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The OpenChannels.org website — built by *MPA News* and *Marine Ecosystems and Management* to help ocean planners and managers share knowledge more easily — now offers the ability for ocean-oriented groups and projects to establish their own private online communities, with secure discussions and content sharing.

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Are you interested in learning more? Contact me at john@openchannels.org and we can discuss opportunities for your group. I look forward to hearing from you.

Meanwhile, check out the new content on OpenChannels this month, including:

- Blog: **The Present and Future of Marine Spatial Planning around the World**

By Charles Ehler

- Blog: **Australia's New MPAs: Why They Won't Work**

By Bob Pressey

- Tools: **Apps for Ocean Management and Conservation**

By Sarah Carr

...and much more. Come join us at OpenChannels.org!



John B. Davis

MPA News Editor, OpenChannels Supervisor

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New Year's Resolutions for the MPA Field: What Practitioners Would Like to Happen in 2013

The year 2012 was a noteworthy one for the MPA world, both for things that happened (like Australia's designation of an enormous new national MPA system) or, in some cases, did not (like Antarctic managers' failure to designate a Southern Ocean MPA system by year-end, as planned). In 2012 the World Commission on Protected Areas released new, more restrictive guidelines for what should be considered an MPA — reopening a central discussion with implications for whether and how the field can meet global protection targets. And the year featured some quirky occurrences, too, like when the UK realized its Chagos MPA was actually 100,000 km² larger than it had previously thought.

As we turn to 2013, MPA News is introducing a new annual feature: collecting MPA-related New Year's

resolutions from practitioners in the field. Typically, New Year's resolutions pertain to the people making them — a commitment they make to meet a goal or reform a habit in the coming year. In our case, however, we invited contributors to apply resolutions to any person or group they wished in the MPA world: themselves, managers, a particular elected official, scientists, fishing groups, anyone! In essence we asked,

What action would you like to see this year in the MPA world, and who should take that action?

The resolutions we received are below. Do you have your own MPA resolution in mind for 2013? Please feel free to share it at <http://openchannels.org/node/2573>

continued on next page



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Jay Nelson

Director, Global Ocean Legacy Project, Pew Environment Group

A resolution for scientists: Although it is not typical to offer New Year's resolutions for others, this is an opportunity that's hard to turn down! I would like to see scientists end their use of the term "marine protected area" to describe marine protection from IUCN Category I to Category VI. As a catchall term, MPA is imprecise, unfocused – and sounds deceptively benevolent to the public. It is understandable why government officials, who benefit from ambiguity, use the term for virtually any marine protection, no matter how minor. But it's a mystery why scientists, who otherwise pride themselves on empirical precision, use a term with such a broad range of interpretations as to be virtually meaningless in a scientific context. Whatever terms are used to describe marine protection, they need to be clear and descriptive.

Tim McClanahan

Senior Conservation Zoologist, Wildlife Conservation Society

A resolution for practitioners and governments: This year marine practitioners and governments will recognize and act on the recognition that small and short-term fisheries closures are not sufficient for protecting the marine communities and biodiversity that are inherent in their regions. They will acknowledge that large and permanent wilderness areas are fundamentally different than the common small closure systems. And they will work with neighboring communities, countries, and international governance bodies to establish large wilderness areas, such that all of the major marine regions have at least one wilderness area where community, regional, and international governance bodies share the recognition and protection.

Lida Pet-Soede

Head, Coral Triangle Program, WWF

A resolution for the fishing sector: In 2013, I would like to see the fisheries sector collaborating with WWF in designing "MPAs for fish fillets". In the Coral Triangle, important progress is being made where new MPAs are declared for the purpose of securing food and livelihoods. Unfortunately, however, few of these are sufficiently designed or implemented to deliver these goals. No-take zones are not in the right place or of the right size for the optimization of actual fish output, and hardly anywhere is fishing around the no-take zones managed with suitable catch limits and effort restrictions. As responsible

fishing companies enter the arena of sustainable use of our oceans, I would like to see them apply their business acumen to help design and implement additional MPAs that are designed to deliver what most MPAs of the past have promised but unfortunately failed to deliver: more fish.

Fanny Douvere

Coordinator, UNESCO World Heritage Marine Programme

A resolution for marine World Heritage sites: We want the 46 marine World Heritage sites to be drivers for change in ocean conservation worldwide. For this, we developed a 10-year strategy to ensure that by 2022 every site will have sufficient means to protect its Outstanding Universal Value for which it was inscribed on the World Heritage List. To achieve that, our resolution this year is to attract key strategic partners that can help us deliver this goal. Marine World Heritage is a story of success. We are at the beginning of a long route and our ambitions are big — 2013 is a time for action! **[Editor's note:** On 7 February in Paris, the World Heritage Marine Programme is hosting an event to raise visibility and attract new partners, including debuting a short film, *Marine World Heritage: The Crown Jewels of the Ocean*, narrated by Jacques Perrin.]

Blair Palese

Communications Director, Antarctic Ocean Alliance

A resolution for CCAMLR: The Antarctic Ocean Alliance (AOA) is calling on the Commission for the Conservation of Antarctic Marine Living Resources – the body that regulates most marine life in the Southern Ocean – to live up to its commitment to establish a network of MPAs and marine reserves around Antarctica while the region's habitats are still largely intact. In particular, the AOA is urging CCAMLR to agree on two proposed protected areas: for the Ross Sea (the world's last pristine ocean area) and East Antarctica. The 25 CCAMLR member countries failed to establish any large-scale marine protection at their meeting last year because some countries actively blocked conservation efforts. We challenge CCAMLR in 2013 to meet its conservation commitments and preserve this unique and remarkable ocean habitat.

Mike Weber

Program Officer for Oceans, Coasts, and Fisheries, Resources Law Group

A resolution for communities and stakeholders: In 2013, the existence of large MPAs in remote areas (as in Chagos, Northwestern Hawaiian Islands, and the Phoenix Islands) will be complemented by growing networks of protected areas near densely populated,

heavily used, yet ecologically critical, coastal waters (as in the US states of Oregon and California). The vision is a global movement toward science-based networks of coastal MPAs, designed by stakeholders and stewarded by local communities invested in their success. These MPAs will be integrated into coastal management and inspire action at all levels of government to improve water quality, ensure sustainable fisheries and promote sustainable coastal use generally. Fishermen, conservationists, and coastal tourism-based business will recognize the importance of MPAs to a healthy ocean and healthy fisheries, and work together to ensure the success of local protected areas.

Yvonne Sadovy de Mitcheson

Director, Science and Conservation of Reef Fish Aggregations (www.SCRFA.org), University of Hong Kong

A resolution for Pacific Island governments and the Secretariat for the Pacific Community: My wish is for universal inclusion of fish spawning aggregations in marine protected areas and as an integral part of MPA planning. Realistically, my resolution for 2013 is that this happens across the Pacific. Spawning aggregations of many important reef fishes support fisheries that feed and generate income for communities and traders in Pacific Island nations. Yet lack of management and increasing demand for fish are causing the aggregations to disappear along with the tremendous benefits they bring. Spawning aggregations are also some of our ocean's most spectacular natural events. The good news is that many Pacific aggregations are still in good shape and there is time to protect them. But this requires urgent and strong commitment from the region's government fisheries departments supported by the Secretariat for the Pacific Community.

Kristina Gjerde

Senior High Seas Advisor, IUCN Global Marine Programme

A resolution for governments and the United Nations: I wish governments in 2013 would support a new agreement for the high seas and deep seabed beyond national jurisdiction. A new implementing agreement under the UN Convention on the Law of the Sea is needed to facilitate the establishment of a representative system of marine protected areas for fully 50% of the planet, set forth baseline standards for prior impact assessments while addressing wider issues of capacity development, technology transfer, and access and benefit sharing of marine genetic resources. The 1982 UN Convention on the Law of the Sea is in need of updating to reflect more sophisticated approaches to protecting the marine environment beyond its primary focus on pollution control, while still retaining the structure and wide support that the Convention already enjoys.

Marie-Aude Sévin and Paul Guoin

Coordinators, Third International Marine Protected Areas Congress (IMPAC 3), National MPA Agency, France

A resolution for the MPA field: Do not procrastinate! This applies foremost to ourselves. Here in France, the final rush has begun to get everything ready for IMPAC 3, opening in Marseille on 21 October and closing in Corsica on 27 October. But we hope that you, too, can own up to this resolution, because we need your involvement, and quickly. The Congress is the only MPA-specific platform designed to pool global expertise and know-how, enabling us hopefully to meet our common target of protecting 10% of the Earth's waters by 2020. So whether you work for an MPA authority, an NGO, a research institute or a sea-related industry, you are bound to have something to learn – and something to contribute. To make sure you don't miss out on anything, follow our timeline:

- **Mid-March:** Connect to impac3.org and discover the program.
- **April 30:** Remember the submission deadline and mail in your contribution.
- **June 8:** Dress up for World Oceans Day, take photos, and share them with overseas friends at facebook.com/impac3.
- **June 15:** Be an early bird – register for IMPAC 3 while the coziest hotel rooms are still available.
- **September:** Buy a French (or, alternatively, Corsican) phrasebook.
- **October 21:** Be there! 

To comment on any of these resolutions:
<http://openchannels.org/node/2573>

...and one dream for the MPA field:

Joachim Claudet

Editor, *Marine Protected Areas: A Multidisciplinary Approach* (Cambridge University Press, 2011)

I have a dream.

I have a dream that one day our perception of the oceans will change.

I have a dream that one day marine spatial planning will be aimed at designating areas where uses, and especially fisheries, are allowed, rather than prohibited.

I have a dream that one day the debate will not be about what should or should not be considered an MPA but rather about the fishing activities that should or should not be allowed within the established marine fished areas.

I have a dream that one day the management target will no more be "percent area to be protected" but rather the amount of fishing allowed in a fished area to maintain a healthy ecosystem.

I have a dream that one day some policy-makers will share this dream.

Identifying Three Types of Ecologically Important Sites on the High Seas: An Interview with Jeff Ardron

Jeff Ardron of the Institute for Advanced Sustainability Studies, based in Germany (www.iass-potsdam.de), spends a lot of time thinking about the high seas. He is active in no fewer than three distinct processes to identify ecologically important marine sites, specifically in areas beyond national jurisdiction:

- Identifying **vulnerable marine ecosystems** (VMEs) for regional fisheries management organizations in the context of bottom fisheries;
- Identifying **ecologically and biologically significant areas** (EBSAs) in the context of the UN Convention on Biological Diversity; and
- Identifying sites that could be of **outstanding universal value** (OUV) according to the natural criteria of the UNESCO World Heritage Convention. (Note: The Convention as currently written does not address sites in areas beyond national jurisdiction.)

Because each of these designations derives from a separate international institution with its own unique goals, each process also involves its own set of criteria

— a fact of life in global resource management. So a high seas site that meets the criteria for a VME, for example, may not qualify as an EBSA or meet the natural criteria for OUV.

How would you characterize the main distinctions among vulnerable marine ecosystems, and ecologically and biologically significant areas, and areas of outstanding universal value?

Jeff Ardron: There is certainly some overlap among these three designations, but also some important distinctions reflecting the different institutions from which they have evolved. The broadest of the three is EBSAs, under the Convention on Biological Diversity, wherein the intention is to describe ecologically important places in a given region. While the criteria were originally conceived with the open ocean and deep sea in mind, they have also been successfully applied in the nearshore. EBSAs are exclusively a scientific description and do not come with any attendant management requirements. The idea is to flag ecologically important areas so that they are known and taken into account by the various regulatory authorities. This is still a young process, with the first set of EBSAs recently accepted by the CBD Conference of Parties in October 2012. It remains to be seen how well the international competent authorities will voluntarily take them on board.

VMEs, on the other hand, are already tightly linked to management — bottom fisheries — through two UN General Assembly resolutions. It falls to regional fisheries management organizations (RFMOs) and flag states to ensure that these UN resolutions are fulfilled. The VME criteria are very similar to the EBSA criteria, but emphasize in particular the fragility of the features and their susceptibility to damage from bottom fisheries. The UN resolutions were borne out of a concern about high seas bottom trawling, in particular, and the potential for widespread damage across the global ocean's bottom habitats. Some progress has been made on protecting VMEs, but to date the focus has been on corals and sponges. Deep sea science indicates that many other species and habitats are also vulnerable, and hence further protections will be required.

The World Heritage Convention currently does not apply to areas beyond national jurisdiction; however, it is very likely that many areas meeting the OUV criteria do occur out there too. So in this case, we are just starting to work with UNESCO World Heritage Marine to bring together the scientific expertise

Simple site-selection tool for data-poor conditions

In the November 2012 issue of *Marine Policy* journal, Lydia Teh of the University of British Columbia (Canada) described a new site-selection tool for MPAs called the Protected Area Suitability Index, or PASI. Developed to be simple to use even in data-poor conditions, the tool assesses suitability of sites for protection based on fishers' preferences for that site and the site's conservation value. The paper is at www.sciencedirect.com/science/article/pii/S0308597X12000711.

Tested by Teh in Malaysia, PASI tends to choose sites that are not preferred by fishers. "The tool will tend, for example, to give a higher protection suitability score to sites that are further away from a fishing village," says Teh. "This is because of the set of heuristic rules that governs the distance attribute. In PASI, if the distance of the assessed site is very near to a fishing village, then its suitability outcome is low." She notes, however, that the rules are adjustable to reflect local conditions. In a fishery with bigger boats and engines, for example, fishers may prefer to travel farther away to deeper water — in which case nearshore sites may be more suitable for protection, which PASI would indicate.

She says the tool requires only minimal training to use. "Anyone who is comfortable using a computer will be able to use PASI: it only requires the user to enter site data into an Excel spreadsheet," she says. "Calibrating PASI requires a few additional steps to assign different rule weightings to reflect the characteristics of the local fishing environment."

For more information: Lydia Teh, Fisheries Centre, University of British Columbia, Canada. Email: lydia.teh@fisheries.ubc.ca

necessary to begin to tentatively identify such places. Whether the World Heritage Convention would ever be amended, or whether a new instrument will be required, is hard to say. But I think that the first step to protecting such places is to draw attention to them. OUV criteria focus on picking “the best of the best” and so this is the most exclusive of the three criteria. I suspect that most, if not all, OUV areas on the high seas would also be EBSAs, but that does not mean that all EBSAs exhibit OUV.

Can you give examples of high seas or deep ocean sites that qualify under two, or even all three, of these designations?

Ardron: First of all, I must stress that each of these designations is the responsibility of their conventions and implementing bodies, and so what I say is just opinion. To be an EBSA and a VME would require that a site is both ecologically important and vulnerable to bottom fisheries, and recognized by both the CBD and an RFMO. Ecologically speak-

ing, there are many such places — certain seamounts, for example. However, from a process point of view, getting joint-designation is challenging because of the sector-based “silo” approach taken in the high seas, with competent authorities generally not coordinating with one another. That said, there has been some cooperation in the Northeast Atlantic between the RFMO (NEAFC) and the regional seas body (OSPAR), and I hope that will continue.

To meet OUV criteria, that hypothetical seamount VME/EBSA would also have to stand out significantly from others like it — perhaps an unusually dense collection of seamounts, or particularly shallow, or in an especially dynamic oceanographic area, etc. However, we are just starting this research. 

For more information:

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To comment on this article:
<http://openchannels.org/node/2574>

Results from MPA News Poll: Reader response to tighter guidelines for what is considered a *marine protected area*

In our November/December 2012 issue, MPA News described how the World Commission on Protected Areas has recently provided greater clarity on the IUCN definition for marine protected area. Namely, some sites that previously may have been considered MPAs — such as gear or temporal closures with no wider stated conservation aims, or community areas managed primarily for sustainable extraction of marine products, or single-species protected areas like shark sanctuaries — may be re-categorized as other types of spatial zoning, and no longer considered to be MPAs.

We asked you to indicate which of the following statements best reflected your perspective on this issue. Results of the poll, conducted on OpenChannels.org, are indicated:

- **Statement A:** This is a good development. It brings greater clarity to the definition of MPAs and increases the value of the concept. In general, we advance the field of MPAs by being more exclusive in what we consider to be an MPA, and focusing our attention on “true” MPAs that are dedicated to area-based conservation. **76% of respondents chose this statement**

- **Statement B:** This development hurts the conservation cause by devaluing legitimate management efforts that may not fit a strict definition but where conservation issues are nonetheless resolved using more limited protection tools. It also puts up artificial “walls” between sites that otherwise may face common management challenges. In general, we advance the field of MPAs by being more inclusive of what we consider to be an MPA. **14% of respondents chose this statement**

- **Statement C:** It does not really matter to me because I see the fundamental issue as increasingly taking into account the marine ecosystem as a whole. MPAs will always be a tool in broader ecosystem thinking, whether meeting a strictly defined area management target or in dealing with the overarching question of improving management over the whole ecosystem. The proof is in the results. **10% of respondents chose this statement**

To comment on these results:
<http://openchannels.org/node/2575>

Perspective: Puget Sound Needs a Network of Effective MPAs and No-Take Marine Reserves

By Jamie Glasgow

Editor's note: Jamie Glasgow is director of science for the Wild Fish Conservancy (www.wildfishconservancy.org), an NGO dedicated to the recovery and conservation of wild-fish ecosystems in the Pacific Northwest region of the US.

Puget Sound is a complex marine estuary that encompasses an area of 2600 km² in the northwestern US state of Washington. The Sound supports an astounding diversity of fish, seabirds, marine mammals, plants, and invertebrates. It is also adjacent to a major metropolitan center that is home to over four million people, where the population is expected to increase to seven million by 2020. (This includes the cities of Seattle, Bellevue, Everett, Tacoma, and Olympia.)

Puget Sound faces challenges typical of an ecosystem surrounded by millions of humans. We have experienced a relatively recent but thorough legacy of resource exploitation that includes: overfishing (by commercial, Native American, and recreational users); expansive hatchery fish production intended to prop up collapsing fisheries; net-pen aquaculture of non-native Atlantic salmon; substantial shellfish aquaculture; nearshore and estuary habitat loss; and upland development that compromises the quantity and quality of freshwater delivered to the Sound. Compounding these resource management challenges are impacts associated with climate change, including changes in ocean acidification, water temperature, and hydrology.

Not surprisingly, these cumulative impacts have taken a huge toll on the ecological integrity of Puget Sound. The abundance, population structure, and life-history diversity of many of the marine organisms that rely on Puget Sound are degraded. Four Puget Sound salmonid populations are federally listed as threatened with extinction. Groundfish abundance in Puget Sound is on a decline that started in the early 1980s, largely attributable to unsustainable fishing pressure. Fourteen out of seventeen species of rockfish in the North Sound and eleven out of fifteen species in the South Sound are at risk. Three of these Puget Sound rockfish species are listed as either threatened or endangered. Marine bird populations that feed on fish near the surface or in open water have declined 80-95% in numbers. And in 2005, Puget Sound orcas were added to the federal government's list of endangered species.

Substantial public will and resources have been aimed at "saving Puget Sound". State and federal agencies have spent more than US \$230 million annually on Puget Sound restoration since 2008, and many millions more have come from private foundations. The majority of these funds have been spent on laudable habitat restoration projects, with notably fewer resources going toward meaningful harvest and

hatchery reform. And what about marine protected areas, you ask? Well....

Just 0.07% of Puget Sound protected

Washington Department of Fish and Wildlife (WDFW), the state agency that regulates non-tribal commercial and recreational fishing, manages a total of 25 MPAs within Puget Sound. Notably, these MPAs were sited opportunistically rather than based on an overarching design with coordinated objectives. Most of them limit commercial, but not tribal or recreational, fishing. At present there are just nine no-take marine reserves in Puget Sound that in total cover 425 acres. This amounts to just 0.07% of Puget Sound's surface area. (That is not seven percent; it is *seven one-hundredths* of one percent.) There are 16 additional "marine preserves" that do not restrict hook-and-line fishing (<http://wdfw.wa.gov/fishing/mpa>).

Why the paucity of MPAs in Puget Sound? Why is there no science-based MPA network? It is not for lack of lip service. MPAs are identified as fundamental but as-yet-unrealized tools in the WDFW Groundfish Management Policy, in the WDFW Draft Puget Sound Rockfish Conservation Plan, and in Fish and Wildlife Commission Policies on groundfish and marine protection areas. Workgroups, committees, and action agendas have identified the need and opportunity for an effective Puget Sound network of MPAs for the past 15 years, yet we are not measurably closer to implementation.

The lack of progress stems from multiple obstacles. Despite struggling groundfish populations that would substantially benefit from MPAs, local and national sportfishing groups view a Puget Sound reserve network as a slippery slope toward reduced fishing opportunities. They have effectively lobbied state government to maintain the status quo. WDFW is charged with setting fishing regulations and restrictions to protect weak stocks, yet its operations are funded in part through the sale of fishing licenses, a conflict of interest that creates a disincentive to eliminate fishing in certain areas or take a position counter to vocal fishing lobbies. Despite policies that commit to the precautionary principles of conservation, WDFW is disinclined to restrict harvest via MPAs where stock status and trend data are sparse or inconsistent; the burden of proof in favor of a conservation need is often placed on conservationists. Western Washington Treaty Tribes, co-managers of Puget Sound fisheries, are cautious to embrace MPAs until conventional fishing regulations have been proven to be inadequate and there is a demonstrated

For more information:

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Note: The current issue of MPA News' sister newsletter *Marine Ecosystems and Management* features an interview with Anthony Wright, executive director of the Puget Sound Partnership, an inter-agency and multistakeholder initiative to address several stressors on Puget Sound: www.meam.net/MEAM28.pdf

need for conservation via reduced harvest. The National Marine Fisheries Service, the federal agency under the US Department of Commerce charged with recovering threatened marine species, has done little to actively encourage development of an MPA network in Puget Sound.

Restoring the fundamental ecology of Puget Sound will require a commitment to a scientifically rigorous MPA network that encompasses a significant portion of the Sound, clearly defined objectives, and a com-

mitment to enforcement, monitoring, and adaptive management. There is also urgent need for public outreach and education. For while WDFW's written fish management policies embrace MPAs as a tool for managing the weakest stocks, an effective MPA network is a significant and necessary departure from conventional Puget Sound fisheries management. 

To comment on this article:
<http://openchannels.org/node/2576>

Notes & News

Belize designates multi-use MPA for Turneffe Atoll; Bertarelli Foundation again involved

In November 2012, the Belizean government designated the 1316-km² Turneffe Atoll Marine Reserve, a multi-use MPA that covers the largest previously unprotected section of Belize's Barrier Reef. In a statement to mark the designation, Fisheries Minister Lisel Alamilla said the MPA's management plan will ensure that conservation priorities are balanced with those of local fishing communities and the coral reef ecotourism sector.

The designation was facilitated by the involvement of the Bertarelli Foundation, a Swiss foundation that is providing US \$5 million in support of the new MPA. That support will fund an endowment to protect the new MPA into the future. (The Bertarelli Foundation also provided funds to facilitate the UK's designation of the Chagos MPA in the Indian Ocean in 2010.) The Turneffe deal was brokered by BLUE, a UK charity, and is expected to receive additional financial support from the Oak Foundation, a US-based charity already active in Belize. Fauna and Flora International and several local organizations, including fishing groups, also partnered in the dealmaking.

A press release by Fauna and Flora International is at www.fauna-flora.org/news/belize-declares-new-marine-reserve-around-turneffe-atoll. A press release by BLUE is at www.bluemarinefoundation.com/en-GB/projects.aspx.

Report: cases, lessons on Mediterranean MPAs

A new publication from WWF offers first-hand advice and experiences from MPA planners and managers in the Mediterranean region. Featuring an array of brief case studies to illustrate various aspects of MPA management, the report *Making Marine Protected Areas Work: Lessons Learned in the Mediterranean* is designed to serve as a practical tool for practitioners and NGOs.

Letter to the Editor

Clarification on Antarctic MPA proposals

Dear MPA News:

I am writing in regard to your coverage of the October 2012 meeting of the Commission for the Conservation of Antarctic Marine Living Resources ("CCAMLR fails to reach consensus on Antarctic MPA proposals", MPA News 14:3). I want to clarify something that might be misleading if not properly understood. The proposal for the creation of MPAs along the Antarctic Peninsula was not directed to areas that are already exposed by collapsed ice sheets but, rather, to areas TO BE EXPOSED by the collapse of ice sheets. Closing the latter areas would allow research to be conducted as soon as those areas become ice-free, and would prevent any other activity (such as fishing) that could interfere with the research.

The other issue that I want to clarify is that, although the US and New Zealand did manage to bridge their differences and present a joint proposal for a Ross Sea MPA as the article says, this did not happen until the second (final) week of the meeting. The original strong differences between the two countries did not help their own cause, as it made it easier for fishing nations to not take a position on a particular proposal for the Ross Sea. It should be noted that, prior to the CCAMLR meeting, the US was very proactive in trying to reach an agreement with New Zealand, even organizing a week-long, bilateral meeting in Washington DC in August at a high diplomatic level to resolve differences. However, New Zealand walked away from the agreement reached at that time.

Rodolfo Werner-Kinkel

Rodolfo Werner is Antarctic and Southern Ocean Adviser to the Pew Environment Group. Email: rodolfo.antarctica@gmail.com

To comment on this letter: <http://openchannels.org/node/2578>

It draws in particular on the experience of managers of MPAs in five countries — Algeria, Croatia, Libya, Tunisia, and Turkey. MPAs from these countries are the focus of the MedPAN South Project, a WWF-led initiative to strengthen regional MPA management. The 56-page report, as well as more information on the MedPAN South Project, are available at www.panda.org/msp.

To comment on Notes & News items:
<http://openchannels.org/node/2577>

Shipping company fined for diesel spill in MPA

A tanker ship spilled 75 liters of diesel fuel into a Canadian MPA in 2009, and the ship's owner has now pled guilty in court to improperly cleaning up the spill and failing to notify authorities. The company, Coastal Shipping, must pay a fine of Cdn \$100,000 (US \$101,000). The ship's captain at the time has separately been ordered to pay a fine of Cdn \$15,000. A portion of each fine will go to the Gilbert Bay Marine Protected Area, where the spill occurred. The MPA is in the Atlantic coast province of Newfoundland and Labrador, and is home to a genetically distinct, resident population of Atlantic cod.

Norway's first no-take zone designated

In June 2012, Norway's Ministry of Fisheries and Coastal Affairs designated the nation's first no-take zone: a 1.5-km² area in the Tvedestrand municipality on the Skagerrak coast in southeastern Norway. The ministry also designated four partially protected zones (allowing

only hook-and-line fishing) in the same region. Collectively, the new zoning designations cover roughly 10% of Tvedestrand's fjord and ocean areas, and were initiated by municipal officials to improve management of local marine resources. The no-take zone includes an important spawning ground for cod.

Habitat mapping of the area began in 2002, and the process to zone the area involved stakeholder consultations to map uses and areas of conflict. Sigurd Heiberg Espeland of the Institute of Marine Research, who is conducting long-term monitoring and tagging of lobsters, cod and labrids in the region, says scientists will study individual fish and lobsters as they move among the zones.

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Editor's note: The LMMA Network supports learning, advocacy, partnership, and institutional development for community-driven marine resource management and conservation, including through the use of locally-managed marine areas or LMMAs (www.lmmanetwork.org). In this recurring feature "LMMA Lessons", the network offers insights that its practitioners have gathered over the past decade.

LMMA Lessons: Strategies for improving community compliance and enforcement

Compliance with and enforcement of management and conservation rules can be among the main challenges faced by ocean managers. Below are tips drawn from Western Pacific enforcement workshops and training events, as well as directly from LMMA practitioners' experience, on ways to enhance compliance and enforcement:

- Good communication and broad outreach ensures everyone knows the rules and boundaries of managed areas. A variety of common tools can be used to spread awareness, like community meetings, well-placed posters, public maps, flyers, radio announcements, school classrooms, etc. Think creatively, too: games, village plays, local rules printed on restaurant tablecloths, religious sermons, and seafood recipe contests have each been used to reach particular user groups.
- Use recognized mechanisms or well-accepted leaders to endorse and communicate your message — like religious groups, traditional leaders, fishing cooperatives, community groups, sports teams, etc. One Fiji site curbed poaching when its community leaders visited nearby settlements of people suspected of violating local rules. The leaders brought ceremonial kava and used this traditional means of negotiation to share information on their management efforts and provide posters with their MPA maps and rules.
- Where new rules have been established, train law enforcement officers to provide initial warnings and community education rather than citations to suspected violators, while recording violations for future reference.
- Where enforcement action is necessary, be safe and smart. Confronting suspected poachers — carrying spears, knives, fish bombs or other weapons — can be dangerous. Rather than interacting directly, create observation networks within your community to quickly detect and report information on suspected violations to authorities.
- Creativity can minimize costs, while providing adequate surveillance, detection, and presence. One Pohnpei LMMA community addressed poaching in a distant local MPA by using an anchored surveillance raft. The floating platform, which can accommodate more than 10 people, enables community volunteers to keep overnight observation, rotating small teams daily. The average monthly number of suspected poaching incidents has been reduced from ten to zero.
- Form partnerships — such as the Alliance of Palau Conservation Officers, a network of district-level conservation officers — that help to provide common training, sharing of resources, development of standard protocols, coordination with national agencies and communication of needs in a united voice to national officials. Once people get to know each other and their needs on a personal level in a supportive, collaborative way, workable solutions are easier to identify.
- Management groups have invited prosecuting attorneys and judges to MPA sites to experience the marine environment and to see for themselves the importance of effective management. The increased awareness and understanding has resulted in more interest in, and efficiency of prosecution of, MPA cases. 

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