MPA news

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International News and Analysis on Marine Protected Areas

Planning MPAs for the Deep Ocean: How Can We Protect What We Do Not Yet Know?

The deep ocean may be the least-known place on Earth. From the sea floor upward, the oceanic water column represents the overwhelming majority of living space on the planet — 90%, by one recent estimate. Yet very little of the dark blue expanse has been explored by humans. Seemingly each deep sea research voyage discovers alien organisms with features or abilities we have never imagined before, much less seen.

In July, UNESCO released a report that is the most comprehensive attempt so far to classify the open ocean into a set of general bioregions. (The report, *Global Open Oceans and Deep Seabed [GOODS] Biogeographic Classification*, is available at http://unesdoc.unesco.org/images/0018/001824/182451e.pdf.) Although the classification of 30 broad bioregions remains a work in progress and is very light on information about the deeper water column, it provides a basis for conservation planning of the open ocean in general. As the report points out, it is a first step toward planning a representative system of MPAs in this little-known realm.

A call for baseline surveys, protected areas

In 2004, the Conference of the Parties to the Convention on Biological Diversity adopted the objective of establishing "comprehensive, effectively managed and ecologically representative systems of [marine] protected areas" by the year 2012. While nations have pursued this objective with varying degrees of commitment in their own waters, there has been only slow progress on MPAs in marine areas outside national jurisdiction.

A significant limiting factor has been the lack of a global framework for establishing representative networks of MPAs on the high seas (see "Recent Developments toward System of High-Seas MPAs", *MPA News* 8:1). But the relative lack of biophysical information on those waters has also presented a challenge. Although the UNESCO report aims to help address that, its classification system covers only the upper pelagic realm (from the sea surface down to 200 m) and the deep seabed, with virtually no coverage of the deep pelagic waters in-between (all waters below 200 m). Information on the deep pelagic realm simply remains too poor. Thus the question is raised, how can you plan to protect something, or somewhere, about which you know very little? Would you know what you were protecting? Or whether it even needed protection?

In a paper published this year in *Conservation Biology*, Bruce Robison of the Monterey Bay Aquarium Research Institute (U.S.) addresses that last question. His paper "Conservation of Deep Pelagic Biodiversity" says the open ocean's "incomparable reservoir of biodiversity" is being impacted by a growing number of factors, including climate change and acidification among others. Together, he suggests, these impacts are leading to restructuring of pelagic ecosystems, including changes in the geographical ranges of many species. (The abstract of Robison's paper is at www3.interscience.wiley.com/journal/122323401/abstract.)

Robison calls for baseline surveys and protected areas as the primary policy goals for addressing these threats. The concept of MPAs in the open ocean is not new. Researchers have proposed various strategies for siting high seas MPAs that account for the dynamic nature of marine systems. In a paper in *Conservation Biology* in 1998, Claudia Mills and Jim Carlton proposed placing MPAs in the center of great ocean gyres, which are believed to have maintained their biodiversity for tens of millions of years (the paper is available at http://faculty.washington.edu/cemills/ConsBiol1998.pdf). Graduate student Chris Van Assen at the University of Amsterdam this year proposed marine fronts — the boundaries between major water bodies — as appropriate MPA sites, due to their general association with high productivity. (For his paper "The importance of the Argentine shelf for conservation in the South Western Atlantic", e-mail chrisvanassen@gmail.com.) The Convention on Biological Diversity has also adopted criteria for identifying areas of significance in the open ocean and deep sea that recognize the need for protecting such pelagic features.

Vulnerability and irreplaceability

Even with such rule-of-thumb suggestions and the UNESCO bioregional classification system, though, an MPA-planning process for the deep ocean would look

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much different than for a coastal MPA. For one thing, there would be vastly less scientific data or traditional knowledge to inform decisions.

Graeme Kelleher, author of *Guidelines for Marine Protected Areas* (http://data.iucn.org/dbtw-wpd/edocs/PAG-003.pdf), says it would be a mistake, however, to allow the lack of biophysical data to delay planning of MPAs in the deeper water column. Quoting the *Guidelines*, he says, "It is better to have an MPA that is not ideal in the ecological sense but which meets the primary objective than to strive vainly to create the 'perfect MPA'. There will usually be sufficient information to indicate whether an MPA is justified ecologically and to set reasonable boundaries."

Jeff Ardron, who co-edited the UNESCO report, says that protecting places we do not yet know in the deep ocean comes down to managing uncertainty. "I very much believe that we should protect 'what we do not know', since we know rather little," he says. "And indeed there are practical approaches to do so, borrowing from the management of uncertainty in other fields, such as economics and medicine." Ardron briefly discussed in the June 2007 *MPA News* how both fields have developed adequate methods for decision-making based on incomplete information ("Challenges Faced by the Global MPA Field", *MPA News* 8:11).

He cautions, however, about focusing too much on areas that may ultimately not require urgent protection. "There is a lot to be said for protecting places before they become degraded," says Ardron. "That said, some conservation issues are more pressing than others. The deep pelagic is a vast realm. Fundamental to systematic conservation planning are the notions of irreplaceability and vulnerability. In assessing conservation priorities, they should be considered together."

Data that would be useful for planning

Les Watling of the University of Hawai`i, who co-authored the UNESCO report, says there are certain types of data that would be useful for deep pelagic MPA planning. He says it would be especially valuable to know:

> (1) How widespread deep sea species are, including at very low depths (e.g., bathypelagic [1000-4000 meters deep] and abyssopelagic [4000-6000 m]); and
>
> (2) Whether species at those depths follow specific water masses, or if they cruise the depths based on tolerances to temperature or other conditions.

"If we can get data to hint at the answers to these questions, we could then use the physical data — such as water temperature, salinity, oxygen — as proxies for the large areas of the globe where animal data are non-existent," says Watling. "With that framework, we could make some biogeographic projections upon which deep-sea pelagic MPAs could be built."

Until such data become available, Kristina Gjerde of the High Seas MPA Task Force supports the idea of extending existing deep seabed protected areas — areas closed to bottom fishing — upward to include the water column above. This would be done on a precautionary basis to protect the entire ecosystem, she says. Then assessments, as suggested by Robison, could be done to determine what biogeographic regions are not represented in the MPAs. In addition, says Gjerde, a set of international requirements is needed to require impact assessments of activities that have the potential to affect oceanic and seafloor biodiversity beyond national jurisdiction. "As with Resolution 61/105 by the UN General Assembly, which pertains to high-seas bottom fishing, activities would need to be managed to prevent significant adverse impacts," says Gjerde. "And one would hope to also see a mechanism to facilitate the planning and establishment of MPA networks beyond national jurisdiction."

When the planning of deep sea MPAs eventually begins, Dan Laffoley, Marine Vice Chair of the World Commission on Protected Areas, would prefer to see planners err on the side of protecting larger areas of the ocean in MPAs rather than smaller. "[Having less than optimal data] never stopped us from designating very large areas many years ago — the Great Barrier Reef, Yellowstone, the Grand Canyon, etc.," he says. "That was before we really knew much about them other than they were wild, had many amazing species, and should be protected for everyone forever. In fact we probably regret not protecting much more back then, and we will probably feel the same way in many decades about the ocean."

For more information:

Graeme Kelleher, IUCN Global Marine Programme, Canberra, Australia. E-mail: *graempa@home.netspeed.com.au*

Jeff Ardron, Marine Conservation Biology Institute, Washington, D.C., U.S. E-mail: *Jeff.Ardron@mcbi.org*

Les Watling, Department of Zoology, University of Hawai'i at Manoa, U.S. E-mail: *watling@hawaii.edu*

Kristina Gjerde, IUCN Global Marine Programme, Chylice, Poland. E–mail: *kgjerde@ejp.com.pl*

Dan Laffoley, WCPA – Marine, Peterborough, U.K. E-mail: *danlaffoley@btinternet.com*

Applying the Arts to MPA Planning and Management: Four Examples

In very general terms, the human mind has a logical side (the left half of the brain) and an emotional side (the right half). The activities of MPA planning and management tend to engage the logical side, involving the application of math and science and developing practical solutions to conservation challenges.

But savvy MPA practitioners recognize that engaging the emotional mind, too, can be a useful strategy for educating and motivating people toward conservation. The arts provide a way of doing that. "MPA practitioners need to be able to reach people in a way that is compelling enough for them to stop and listen to the conservation messages we want to share," says Liz Moore of the (U.S.) National Marine Sanctuary Program. "Art is fundamental to human nature and appeals to all of us, and presents a way to get people to pay attention." Moore led a workshop on MPAs and the arts at last May's International Marine Conservation Congress.

How can MPA practitioners harness creative processes as part of their outreach and education work? Here are examples of four partnerships between artists and conservation initiatives:

Underwater sculptures: Serving as habitat, visitor management tool, and revenue source

In May 2006, sculptor Jason deCaires Taylor built what may have been the world's first underwater sculpture park. Located within the Moliniere/Beausejour Marine Protected Area along the coast of Grenada in the Caribbean, the sculpture park covers an area of 880 square meters, in water as deep as 25 meters. The cement artworks are a picturesque collection of life-size human figures. (A gallery of photos is at www.underwatersculpture.com.)

In addition to expressing Taylor's artistry, the sculptures were designed to serve two management purposes for the MPA, he says. The site had suffered considerable hurricane damage in recent years, so the artworks would provide a new base for marine life to reestablish itself. In addition, the sculptures would help draw divers and snorkelers away from areas of natural coral reef in the MPA, where over-use by visitors posed a threat to ecosystem health. The art has already had an effect, says Taylor, diverting at least 50% of visitor traffic from a nearby area that had previously served as the MPA's main snorkeling site. (To be sure, the sculpture park has also raised visitation levels at the MPA overall. Prior to the sculptures, Moliniere Bay received just 200 visitors per year; now 50-100 visitors per day is normal for the high tourism season.)

Taylor has been commissioned to create a massive collection of more than 400 underwater sculptures for another MPA, the National Marine Park of Cancun, Isla Mujeres and Punta Nizuc in Mexico. He says MPAs are more attractive to him as sites for his work than unprotected areas. "It has been a conscious decision to select marine protected areas," he says. "First MPAs offer an incredible amount of field data and survey material, which are very useful for selecting the [installation] sites. It is also easier to deal with one authority — the MPA manager — when gaining permissions than with several authorities."

Managers at both MPAs have played an active role in planning the deployment of Taylor's sculptures. The director of the Mexican MPA, Jaime Gonzalez Cano, commissioned the upcoming project, compiled the environmental assessments, raised funds, and interacted with all the interested parties, including the tourist board, fisheries, diving companies, and the media. Once installed, the sculpture park there will require no special upkeep, says Taylor, as all the figures are designed to become "living" reef modules, slowly growing a mantle of coral around themselves. The project will officially be an underwater museum for which divers and snorkelers will pay a fee to visit.

For more information:
Jason deCaires Taylor, England. E-mail: *info@underwatersculpture.com*

Cartoons: "Sweetening" the MPA message

Since 1991, Jim Toomey has drawn a daily comic strip called *Sherman's Lagoon* that now appears in more than 150 newspapers worldwide. Featuring an overweight, happy-go-lucky shark named Sherman and a regular cast of undersea characters, the cartoon takes place in a fictional lagoon in Micronesia. Sherman and his friends often make trips to other parts of the world's oceans, and those trips routinely reference real MPAs, like Gulf of the Farallones National Marine Sanctuary in California and Papahānaumokuākea Marine National Monument in Hawai`i. These references to real MPAs indicate the role that marine protected areas have assumed in Toomey's work.

In 1999, Toomey received a phone call from the U.S. National Marine Sanctuary Program, asking if he would be willing for Sherman the shark to serve as an outreach tool for educational projects. That led to what has become a series of Sherman-themed education tools for U.S. MPA programs produced with Toomey's help: from a poster describing different types of MPAs (http://mpa.gov/pdf/helpful-resources/education/Poster04companion.pdf), to one that summarizes the purposes of the national system of MPAs (www.noaaworld.noaa.gov/conservation/jun2009_conservation_1.html) to an activity sheet that helps educators to introduce the concept of MPAs to their students (http://mpa.gov/pdf/helpful-resources/education/mpaposter_activity.pdf).

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Toomey says the entertainment value of cartoons helps deliver the MPA message to the public. "The advantage that cartoons have over other communication methods is that they entice people to read because there's a pay-off embedded in the material — a laugh, hopefully," he says. "If you take your average brochure about, say, marine debris, what often happens is the person will read a point or two and then get distracted. This is especially true in this day and age when we all have the attention span of tsetse flies, and so many other media compete for our attention. It's important to have some kind of 'sweetener' in the message that motivates people to read on." [Editor's note: Cartoons can also be valuable communications tools for resource managers in regions with low literacy rates or to communicate to young audiences — see "Educating Stakeholders about MPAs: Practitioners Use an Array of Methods", *MPA News* 8:7.]

For more information:
Jim Toomey, U.S. E-mail: *jptoomey@yahoo.com*

Toomey acknowledges that cartoons are limited in the type and sophistication of information they can convey. "There's always a tradeoff," he says. "But the wider you cast your net in terms of the general public, the more you need to consider the entertainment component of your message."

Theater: Resolving conflicts

At the World Conservation Congress in Barcelona in 2008, a training workshop for conservation practitioners demonstrated how theatrical techniques could be used to resolve environmental conflicts. With exercises that encouraged attendees to listen closely to one another and to play the roles of stakeholders with whom they might otherwise disagree, the workshop was designed to help participants to engage emotionally with the issues under discussion.

The workshop was led by María Bravo Font, an actress and environmental journalist. Although the use of theater techniques for creative conflict resolution is not new — search the Web for "creative conflict resolution" for links to many background sources — Bravo takes a particularly in-depth approach to it. She directs a Spanish firm, Teatrosfera, that combines expertise in psychology, ecology, and communications with theater to help resolve conflicts over environmental issues.

"Theater techniques invite us to put ourselves in others' places and to develop empathetic abilities, which facilitate conflict negotiation," says Bravo. "In addition, these techniques integrate the 'emotional' side of facts. This helps us discover unsuspected keys in the way we perceive conflicts. Emotions are the base that upholds our life attitudes. Therefore, a consideration of the emotional component of conflicts needs to complement the cognitive analysis of those conflicts."

For more information:
María Bravo Font, Teatrosfera, Reus, Spain. E-mail: *maria@teatrosfera.com*

Bravo says the objective of Teatrosfera's work is to motivate a more positive perception of conflicts — identifying opportunities for improvement and trying out different solutions. "The theater-playing provides a sense of playfulness that creates a relaxed, friendly working atmosphere, where listening, concentration and creativity are activated," she says. "We gain flexibility to adapt ourselves to changes, learn to be more tolerant, and see the value of what is different."

Dance: Telling a story

"People get it when you tell them a story — a story in which they can play a part in how it ends," says Kristin McArdle, a choreographer and artistic director who runs her own dance company in New York City. Her company, Kristin McArdle Dance, partners with conservation organizations, museums, and local businesses to raise environmental awareness through the arts. Her latest dance projects have focused on the marine environment, including the influence that humans have to impact it. "Dance," says McArdle, "can communicate messages of consequences and nuances to environments and actions. It provides an emotional catalyst for the audience to identify with the environment." (For video of her dances, go to www.kristinmcardledance.com.)

McArdle has applied to partner with the U.S. National Marine Sanctuary Program on a dance project that would travel to aquaria, science centers, and festivals. She notes that although her dance projects have incorporated complex concepts like overfishing, sustainable seafood, and even MPAs, the dances have not done it all alone. "Our dance program has provided background information about marine conservation and sustainable seafood, and I've spoken to the audience directly at intermission about what the dances hoped to evoke," says McArdle. "The purpose of the entire evening of art is to provide a context for the conservation message to be received. Most people don't know what marine protected areas are, but people will go see a performance inspired by the ocean or to celebrate the local community's relationship to the sea."

She completed a recent trip to Trinidad and Grenada to conduct research for a new dance piece on leatherback turtles — a dance folktale of the links between sea turtle behavior and ecology, fishermen's catches, and regional economic sustainability. The goal is to create something that shows the benefits of ecotourism, citizen science, and community conservation and management. She is collaborating on it with the Wider Caribbean Sea Turtle Conservation Network, and the dance will be performed by local artists in the Trinidadian and Grenadan communities she visited.

McArdle says that art and science communities share common interests, curiosities, and even goals, but ask very different questions and communicate in different ways. "Scientists often produce papers to communicate

their findings and interpretations of their research, while artists produce art that asks people to see the world in a new way, or to notice something about how we behave that we never thought about before," she says. "Artists and conservation biologists share a love of the ocean and advocate ocean conservation and exploration, but we focus our attention, skills, and expression through very different mediums. However, we all want people to care about the human actions that affect these incredible creatures' ability to exist. Ultimately, ocean health determines human health."

For more information:
Kristin McArdle, New York, U.S. E-mail: *kristinmcardledance@me.com*

Research spotlight

Would it be better to select areas where fishing is allowed, rather than disallowed?

In an article in the June 2009 issue of *PLoS ONE* journal, researchers take a different look at the concept of planning marine reserves. They suggest that selecting the areas of the ocean that should remain fished may be a more efficient management policy than selecting the areas where fishing should be banned.

Using spatial catch data from 13 commercial fisheries along the Pacific coast of Canada, the researchers set catch targets for each fishery that represented a small reduction (2%-5%) from current levels. Then, using a decision-support tool, they determined the minimum ocean area needed to maintain those catch targets, allowing the remaining area to be unfished. The result: those small reductions in fisheries yields could result in large unfished areas — totaling 20%-30% of previously fished waters — that also contained a significant proportion of the region's representative habitat types.

"Our approach of selecting fishing areas instead of reserves could help redirect debate about the relative values that society places on conservation and extraction, in a framework that could gain much by losing little," write co-authors Natalie Ban and Amanda Vincent of the University of British Columbia in Canada. (Ban has since moved to James Cook University in Australia.) "Instead of debating the merit of each potential marine reserve, the discourse could focus on analyses of the ecological benefits of small reductions in fishing," they write. The article "Beyond Marine Reserves: Exploring the Approach of Selecting Areas where Fishing Is Permitted, Rather than Prohibited" is available for free at *www.plosone.org/article/info:doi/10.1371/journal.pone.0006258*.

Letter to the Editor: MPAs, Politics, and Chess

Dear MPA News:
There was much to like about the International Marine Conservation Congress [held this past May in Washington, D.C., U.S.] and much to learn from it. Conference attendees put an impressive amount of ecological knowledge on display. And the conference did not lack for compelling visions of what wise policies should look like.

My lone significant critique concerned the disposition of some conference attendees. When observing the persistence of bad policies, some attendees simply lamented the fact that we lack the "political will" to do the right thing. I must admit that I have never been fond of the term *political will*. It suggests that supporters lack the energy — and/or political leaders lack the fortitude — to advance the preferred position of a given political constituency. That characterization might be accurate for some people in some situations but it can also be misleading. Politics is more like chess than tug of war.

Policy reforms are never easy to implement and political resistance is to be expected. Departures from status quo policies usually leave some people worse off (or downgrade the importance of something they value). Those people will likely mobilize to keep their preferred policy in place. More often than not the outcomes will have less to do with willpower (tug of war) than with political maneuvering (chess). And the more you understand about the game being played and the players playing it, the greater your chances of winning. Political behavior can be understood in much the same way as ecological behavior. You need to study the political landscape with the same degree of scrutiny as the ecological one.

Frank Alcock
New College of Florida, Sarasota, Florida, U.S. E-mail: *falcock@ncf.edu*

Editor's note: Alcock is Director of the new Marine Policy Institute at Mote Marine Laboratory in the U.S.

Notes & News

France sets MPA target: 20% of waters in MPAs by 2020

In July, President Nicolas Sarkozy announced new targets for the protection of France's maritime territory. He called for the percentage of French waters in MPAs — currently just 1% — to be increased to 10% by the year 2012, and to 20% by the year 2020. Furthermore he called for half of the protected waters in 2020 to be in no-take marine reserves. As France's maritime territory covers 11 million km^2 (second largest maritime territory in the world, after the U.S.), this would amount to more than 2 million km^2 under some form of protection, and 1 million km^2 in new no-take areas.

"The example France is going to set [with the new MPAs] will pave the way for an unprecedented effort to preserve the oceans, recover fish stocks, and safeguard all those who depend every day on the fertility of the seas for their livelihood," said Sarkozy. The new targets were delivered as part of a broad overhaul of French maritime policy announced the same day.

For President Sarkozy's speech announcing the new targets, go to www.ambafrance-uk.org/President-Sarkozy-on-France-s.html.

Report provides frank, long-term outlook for Great Barrier Reef

The Great Barrier Reef Marine Park Authority has produced a report for the Australian government summarizing the past and present condition of the Great Barrier Reef and an outlook on its possible future. The *Great Barrier Reef Outlook Report 2009* concludes that climate change, poor water quality from catchment runoff, loss of coastal habitats from coastal development, and impacts from unsustainable fishing are all reducing the resilience of the Great Barrier Reef. As a result, the ecosystem is vulnerable to dramatic decline unless those threats are addressed. It is the first report of its kind for the marine park.

"Unavoidably, future predictions of climate change dominate most aspects of the Great Barrier Reef's outlook over the next few decades," states the report. "The extent and persistence of the damage to the ecosystem will depend to a large degree on the amount of change in the world's climate and on the resilience of the Great Barrier Reef ecosystem in the immediate future." Grimly, the report notes that even with recent management initiatives to improve resilience in the park, the overall outlook for the Great Barrier Reef "is poor" and "catastrophic damage to the ecosystem may not be averted." In other words, if changes in the world's climate become too severe, no management actions will be able to protect the Great Barrier Reef ecosystem.

The report states that to give the ecosystem its best chance at adapting to and recovering from the serious threats ahead, managers will need to improve water quality, reduce the loss of coastal habitats, and increase knowledge about fishing and its effects. To download the outlook report or an "In Brief" version, go to www.gbrmpa.gov.au/corp_site/about_us/great_barrier_reef_outlook_report.

Celebrating 40 years of declared fish habitat areas in Queensland

The Australian state of Queensland is celebrating the 40th anniversary of its declared fish habitat area (FHA) network, which protects critical fish habitats from the impacts of development, while still allowing legal fishing. Queensland designated its first seven FHAs in 1969. Today the state has 70 declared FHAs protecting 8800 km^2 of fish feeding, breeding, and nursery habitats. The network contributes an estimated AU$40 billion a year (US$34 billion) in ecosystem services to the Queensland economy. For more information on the 40-year anniversary, go to www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/28_13189_ENA_HTML.htm.

South Australia announces revised boundaries for marine parks

In July the South Australian government announced revised boundaries for the 19 marine parks in the state's forthcoming network of MPAs. With the amended boundaries, the system covers 44% of state waters. Management plans for the new MPAs, including zoning, will now be developed in consultation with industry and other community stakeholders.

When the parks' provisional boundaries were announced last January (*MPA News* 10:8), the system covered 46% of state waters. Following a public comment period, the boundaries were revised to accommodate fishing and tourism industry concerns about economic impacts and conservation concerns that not enough of each bioregion was adequately represented. For more information on the South Australian marine parks network, including maps, go to www.marineparks.sa.gov.au.

U.S. designates Arctic area off-limits to new commercial fishing activity

In the U.S. the Obama administration has approved a management plan that prohibits commercial fishing in the nation's Arctic waters until more information is available to support sustainable fisheries management there. The new Arctic Fishery Management Plan covers an area of roughly 150,000 square nautical miles (514,000 km^2) in the Chukchi and Beaufort Seas where

there is currently no significant commercial fishing. But warming ocean temperatures, migrating fish stocks and shifting sea ice conditions from a changing climate may potentially favor the development of commercial fisheries. "This plan takes a precautionary approach to any development of commercial fishing in an area where there has been none in the past," said U.S. Secretary of Commerce Gary Locke in announcing the plan.

Before commercial fishing is allowed there in the future, the plan requires studies on the nature and extent of indigenous fish stocks and how they interact in the Arctic ecosystem. Conservation and management decisions will then be made, including catch levels, fishing gear, bycatch, and areas permitted for fishing with appropriate monitoring. The plan is available at www.fakr.noaa.gov/npfmc/fmp/arctic/ArcticFMP.pdf.

New MPAs approved for north central coast of California

In August, the Fish and Game Commission of the U.S. state of California approved a plan for a system of 24 MPAs covering 20% of state waters along its north central coastal region. In total, the system of MPAs covers 153 square miles. Of that, 86 square miles — or 11% of state waters in the region — will be no-take. The MPAs will take effect in January 2010.

The regional planning was part of a multi-stage approach to implement California's Marine Life Protection Act (MLPA). The north central coast study region is the second of five statewide study regions to complete the MLPA planning process. The first was the central coast region, whose process was described in our June 2007 and July 2007 issues (*MPA News* 8:11 and 9:1). The next regional planning process, already underway, covers the north coast of California.

For more information on the north central coast study region, including maps of the newly designated MPAs, go to www.dfg.ca.gov/mlpa/northcentralhome.asp.

"Statement of concern" to be presented to UN

A statement signed by more than 200 marine scientists will be presented to a side event of the UN General Assembly on 15 September, expressing concern that not enough has been done to protect deep-sea ecosystems from bottom fisheries and calling for a temporary ban on bottom fishing on the high seas. The statement coincides with the scheduled UN review of a 2006 resolution by the General Assembly (Resolution 61/105) that urged flag states and regional fisheries management organizations to protect deep-sea ecosystems from the effects of bottom fishing. Signatories to the statement of concern say those authorities have failed to conduct comprehensive assessments of deep-sea ecosystems, gauge the effects of bottom fishing on them, or protect those ecosystems — actions all required under the 2006 resolution.

"With 227 signatures, and still growing, I think the scientific concern speaks for itself," says Jeff Ardron of the Marine Conservation Biology Institute, which led the statement signature-gathering effort. For more information on the statement of concern, go to www.mcbi.org/what/highseas_letter.htm. Resolution 61/105 is at www.un.org/Depts/los/general_assembly/general_assembly_resolutions.htm.

In U.S., National MPA Center starts second round of MPA nominations

Managers of marine protected areas in the U.S. that are eligible to be part of the national system of MPAs are invited to nominate their sites to be part of the system. This is the second round of nominations for the national system. The first was held in fall 2008 and resulted in acceptance of an initial group of 225 sites.

The national system of MPAs contains sites managed by all levels of government. Its purpose is to facilitate partnering at regional and national levels on MPAs to achieve common objectives for conserving the nation's important natural and cultural resources. The system

Webinar: "Lessons from MPA Networking Programs, Part II", 19 October 2009

MPA News and the EBM Tools Network will co-host a live Web-based seminar ("webinar") on 19 October 2009 to explore lessons learned from MPA networking programs in the Florida Keys National Marine Sanctuary (U.S.) and in rocky reef MPAs in the Mediterranean. Speakers will include:

- Billy Causey, National Marine Sanctuary Program (U.S.)
- Joachim Claudet, University of Salento (Italy)

TIME: Due to time zone differences, the start time of the 90-minute webinar will depend on your location. It will begin at the following hour in these time zones:

- 8:00 a.m. US Pacific Daylight Time (GMT-7), 19 October
- 11:00 a.m. US Eastern Daylight Time (GMT-4), 19 October
- 3:00 p.m. Greenwich Mean Time (GMT), 19 October

(In Australia, the webinar will occur very early on the morning of 20 October.)

REGISTRATION: Register for the webinar for free at *www1.gotomeeting.com/register/831299216*.

RECORDING: If you are unable to participate in the live webinar, a recording and transcript will be available at *www.ebmtools.org/about_ebm/meam.html/* a few days after the webinar.

Note: Our most recent webinar, "Lessons Learned from MPA Networking Programs" was held on 27/28 August and featured lessons from both the Great Barrier Reef Marine Park and an MPA network in West Hawai`i. For the audio/video recording and transcript of that webinar, go to *www.ebmtools.org/about_ebm/meam.html*.

MPA News

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Direct correspondence to: MPA News, School of Marine Affairs, University of Washington, 3707 Brooklyn Ave. NE, Seattle, WA 98105, USA. Tel: +1 425 788 8185; Fax: +1 206 543 1417; E-mail: *mpanews@u.washington.edu*

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does not bring state, territorial, or local sites under federal authority, nor does it restrict or change the management of any MPA. All nominations for the second round are due to the MPA Center by 6 November 2009. More details on the national system of MPAs can be found in the *Framework for the National System of Marine Protected Areas of the United States of America*, available at www.mpa.gov/national_system/final_framework_sup.html.

LMMA Network releases annual report

The 2008 annual report of the Locally-Managed Marine Area (LMMA) Network has been released. The LMMA Network is a group of practitioners — traditional leaders, conservation staff, university researchers, and others — working to improve locally-managed marine areas in the Indo-Pacific through the sharing of experiences and resources. The annual report describes progress on the program's objectives, challenges faced by practitioners, and highlights from each country's efforts. Community-based MPAs play a prominent role in the program. The report is available at www.lmmanetwork.org.

Report: advice on good practices for involving stakeholders in MPA planning

A new report for the U.K. government provides dozens of suggestions for good practices on how to involve stakeholders effectively in MPA planning. With findings from a global survey of MPA practitioners as well as other information sources, the report is designed for use in the U.K.'s initiative to plan Marine Conservation Zones. Although U.K.-focused, the report offers useful advice for MPA practitioners elsewhere on topics like preparing for stakeholder participation, designing the participatory process, deciding which stakeholders to include (and when to include them), and building trust. The report was commissioned by Natural England and the Joint Nature Conservation Committee. A link to the report in PDF format is at www.naturalengland.org.uk/about_us/news/2009/190809.aspx.

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MPA Tip: Coordinating research in an MPA

The following tip was adapted by *MPA News* from *Managing Marine Protected Areas: A Toolkit for the Western Indian Ocean*, published by the Western Indian Ocean Marine Science Association (WIOMSA). The toolkit is available at *www.wiomsa.org/mpatoolkit/Home.htm*.

Tip: Appropriate research on ecological and socio-economic issues is essential for effective management of an MPA. However, it is rare for a management agency to be able to fund all the necessary studies. Therefore assistance from external sources — other agencies, universities, NGOs — is often needed. To manage this research, MPA managers should:

- Prepare a research strategy. The strategy identifies the MPA's key research needs and priorities, which can be provided to researchers who ask to work in the MPA.
- Develop a code of conduct for researchers so that they fully understand how they are expected to behave in the MPA and what the regulations are.
- Ensure that visiting researchers work closely with the MPA staff; if possible, assign staff members to the research studies so that they can learn from the work being carried out.
- Ensure that regular feedback on research underway in the MPA is provided to staff and other interested stakeholders, such as through informal talks or seminars by the researchers.
- Compile and keep up-to-date a bibliography of research carried out in the MPA.
- To the extent possible, provide basic research facilities, such as a field laboratory, information about the area (a standard site description is useful), simple accommodation, assistance with transportation on site, and guides, translators, and other assistants. Establish clear charge rates for use of the facilities.