everyone involved a good turn by focusing their advocacy efforts, both inside and outside the fishing community, on seeing that they are addressed honestly and thoroughly.

Note from the editor:

Brock Bernstein, author of the perspective piece at left, is president of the National Fisheries Conservation Center (NFCC). The NFCC is a US-based NGO dedicated to developing "win-win" fisheries-management approaches that benefit natural resources and the human communities that depend on them. The adjoining piece originally appeared in the February 2002 issue of Pacific Fishing magazine, a US-based trade publication covering the Pacific commercial fishing industry (http:// www.pfmag.com).

For more information:

Brock Bernstein, National Fisheries Conservation Center, 308 Raymond St., Ojai, CA 93023, USA. Tel: +1 805 646 8369; E-mail: brockb@west.net Web: www.nfcc-fisheries.org

MPA News

Editor-in-Chief John B. Davis

Editorial Board Chair

David Fluharty, Ph.D. School of Marine Affairs Univ. of Washington

Patrick Christie. Ph.D. School of Marine Affairs Univ. of Washington

Michael Murray Channel Islands National Marine Sanctuary

Direct correspondence to: MPA News. School of Marine Affairs, Univ. of Washington, 3707 Brooklyn Ave. NE, Seattle, WA 98105, USA. Tel: +1 206 685 1582; Fax: +1 206 543 1417; E-mail: mpanews@ u.washington.edu.

MPA News is published monthly by Marine Affairs Research and Education (MARE), a 501(c)(3) not-forprofit corporation, in association with the School of Marine Affairs, Univ. of Washington. The MPA News staff is solely responsible for content

.....

The MPA News project is funded in part by the David and Lucile Packard Foundation. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the Packard Foundation.

For a free subscription, send an e-mail message to mpanews@u.washington.edu. Please type "subscribe" on the subject line, and include your name, mailing address, and daytime phone number in the text of the message. Also, please note whether you would like your subscription to be delivered electronically or in paper format.

Letters

Last month, MPA News printed two letters suggesting the IUCN definition of "marine protected area" was too loose to be truly useful (MPA News 3:7). These letters, in turn, prompted responses from individuals who were instrumental in the development of the IUCN definition. Their letters appear below.

Dear MPA News:

I'd like to refer to the debate regarding the definition of an MPA. This term is intended by IUCN to be a general one, describing areas that are subject to various levels of protection. It is directly and intentionally analogous to the IUCN definition of a "protected area". Readers of your newsletter should recognize that, under both general terms (PA and MPA), there are six categories of protected area that are intended to cover the range of degrees of protection.

The IUCN categorization scheme took four years to develop, involving thousands of people. As one who was involved in this exercise, I'd have to advise people (other than obsessive masochists) to refrain from repeating this exercise. It might seem like a simple job, but it's not. It might also be worth noting that the most recent IUCN categorization scheme resulted from a perception that the preceding one was deficient. I don't think the existing one is significantly better.

People interested in the 1994 IUCN publication Guidelines for Protected Area Management Categories can find it on the IUCN website in PDF format (http:// wcpa.iucn.org/pubs/pdfs/IUCNCategories.pdf).

Graeme Kelleher

12 Marulda Street, Arenda, Canberra ACT 2614, Australia. Tel: +61 2625 11402; E-mail: g.kelleher@gbrmpa.gov.au.

.....

Dear MPA News:

Perhaps a little further information would be useful on IUCN's definition of an MPA, following the correspondence in your last issue (MPA News 3:7). As the editor pointed out, this definition is probably the most widely used. The reasons for this are probably: (1) that it was the result of extensive consultation and debate across nations and between individuals involved at all levels in MPA management at the time it was drawn up; and (2) because, intentionally, it is designed to apply to a wide range of types of MPA - from large multiple use areas with strictly protected zones within them, to areas specifically designed to be totally protected.

Nevertheless, there have been many debates about whether it needs revising. Publications that address the issues surrounding the question of "What is an MPA" include the MPA theme issue of Parks (Vol. 8, no. 2, June 1998) and a 1998 WWF International discussion document on MPAs (to find out how to obtain this, email Renate Dominique at *rdominique@wwfint.org*). Before moving into detailed discussion through MPA News, readers might like to consult these sources. The following points summarize some of the issues, and respond to questions raised by your correspondents.

A "protected area", in IUCN terms, must be primarily focused on the protection of biological diversity, since IUCN's definition of a protected area is "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means". Thus EEZs are not included, since they are not established primarily for the purpose of biodiversity conservation. The MPA definition could perhaps be tightened by changing the final words 'enclosed environment" to something like "enclosed environment for the purpose of protecting and maintaining its biodiversity".

Jane Frances [MPA News 3:7] suggests that the IUCN definition puts too much emphasis on permanency through its phrase "reserved by law". However, the complete phrase is intentionally "reserved by law or other effective means". This phrase arose out of the need to include areas protected through traditional or community mechanisms, or by means other than western-style law. However, the definition does indeed cover areas with only a tiny proportion of marine environment, which may seem inappropriate. Furthermore, it is not clear whether fishery "management areas", where the primary purpose is protecting or enhancing fisheries stock, should be included — at one level these can be seen as important for biodiversity protection.

For those who work on MPAs in a range of countries and situations, the most important thing is to be clear about what you are talking about in any particular instance. If it is widely accepted that "marine protected area" is a general term for an area set aside for conservation, whether on a multiple-use or strict-protection basis. perhaps that term should be left alone. We then need to use more precise terms for areas in which fishing or removal of organisms is prohibited. There are many names for these, and perhaps it would be useful to find a generic term. One problem is that, in many countries, protected area terms have specific legal definitions, and it would be a long expensive job to harmonize these. Thus, a Marine Reserve in Belize is, by law, a multiple use area, with zones for different activities, some of which will be closed to extraction; and in Kenya it is an area where traditional forms of fishing are allowed (compared with a Marine Park in which there is no fishing). A generic definition for a no-take area will thus require careful selection of words.

Sue Wells

Coordinator, Marine and Coastal Programme, IUCN Eastern African Regional Office, P.O. Box 68200, Nairobi, Kenya. Tel. +254 2 890606; E-mail: smw@iucnearo.org.