

Marine Mammal Protected Areas: What Makes Them Special, and How their Management Can Be Advanced

It is not uncommon for marine protected areas to be designated with the protection of a particular species or group of species in mind. There are MPAs for many commercially valuable fish species, for example, as well as MPAs for sharks or sea birds or corals.

There are also protected areas for marine mammals. This last group of MPAs in particular has experienced a boom in numbers in recent years. In 2004 according to the Whale and Dolphin Conservation Society, there were 358 marine mammal protected areas worldwide. As of June 2011, there are 570 such sites — a 58% increase in just seven years. (Marine mammals include cetaceans [whales, dolphins, porpoises], pinnipeds [seals, sea lions, walrus], sirenians [dugongs, manatees], otters, and polar bears.)

What defines a site as being a marine mammal protected area (MMPA): is it simply an MPA where marine mammals happen to live, or is it more than that? And what challenges do MMPAs and their managers face? For this issue, MPA News interviewed three members of the International Committee on Marine Mammal Protected Areas (ICMMPA), an independent group of scientists, resource managers, and NGOs dedicated to the conservation of marine mammals and their habitats. The committee is actively planning the Second ICMMPA Conference, to be held 7-11 November 2011 in Fort-de-France, Martinique, in the Caribbean (<http://icmmpa.org>).

A. MMPA managers need to “think big”, beyond their site boundaries

By Brad Barr

Editor's note: Barr is a senior policy advisor in the Office of National Marine Sanctuaries (ONMS) within the US National Oceanic and Atmospheric Administration (NOAA). Previously he was manager for six years of the Stellwagen Bank National Marine Sanctuary, which provides a critical feeding ground for several endangered cetacean species, including humpback whales, fin whales, minke whales, and North Atlantic right whales. Regarding his comments below, Barr clarifies that he is not speaking for ONMS, NOAA, or the US Government.

On defining a “marine mammal protected area”:

Identifying an MMPA is fairly straightforward. If the marine protected area was designated specifically to address (a) the preservation and recovery of marine mammal populations and (b) management of human activities that can affect marine mammals that use the area for some critical life history function (feeding, breeding, calving, etc.), it is an MMPA. The concentration on marine mammals may not be exclusive, necessarily, but can be for some sites. The Hawaiian Islands Humpback Whale National Marine Sanctuary (<http://hawaiihumpbackwhale.noaa.gov>) is a good

example of a protected area that is exclusively focused on marine mammals. On the other hand, Stellwagen Bank National Marine Sanctuary (<http://stellwagen.noaa.gov>) is an example of a “non-exclusive” MMPA, where marine mammals are a major management focus but certainly not the only one for which management is responsible. The Stellwagen site also provides habitat for several commercially valuable fish species and is an important cultural heritage site with multiple historic shipwrecks.

Focusing on charismatic megafauna like whales, dolphins, and other marine mammals can be a “tide that lifts all boats” for marine conservation. MMPAs help to make ocean conservation relevant, interesting, and even exciting to the public. At the same time they can foster creative solutions to broader management issues that face ocean conservation.

On the ecosystem context of MMPAs:

The geographic scope of management of an MPA should not be constrained by “the box” — i.e., the designated boundary of the MPA. To be effective, we need to work on multiple scales that are largely

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dependent on the geographic scope of the management targets and the human activities that can affect these resources. Some of the species, groups of species, populations, communities and the like can have high site-fidelity, and the geographic scale of management actions will necessarily be very site-specific. In contrast, for marine mammals the geography involved can be vast, potentially on a continental or ocean basin scale.

Excellent projects like YoNAH (Years of the North Atlantic Humpback — www.coa.edu/yonah.htm) and SPLASH (Structure of Populations, Levels of Abundance, and Status of Humpbacks — hawaiihumpbackwhale.noaa.gov/science/splashinfo.html) in the North Pacific have helped to limit some of this geographic scope by better defining sub-populations and their critical habitats. But in most cases, our information about ranges, migration, and critical habitats of marine mammals is limited. In these cases, an MMPA manager has to “think big”, be inclusive of all the places that population might be using, and coordinate with other managers appropriately. These big geographies — involving sites half a world away in some cases — will define the ecosystem context within which an MMPA manager must plan and act. This may not be the traditional perspective on EBM, which is often significantly more limited in scope. But from a practitioner’s point of view, it may be the only way to effectively implement an ecosystem approach to management for MPAs — particularly MMPAs.

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On the need to communicate with other MMPA managers:

It is these big geographies that represent the greatest challenges and opportunities. MPA managers in general are constrained by limited resources, and there is great emphasis on effectively managing “the box”. However, most of the time, marine mammals are not in “the box”. As a result, greater attention needs to be paid to communicating with other managers who share stewardship responsibilities for these species, whether in their own agency or across an ocean basin. There is currently little support for allocating the time it takes to do this sort of external coordination effectively, and woefully inadequate funding to support the added costs, which can be considerable.

The good news is that there are some highly creative MMPA managers out there who are doing great things, and we can learn much by simply talking to one another (see box on page 4, “Examples of creative MMPA management”). With a bit of innovation and strategic thinking, an MMPA manager can accomplish a lot. This is one of the reasons the International Conferences on Marine Mammal Protected Areas were established, the first of which was in 2009 in Hawaii. These conferences are an important mechanism to foster capacity-building and the sharing of creative solutions to common management challenges. With some persistence, the ICMMPA conferences will help to educate and inform the larger marine protected area community — particularly those who oversee national systems of MPAs — why it is essential for MMPA managers to “think (and act) outside the box.”

B. Building a global network of MMPA practitioners and improving habitat data

By Erich Hoyt

Editor’s note: Hoyt is a senior research fellow at the Whale and Dolphin Conservation Society (WDCS) in the UK, where he leads the Global Critical Habitat/Marine Protected Area Programme. He is author of *Marine Protected Areas for Whales, Dolphins and Porpoises: A World Handbook for Cetacean Habitat Conservation and Planning*. A completely revised and expanded second edition of the book will be published in July 2011 (www.cetaceanhabitat.org/cetacean_protected_areas.php). The second edition describes trends in MMPA practice since 2005, when the first edition was published.

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On trends in MMPAs:

Although most marine mammal protected areas remain small — too small in fact to offer sufficient habitat protection for sometimes highly mobile marine mammals — the average size of MMPAs is increasing. This is due in part to the designation in recent years of some very large sites that protect

marine mammal habitat, such as Papahānaumokuākea Marine National Monument and other large new Pacific MPAs. Comparing the 15 largest MMPAs in 2005 to 2011, for example, the average size of these has gone from just over 100,000 km² to 220,591 km².

Another trend is that the marine mammal community is now talking to each other much more, and on a more global scale. The first ICMMPA conference in Hawaii brought together 200 researchers and managers from 40 countries. The networking that grew from that has been substantial, including the building of sister sanctuary relationships and exchanges between managers of MMPAs.

On threats facing marine mammals:

The biggest threat to marine mammals is entanglement in fishing gear: an estimated minimum of 300,000 cetaceans (mainly dolphins) die per year due to entanglement. However, most of these deaths are offshore and outside of existing MMPAs. When we talk about existing MMPAs and threats that they address, we are

generally talking about inshore and nearshore areas, and the threats there are more directly related to vessel traffic (including ship strikes and noise); pollution from agricultural runoff; overfishing; and habitat degradation. These are the things that MMPAs tend to see as their mission, based on the human uses of these areas. (For the new, larger, offshore sites like Papahānaumokuākea, the threat analysis will differ.)

On the need to improve data to support MMPAs:

There is a huge problem with lack of good data on cetacean abundance and distribution, particularly in offshore habitats. Such data are necessary to provide the fine-scale information on distribution that allows for delineating and protecting critical habitat areas. Most of the 87 species of whales and dolphins are found in the open sea; however, many of these may be studied only in a few coastal or nearshore waters, and only seasonally at that. There are serious logistical and cost implications involved in doing transect studies across the great expanse of the open ocean.

Protection (the creation of MPAs) tends to happen where we have data. So the vast majority of data-poor areas receive no protection, even though they may be just as important or more important in terms of spe-

cies richness, presence of rare or endangered species, etc. Therefore we face a challenge to evaluate these vast expanses and (perhaps through new techniques of spatial modeling and ground truthing) come up with approaches that enable a sensible degree of protection.

On identifying sites for MMPAs:

The Whale and Dolphin Conservation Society has identified 12 sites around the world as key representative habitat areas for different whale, dolphin, and porpoise species. Because cetaceans live in rivers, lakes, and estuaries as well as nearshore and offshore waters, we chose a wide variety of species living in the widest variety of habitats. We have two proposed river-based networks in northern South America and in South Asia, for example, as well as four high seas areas — including some very large sites covering hundreds of thousands of square kilometers. Such large sites would be appealing for protecting not only marine mammals but everything else in those ecosystems. We view marine mammals, with their popularity and the knowledge we have of their breeding and feeding grounds and their migrations, as a vehicle for attaining large, networked areas that can benefit ocean conservation in general.

C. MMPAs in the Mediterranean, and lessons from the Pelagos Sanctuary

By Giuseppe Notarbartolo di Sciara

Editor's note: Giuseppe Notarbartolo di Sciara is founder and president of the Tethys Research Institute, an Italian NGO for marine research and conservation. He was active in proposing the creation of the Pelagos Sanctuary for Mediterranean Marine Mammals, a 90,000-km² MPA co-designated by France, Italy, and Monaco (MPA News 5:3), and he is now pushing for improvement of its management. Pelagos provides breeding and feeding habitat for all cetacean species that are regularly in the Mediterranean Sea.

On the value of protected area networks for marine mammals:

It could be argued that people like me who support protected area networks specifically for marine mammals are simply being marine mammal chauvinists, trying to preserve the seas for our favorite pet taxon. Ocean management, which is moving in general toward a more integrated, holistic approach, doesn't need a craze of single-taxon networks (whale MPA networks, sea bird MPA networks, shark MPA networks, ...copepod MPA networks?), each focused on a sliver of the marine ecosystem.

Nonetheless, marine mammals are special in that they can serve simultaneously as charismatic flagship species (chosen to represent an environmental cause),

umbrella species (whose conservation can confer protection to many co-occurring species), and indicator species (signaling the condition of an ecosystem). As such, marine mammals can be quite valuable as the focus of a protected area or network of protected areas.

I do see a strong need to integrate place-based protection for marine mammals with similar protection for a variety of other taxa that share the same ecosystem. This way the justification for MPA designation becomes more compelling. Threats that marine mammals share with other species (such as bycatch) can be addressed by the same management measures. Importantly, care should be taken to ensure that mitigating a threat to marine mammals — such as by inducing shifts in gear use (e.g., reducing bycatch by shifting from driftnets to longlines) — does not end up increasing a threat to other species, such as sea turtles. I would like to see an initiative to explore practical ways for a more universal approach, integrating other significant taxa with marine mammal place-based protection.

On which Mediterranean MPAs qualify as MMPAs:

Although many MPAs in the Mediterranean contain suitable habitat for marine mammals, only a handful of these were established with the declared intent of protecting one or more marine mammal populations. Only these, in my view, qualify as “marine mammal protected areas”. These include:

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For a limited time, if you donate \$100 in support of MPA News, you will receive the newly revised second edition of the book *Marine Protected Areas for Whales, Dolphins and Porpoises: A World Handbook for Cetacean Habitat Conservation and Planning* by Erich Hoyt, plus a special limited-edition poster showing the marine mammal protected areas of the world, produced by the Whale and Dolphin Conservation Society. (If you donate \$50, you will receive the limited-edition poster only.) To donate, go to: <http://marineaffairs.org/donate.html>. Thank you.

- Three MPAs in Turkey (Foça, Yalikhavak and Mersin) and two in Greece (National Marine Park of Alonissos – Northern Sporades and Karpathos) to protect Mediterranean monk seals;
- The MPA of “Ischia – Regno di Nettuno” in the southern Tyrrhenian Sea (Italy), mainly to protect short-beaked common dolphins; and
- The Pelagos Sanctuary in the northwestern Mediterranean, most of which lies on the high seas, established by a treaty among France, Italy, and Monaco.

Unfortunately an MPA dedicated to the protection of common bottlenose dolphins in Croatia — the Lošinj Dolphin Reserve (MPA News 8:3) — was never formally established after a three-year provisional protection expired in 2009.

On challenges faced by the Pelagos Sanctuary:

In the 12 years since its creation, Pelagos has failed to fulfill the goal of significantly improving the conservation status of the area’s cetacean populations, which are threatened by intense human pressures (e.g., fisheries,

maritime traffic, military exercises, coastal construction, downstream effects of land use, whale watching, climate change). Effectively mitigating those threats would require ecosystem-based management, or EBM. EBM takes into account the regulation of marine resource use and other human activities, control of land-based and maritime sources of pollution, integrated coastal zone/ocean management, and an adaptive management approach that would deal with rapidly changing patterns of use as well as with technological, socio-economic, political, and natural change.


Management actions — including zoning; channeling the area’s intense maritime traffic along established corridors; systematically addressing fishery impacts on cetaceans; ensuring that no high-intensity noise is produced; ensuring the orderly and respectful development of the whale watching industry; and establishing precise regulations to address and mitigate impacts exerted on the local cetacean populations by pressures deriving from human activities — require an adequately empowered management body. Unfortu-

Examples of creative MMPA management

Brad Barr, a senior policy advisor in the US Office of National Marine Sanctuaries, says managers need to get creative to address the challenges of marine mammal protected areas, including the vast geographic range of many marine mammal species and the shortage of data on their populations. Here he describes two examples of such creative management, both of which were initiated by the Hawaiian Islands Humpback Whale National Marine Sanctuary (US):

“The first example is SPLASH (<http://hawaiihumpbackwhale.noaa.gov/science/splashinfo.html>), a program that brought together 400 researchers from 50 organizations in 10 countries to provide extraordinary information for guiding management of humpback whales in the North Pacific, including on the range, critical areas, and migratory pathways of sub-populations. One networking outcome has been the genesis of an idea, announced at the first International Conference on Marine Mammal Protected Areas and currently in development, to network MMPAs for one sub-population that could ultimately include MMPAs in three nations: Hawaiian Islands Humpback Whale National Marine Sanctuary and Glacier Bay National Park & Preserve (US); Gwaii Haanas National Marine Conservation Area (Canada); and the Commander Islands State Biosphere Reserve (Russia) — all critical areas for this sub-population of Humpback whales. The information provided by SPLASH could not have been assembled by any single country or research organization. It is a great example of how the community can come together to address the essential research and management at an appropriate ecosystem scale.

“The second example is the work on cetacean disentanglement from fishing gear at Hawaiian Islands Humpback Whale National Marine

Sanctuary. At that MPA, David Mattila and Ed Lyman have not only further developed safe and effective techniques for addressing this issue on site; they have also shared their expertise with the global MMPA community (including training sessions in Australia, Canada, Korea, Mexico, New Zealand and Samoa), teaching others to effectively implement disentanglement efforts and conducting and participating in critical research to better understand and address the issue. We have come to understand from this work that it is a worldwide problem, and likely a very pervasive and problematic one given the troubling estimates of much larger numbers of humpbacks being killed or seriously injured by entanglement (or bycatch) than previously thought. Many in the community need help to address this challenging problem effectively. The outreach and training that experts like David and Ed provide is critically important, and shows the commitment of such folks in the community to not only address management issues creatively, but offer these solutions to the broader MMPA community.” 

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General information on the large whale disentanglement work is at:

- <http://hawaiihumpbackwhale.noaa.gov/res/entanglement.html>
- www.nero.noaa.gov/prot_res/stranding/lwd.html
- www.coastalstudies.org/what-we-do/whale-rescue/introduction.htm


Editor’s note: The above websites do not provide “how to” information or training on disentanglement of large whales as the activity can be very dangerous if undertaken without extensive initial hands-on training and supervision. For information on training opportunities, e-mail David Mattila of the Hawaiian Islands Humpback Whale National Marine Sanctuary at david.mattila@noaa.gov.

nately, actual management and conservation actions within Pelagos' waters are very limited by the fact that there is no proper management body of the Sanctuary.

On lessons from the Pelagos experience so far:

The continuing existence of management shortcomings concerning the Pelagos Sanctuary is difficult to understand when considering the effort currently undertaken by UNEP's Mediterranean Action Plan, under mandate from the parties to the Barcelona Convention and with funding from the European Commission, which includes the creation of a network of SPAMIs (Specially Protected Areas of Mediterranean Importance) in Mediterranean areas beyond national jurisdiction. Such effort, which will hopefully result in the establishment of several SPAMIs on the Mediterranean high seas within the next decade (thus creating the core for a future pan-Mediterranean MPA network), begs the question of how the parties to the Barcelona Convention envisage managing such high seas protected areas, or whether

it is conceivable to establish MPAs without providing for a solid and effective management mechanism.

This, in turn, raises the question of whether a management mechanism appropriate for MPAs on the Mediterranean high seas can be envisaged within the existing legislative framework, or whether there is a need for more advanced juridical creativity to account for the likely multinational nature of such protected areas. Considering the scenario described above, the lack of interest by Mediterranean countries in the opportunities for management experimentation and development, presented by the only SPAMI on the Mediterranean high seas currently existing (the Pelagos Sanctuary), is baffling. I think that we are facing an example of lack of political leadership in the region. The take-home lesson is that there is no point in mustering the best scientific, advocacy, and managerial expertise to come up with sensible plans to protect the sea if there is no political will to transform such effort in tangible results in the real world. 

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Letter to the Editor

Well-managed trawl fishery would be disproportionately impacted by SW Australian MPAs

Dear MPA News:

I am writing regarding your article on the Australian Government's proposal for a network of eight new MPAs for the country's South-west marine region ("Australia Announces Plan for Large Network of MPAs off SW Coast", MPA News 12:6).

Despite calls from some green groups that less than 1% of the South-west (SW) region is protected, it should be pointed out that the SW is actually largely prospective in nature, with huge areas untouched by any form of fishing. The Great Australian Bight trawl fishery (GABTF), for example, impacts less than 5% of the slope, 4% of the shelf, and 1% of the deepwater areas of the region based on spatial analysis undertaken by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia's national science agency. In addition, the current fisheries closures in the region — implemented by the GABTF in 2007, and including one that is 120nm wide and extends out to the limit of the EEZ — mean that the region is likely to be among the most pristine and well-managed in the world. This is especially when taking account of significant investment in science to support individual transferable quota (ITQ) management of key stocks and the CSIRO ecological risk assessment process, which uncovered that no species in the GABTF is at high risk from the impacts of the fishery.

Yet as proposed, the draft MPA network will mean that certain sectors of the commercial fishing industry — including the well-managed trawl fishery — will be disproportionately impacted. This is despite other users, such as oil and gas exploration and drilling, being allowed in the majority of the MPAs. The barrage of misinformation about the need for MPAs to effectively manage fisheries is upsetting. Although MPAs may play some largely unproven role in fisheries management for certain species, they are for the broader public good of biodiversity conservation and should be planned for and implemented in that context.

We will be working with Government to achieve balanced outcomes for biodiversity conservation, minimizing impacts on marine users and maintaining access to sustainable resources, in line with common sense and the goals and principles for Commonwealth marine bioregional planning. It is early days in the SW consultation process, so stakeholder positions, policy, and politics will all become clearer as the process unfolds. Our mission is to continue to supply Australian and overseas markets with high-quality, sustainable Australian seafood into the future.

Jeff Moore

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UN Working Group Recommends Path toward Multilateral Agreement on High Seas Conservation, Including MPAs

Conservation of biodiversity on the high seas took a significant step forward in June: a working group of the United Nations General Assembly recommended the establishment of a process that could lead to a multilateral agreement on high seas conservation and sustainable use. Specifically the recommendations call for crafting a legal regime under the UN Convention on the Law of the Sea to conserve marine biodiversity in areas beyond national jurisdiction — including by designating MPAs. Currently no mechanism exists to designate MPAs on the high seas that would apply to all nations. High seas comprise 64% of the world ocean.

The consensus recommendations will be considered for approval by the UN General Assembly in September this year. The group that made the recommendations — the Ad Hoc Open-ended Informal Working Group — involved 200 participants representing governments, UN agencies, and intergovernmental and non-governmental organizations.

MPA News spoke with Kristina Gjerde, high seas policy advisor for the IUCN Global Marine Program, about the significance of the Working Group's recommendations and how they emerged:

MPA News: What do the Working Group's recommendations signify for MPAs on the high seas?

Kristina Gjerde: The significance of the June 3 Working Group recommendations is that they pave the way for a possible global agreement for high seas conservation, including the establishment of high seas MPAs. At the very least, States have agreed (assuming the recommendations are adopted by the UN General Assembly) to establish a more formal “process” empowered to identify new ways to improve implementation of existing commitments to high seas conservation as well as to consider the possible development of a new multilateral agreement.

MPA News: You and others have been working for years to build support for a multilateral process for high seas conservation (“Recent Developments toward a System of High-Seas MPAs”, MPA News 8:1). What allowed this breakthrough to happen?

Gjerde: All States at the UN Working Group recognized the need to address a package of issues of interest to a wide range of nations. These specifically


included marine genetic resources and questions relating to their benefit sharing, capacity building, and technology transfer. On the high seas, only a handful of States (mainly developed countries) have access to marine genetic resources or the technologies needed to exploit them. Thus when the developed States agreed to consider these equity concerns, the developing States came out in strong support for a higher-level, UN-based process empowered to focus on practical and legal measures, rather than to continue to merely “study” the issues, as the current UN Working Group mandate provides.

MPA News: What is the likelihood that the UN General Assembly will adopt the recommendations later this year?

Gjerde: Relatively high. There was very strong and enthusiastic support from nearly all the States at the UN Working Group meeting. Nevertheless there is work to be done to build public and political support at home and abroad.

MPA News: There were also recommendations on high seas MPAs made last year at the Conference of the Parties to the UN Convention on Biological Diversity (MPA News 12:3). Can you place those in the context of the Working Group's recommendations?

Gjerde: Last year's CBD Conference of Parties (CBD decision X/29) agreed to a science-based process for identifying areas of ecological or biological significance. This scientific input is essential to support the development of specific MPAs as well as other area-based management tools.

Nevertheless, as the CBD does not have the legal authority to “designate” high seas MPAs or to adopt management measures for activities such as fishing or shipping, the UN Working Group's June 3 recommendations are a vital step forward as they can lead to a global political process to improve high seas conservation, including through more integrated and coordinated ecosystem-based management and tools such as high seas MPAs. 

[Editor's note: an IUCN press release on the Working Group's recommendations and supplementary material are at www.iucn.org/?uNewsID=7612.]

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Notes & News

User-friendly guide on marine and coastal EBM offers several examples from MPAs

A new publication from the UN Environment Programme (UNEP) applies a reader-friendly approach to help countries and communities move toward ecosystem-based management of oceans and coasts. Drawing on practical experience and lessons from around the world, the guide serves as an introduction to EBM principles and applications, and provides an overview of the general phases involved. It provides more than two-dozen examples of EBM in practice, including several from MPAs worldwide.

The 68-page publication *Taking Steps toward Marine and Coastal Ecosystem-Based Management: An Introductory Guide* emphasizes that EBM can be implemented incrementally rather than as one big push. Quotes from experienced EBM practitioners are sprinkled throughout, offering first-hand advice on planning and implementation.

The guide was co-authored by multiple individuals with ties to Marine Ecosystems and Management (MEAM), the sister publication to MPA News: Tundi Agardy (MEAM contributing editor), John Davis (MEAM editor-in-chief), and Kristin Sherwood (MEAM editorial board member), together with Ole Vestergaard of the Marine and Coastal Ecosystems Branch of UNEP's Division for Environmental Policy Implementation. The guide's target audience is practitioners in the UNEP Regional Seas Programme. However, it should be of help to a wider audience as well, including planners and decision-makers at all government levels and across multiple sectors — fisheries, transportation, tourism, environmental management, and more.

The guide is available for free. To download, go to http://unep.org/pdf/EBM_Manual_r15_Final.pdf.

Two more sites with marine coverage added to World Heritage List

At its annual meeting in June, the UNESCO World Heritage Committee added Australia's Ningaloo Coast and Japan's Ogasawara Islands to the World Heritage List:

- The 7050-km² marine and terrestrial site of Ningaloo Coast, on the remote western coast of Australia, includes the Ningaloo Reef (one of the longest nearshore reefs in the world), the Cape Range mountains, and a 200-km coastline. An-

nual gatherings of whale sharks occur on the reef, which is also home to whales, sea turtles, and more than 500 species of tropical fish. The site's terrestrial component features underground water bodies with a substantial network of caves and groundwater streams.

- The 79-km² Ogasawara Islands site is primarily terrestrial, featuring 30 islands. The islands are home to a critically endangered bat species and 195 endangered bird species. The surrounding waters support numerous species of fish, cetaceans, and corals.

With these new listings, the number of World Heritage sites with marine coverage is now 45. Although that number is growing each year, it still pales in comparison to the number of natural terrestrial sites on the World Heritage List: 165. Fanny Douvère, who heads UNESCO's World Heritage Marine Programme, says work is underway to bolster the representation of marine heritage. "Efforts are being undertaken to support the nomination of new sites in marine regions that are currently underrepresented," she says. "A first expert meeting is planned to be held in the Western Indian Ocean and will focus on the identification of new potential marine World Heritage sites. Efforts are also underway to review the potential application of the World Heritage Convention to protect areas on the high seas."

The World Heritage designation is the highest internationally recognized status of conservation and is granted based on sites' outstanding universal value. Often the listed status enables sites to attract greater financial resources and other support (political and managerial) necessary for adequate conservation. Listed sites become subject to a system of regular monitoring and evaluation to ensure they continue to protect the special values for which they are inscribed on the World Heritage List. These monitoring exercises, typically conducted by the World Heritage Centre and IUCN, prevent these marine sites from being "paper parks". When serious conservation problems are discovered, a site is inscribed on the List of World Heritage in Danger.

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China designates seven National Ocean Parks

In May, China designated its first seven National Ocean Parks with the goal of ensuring a healthy environment and sustainable development for coastal tourism. The sites are distributed throughout the country's coastal areas with two in Guangdong, two in Shandong, and one in Guangxi, Fujian and Jiangsu. The largest site covers an area of 514 km² in Lianyungang, Jiangsu Province.

"The National Ocean Parks, which provide beautiful beach resorts for the public, can promote marine eco-environment protection and facilitate sustainable development of coastal tourism," said Chen Liqun of the State Oceanic Administration. These parks are distinct from other types of MPAs in China. For example, the country has 33 National Marine Nature Reserves, which ban or restrict exploitation of natural resources. In contrast, the National Ocean Parks aim to balance resource use with environmental protection under the principles of scientific planning and coordinated management.

Report: Canada should protect 30% of each marine bioregion in no-take marine reserves

A report co-authored by 14 marine scientists and published in May by the Canadian Parks and Wilderness Society (CPAWS) calls on the Canadian government to designate no-take marine reserves in at least 30% of each of its marine bioregions, as well as plan and implement functional networks of MPAs nationwide. The report says that Canada, with less than 1% of its EEZ in MPAs and nearly no coverage in no-take marine reserves, lags behind other countries on marine protection.

The report provides guidelines both for selecting individual sites for MPAs (no-take and otherwise) and for planning networks of these sites. Potential reserve sites should be analyzed based on six general classes of ecological criteria, according to the report:

- Uniqueness, rarity or special character;
- Productivity;
- Biological diversity;
- Degree of naturalness/human impact;
- Sensitivity/resistance to disturbance; and
- Potential for recovery from disturbance.

The report recommends that functional MPA networks include a combination of large MPAs and no-take reserves, provide adequate representation and replication of habitats, and ensure connectivity between sites. The planning should also be based on a strong understanding of institutional arrangements and human communities, including respecting the rights and interests of Aboriginal peoples.

The 60-page report *Science-based Guidelines for Marine Protected Areas and MPA Networks in Canada* is at http://cpaws.org/uploads/mpa_guidelines.pdf. CPAWS seeks endorsement of the guidelines by scientists around the world; you can add your name at <http://bit.ly/CPAWSguidelines>.

Study on MPA capacity-building programs in Mediterranean

A study is underway to assess MPA-training organizations and programs in the Mediterranean Sea. The intent is to formulate a capacity-building strategy by 2012 to support regional, national, and local needs for developing and managing Mediterranean MPAs. The strategy will be a public document that can be used by all governments, institutions, and scientific organizations to contribute to building MPA capacity.

The study is being conducted by the WWF Mediterranean Office, the Mediterranean Regional Activity Centre for Specially Protected Areas (RAC/SPA), and the Mediterranean Protected Areas Network (MedPAN) with other Mediterranean national and regional partners. To contribute to the survey or to request more information, contact Francis Staub (fstaub@biodiv-conseil.fr) and Arturo Lopez (Arturo@makiwi.net).

Small grants program available for Mediterranean MPA managers

The Mediterranean Protected Areas Network (MedPAN) has launched a grant program to support small projects at Mediterranean MPAs. With funding from the French Environment Global Fund, the Albert II of Monaco Foundation, and the MAVA Foundation, grants will be available to support:

- Management planning / management assessment
- Innovative funding mechanisms
- Communication and environmental education activities
- Stakeholder consultation and mediation processes
- Sustainable management of tourism
- Sustainable management of fisheries
- Enforcement at sea
- Ecological and socio-economic monitoring
- Monitoring of invasive species
- Monitoring and/or adaptation to the impacts of climate change

The maximum grant size is 20,000 € (US \$28,000), and up to 10 projects will be selected. Grant applications will be accepted through 5 September 2011. For more information, go to www.medpan.org.