

U.S. Designates Three More Large MPAs in the Pacific

On 6 January 2009 in his final month in office, President George W. Bush designated three vast new MPAs in U.S. waters in the Pacific Ocean. Encompassing a total area of roughly 505,000 km², the three MPAs are:

- Marianas Trench Marine National Monument — in the Western Pacific, containing the deepest known points in the global ocean;
- Rose Atoll Marine National Monument — in the Central Pacific, containing one of the world's most pristine atolls; and
- Pacific Remote Islands Marine National Monument — in the Central Pacific, consisting of Wake Atoll, Baker, Howland, and Jarvis Islands, Johnston Atoll, Kingman Reef, and Palmyra Atoll.

President Bush banned drilling and mining at each of the sites, and placed increased restrictions on recreational fishing. Commercial fishing will be off-limits at Rose Atoll and the Pacific Remote Islands but will still be allowed in waters above the Marianas Trench.

Together the protected areas include hundreds of fish species and dozens of seabird and coral species. Some of these islands are also important to Polynesian and Micronesian culture, as well as to military and aviation history. The new designations add to President Bush's legacy of ocean protection. In 2006 he designated the 362,000-km² Northwestern Hawaiian Islands Marine National Monument (*MPA News* 8:1), now known as Papahānaumokuākea Marine National Monument.

For the official proclamation of each site, including a physical description of the area and what its regulations will be, go to www.fws.gov/pacific/news/2009/Monuments. A map indicating the location and boundaries of the new MPAs is at <http://depts.washington.edu/mpanews/monuments.jpg>.

The designations mark the culmination of years of behind-the-scenes advocacy and negotiations between NGOs and the Bush Administration. The Marine Conservation Biology Institute (MCBI) and Environmental Defense Fund (EDF) lobbied for Rose Atoll and the Pacific Remote Islands sites. Pew Environment Group lobbied for protection of the Marianas Trench. Little commercial fishing activity is known to have occurred historically at any of these sites, except for some tuna and billfish fishing near some of the Remote Islands.

"These are places time forgot," said Diane Regas, Associate Vice President for oceans at EDF. "They still look as they did hundreds and even thousands of years ago."


"President Bush has now protected more of the ocean than anyone else in the history of the world," said Elliott Norse, President of MCBI. "We greatly appreciate this bold, visionary action."

Management of sites

All three MPAs will be managed by the U.S. Fish and Wildlife Service (FWS) under its Division of National Wildlife Refuges, in consultation with the National

Oceanic and Atmospheric Administration (NOAA). Don Palawski is Project Leader of the FWS's Pacific Remote Islands National Wildlife Refuge Complex, which oversees the new MPAs. He says the main challenges will pertain to the immense area involved — namely, addressing the logistics of managing scientific research and enforcement activities across such a large expanse.

"Both NOAA and the FWS Division of National Wildlife Refuges have a long history of conducting scientific expeditions to these unique marine environments," says Palawski. "By working together and with other partners, we can be more effective and efficient in conducting scientific investigations in these remote areas. In addition, emerging and innovative technologies will likely facilitate our ability to conduct remote surveillance and continuously collect oceanographic and biological data from these unique and biologically diverse ocean and island environments."

Conservationists originally hoped for the MPAs to be even larger than they turned out to be. MCBI and EDF pushed for outer boundaries stretching to the edge of the U.S. Exclusive Economic Zone, 200 nm from shore. Ultimately, the boundaries were set 50 nm from shore, similar to the outer boundary of the Papahānaumokuākea Marine National Monument. 

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“The Best Job in the World”: Queensland Campaign Results in 14,000 Applications for MPA Job

In January, the World Wide Web was abuzz with an advertisement for what was touted as “the best job in the world”: a six-month, AU \$150,000 contract (US \$101,000) to serve as island caretaker in Australia’s Great Barrier Reef Marine Park. The job’s main responsibility: to explore the natural wonders of the marine park and surrounding 600 islands, and post those experiences on the Internet. Within a month, more than 14,000 applications from 169 countries had been submitted for the position. More are still flooding in. The application period ends 22 February.

The job advertisement is the brainchild of Tourism Queensland, a Queensland state government agency, along with its creative firm Cummins and Nitro. Although the “island caretaker” position is real, it is less an actual caretaking job than a promotional one. According to the application form, “You’ll be required to report back on your adventures to Tourism Queensland headquarters in Brisbane (and the rest of the world) via weekly blogs, photo diary, video updates and ongoing media interviews. On offer is a unique opportunity to help promote the wondrous Islands of the Great Barrier Reef.” Other minor duties of the caretaker may reportedly include feeding fish, cleaning a pool, and/or collecting mail.

Nicole McNaughton, spokesperson for TQ, says the caretaker job was intended as an innovative way to cut through an increasingly cluttered travel market. “Travelers these days are placing increasing importance on first-hand reports from other travelers when they choose a holiday,” says McNaughton. “So when Tourism Queensland was looking for an innovative way to promote our new *Islands of the Great Barrier Reef* campaign, what could be better than having a real and independent traveler based on a Great Barrier Reef island reporting on their personal experience?”

TQ took that concept farther by making it a real job with a global recruitment process. “This will enable the successful applicant to spend an extended amount of time really getting to know the Great Barrier Reef and its islands, to meet and spend time with Queensland locals, and truly experience all of the amazing things that bring people from around the world to visit,” says McNaughton.

The total cost of “The Best Job in the World” campaign — including a multilingual website, www.islandreefjob.com — will be AU \$1.7 million (US \$1.14 million), including investment from both TQ


and industry partners. Tourism Queensland anticipates the unique campaign strategy will result in millions of additional dollars worth of free media exposure.

Coordinating with marine park officials

Over the course of the campaign’s development, TQ updated its colleagues at the Great Barrier Reef Marine Park Authority (GBRMPA), which oversees the marine park. “TQ briefed us on the campaign before the launch, and the success of the recruitment program has been wonderful,” says Lorelle Schluter, Manager of Sustainable Development and Policy in GBRMPA’s Tourism and Recreation Group. GBRMPA is working with TQ to coordinate an introduction for the successful applicant, including a tour of Reef HQ (GBRMPA’s commercially-managed aquarium attraction), briefings with key GBRMPA staff, and potentially an opportunity to participate in a marine park compliance patrol.

“GBRMPA is particularly keen to have the successful applicant briefed on significant issues impacting the Great Barrier Reef, including climate change, impacts from coastal run-off, and illegal fishing,” says Schluter. “The person who is appointed to this position will inevitably have to address these key issues, and we want him or her to have the information to set the story straight about how the Great Barrier Reef is being managed. It is important for us to get the message out there globally that the Great Barrier Reef is better managed than most other reefs in the world, and that this increases the resilience of the Reef, which helps it bounce back more quickly and efficiently from major disturbances.”

The application process involves filling out a form on the campaign website (www.islandreefjob.com) and uploading a 60-second application video, explaining why the applicant is the best person for the job and demonstrating some knowledge of the Great Barrier Reef. Videos of applicants are currently viewable on the website. The successful candidate will be named on 6 May.

“Honestly, we have been overwhelmed by the response to the campaign,” says McNaughton. “No one has ever done anything like this before and the opportunity has captured the imagination of millions of people around the world. The thought of spending six months on a warm Queensland tropical island during the height of the Northern Hemisphere winter is particularly enticing.” 

For more information

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Publication Offers Guidelines, Best Practices for Tropical MPA Management

A new report provides guidance on the planning and management of MPAs in tropical regions, based on lessons learned from six MPA network initiatives in the Coral Triangle region of Southeast Asia. The publication analyzes the MPA networks through their various stages of development, including planning and design, implementation, and evaluation. Best practices for each stage are provided.

The report represents the final phase of the MPA Learning Partnership, a project initiated in 2005 by the U.S. Agency for International Development and four international NGOs (The Nature Conservancy, World Wildlife Fund, Conservational International, and the Wildlife Conservation Society). The goal of the project was to accelerate implementation of effective and sustainable MPA networks through improved learning and knowledge exchange. In the past year, comprehensive surveys of stakeholders and managers were conducted at the six participating network sites, and workshops were held to understand challenges and share experiences.

The detailed surveys allowed the report's authors to identify the factors most closely related to MPA effectiveness. In cases where increased fish catch in adjacent waters was considered an MPA success

indicator, for example, factors such as sustainable financing for MPA management, clarity of MPA rules, and enforcement by community-based enforcers were all strong predictors of such success. "The results from the analyses verify that the social aspects of MPA management are critical to the MPAs' success," write the authors. "There is a definite correlation between increasing benefits to stakeholders and MPA management improvement in each country context."

The Coral Triangle region includes part or all of six countries — Indonesia, the Philippines, Malaysia, Papua New Guinea, the Solomon Islands, and Timor Leste. The 120-page publication *Marine Protected Area Networks in the Coral Triangle: Development and Lessons* is available in PDF format at <http://conserveonline.org/library/mpa-networks-in-the-coral-triangle-development-and-lessons>. Please note: the report's PDF file is 29 MB in size, so the download may be slow. 🌊

For more information

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MPA Tip: Managing stakeholders' expectations of MPA success

The following tip is excerpted from *Marine Protected Area Networks in the Coral Triangle: Development and Lessons*, which provides guidance and best practices gathered from six MPA network initiatives in Southeast Asia:

A problem associated with MPAs and networks is the high expectations that MPAs have created in all of the sites visited. In this regard, a major lesson is that clear objectives and setting of expectations at the beginning is vital. Small MPAs of 10 hectares (ha) will not be able to significantly increase fish biomass or provide larval and fish export to surrounding areas, but they do offer the opportunity for communities and government agencies to engage in management and learn from experience. If management is successful, they can then scale up to larger MPAs and into a network later on.

Likewise a 1-million ha MPA will also not achieve significant fish biomass buildup in the short term until management is in place and social aspects have been addressed. There is no right or wrong model, but objectives and expectations must be clear from the beginning. Overly ambitious MPAs with no clear long-term funding may have problems achieving their management objectives over time. Effective MPA networks allow this learning to take place to scale up as the policy environment, social considerations of those affected, and management needs are addressed. 🌊

(The publication is available at <http://conserveonline.org/library/mpa-networks-in-the-coral-triangle-development-and-lessons>.)

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Notes & News

U.S. closes large, melting Arctic area to fishing

On 5 February, the U.S. North Pacific Fishery Management Council (NPFMC) designated a vast fishery closure in an area that until recent years was covered with ice and had never been actively fished before. Totalling more than 500,000 km² and including all U.S. waters north of the Bering Strait, the so-called Arctic Management Area is undergoing climate change and its ice sheets are melting. The NPFMC, which oversees management of commercial fisheries in U.S. waters off Alaska, applied the closure for precautionary reasons.

The area will remain closed "until such time in the future that sufficient information is available with which to initiate a planning process for commercial fishery development," according to a January 2009 draft fishery management plan that provided the basis for the closure. That draft plan, which includes a map of the closed area, is available at www.fakr.noaa.gov/npfmc/current_issues/Arctic/ArcticFMP109.pdf. The closure applies to commercial fishing for nearly all stocks of fish except Pacific salmon and Pacific halibut, which are managed under other authorities.

MPA Training of Trainers course for Caribbean

From 22 March to 4 April 2009, a Caribbean regional course on MPA management will be held at Buccoo Reef Marine Park in Trinidad and Tobago. The aim of this "Training of Trainers" course is to instruct MPA managers who will in turn train local personnel in MPA management. Invited to apply are MPA managers and similar senior personnel from sites, government agencies, and NGOs directly involved with MPA management. Full scholarships will be provided to selected applicants. For information on how to apply, e-mail Georgina Bustamante at gbustamante@bellsouth.net.

The regional course is part of a comprehensive program that also includes follow-up training activities and a pilot mentorship program. The initiative has received support from UNEP's Caribbean Environment Program (with funding from the Swedish International Development Cooperation Agency) through the Caribbean MPA Managers Network and Forum (CaMPAM) and the Gulf and Caribbean Fisheries Institute; the Protected Areas and Associated Livelihoods Project of the Organization of Eastern Caribbean States; and the Buccoo Reef Trust (with funding from the United Nations Foundation and International Coral Reef Action Network). Additional support has come from NOAA's Coral Reef Conservation Program and other programs.

Paper: Progress lagging on MPAs since World Parks Congress

A new paper in the IUCN journal *Parks* reviews global progress on the designation of MPAs since the 2003 World Parks Congress in Durban, South Africa. The paper focuses in particular on two MPA-related recommendations from the Congress: one that called for building a global representative system of MPA networks, and one that called for improved protection of high seas biodiversity and ecosystem processes. The authors acknowledge that some progress has been made in both respects, but that it has been too little to reach agreed-upon targets. "It is evident from statistics on MPAs that significantly more action is needed not just from a biodiversity perspective but increasingly from the climate change perspective," write authors Dan Laffoley, Kristina Gjerde, and Louisa Wood, all of IUCN. The paper "Progress with Marine Protected Areas Since Durban, and Future Directions" is available at www.protectplanetoocean.org/resources/docs/Progress_with_MPAs_paper_Parks_17_1.pdf.

Report: Ocean acidification in an MPA and how to respond

The December 2008/January 2009 issue of *MPA News* featured an article on ocean acidification and its potential impacts on MPA management and planning (*MPA News* 10:6). In late 2008, an advisory council to the Channel Islands National Marine Sanctuary in the U.S. produced a report analyzing ocean acidification in that MPA specifically and how management could respond. The 42-page report *Ocean Acidification and the Channel Islands National Marine Sanctuary: Cause, Effect, and Response* is available at www.channelislands.noaa.gov/sac/pdf/CWG_OAR_final.pdf. Also, a recent report on five years of monitoring a network of marine reserves within the Channel Islands National Marine Sanctuary is available at www.dfg.ca.gov/marine/channel_islands/pdfs/fiveyears_full.pdf.

Journal offers several papers from European MPA symposium

The January 2009 issue of the ICES *Journal of Marine Science* provides 25 papers based on presentations from the 2007 *European Symposium on Marine Protected Areas as a Tool for Fisheries Management and Ecosystem Conservation*, held in Murcia, Spain. The papers range in subject from human dimensions of MPAs, to managing mobile species with MPAs, to improving representation of habitats in Mediterranean MPAs, and more. The special issue of the journal is available for free online at <http://icesjms.oxfordjournals.org/content/vol66/issue1/index.dtl>.

Google Earth adds oceans

The latest version of Google Earth — a virtual globe program with satellite images of the Earth's surface — features ocean bathymetry for the first time, allowing viewers to dive through the sea surface and explore the oceans beneath from their desktops. Previously the program portrayed the oceans as simply a flat, uniformly blue surface. The new version (Version 5.0) features the pre-existing MPA layer from Google Earth, indicating where each of the world's marine protected areas is located. "Ocean in Google Earth", as the marine portion of the program is called, was developed by Google through a Council of Ocean Advisors, including Dan Laffoley, Marine Vice Chair of IUCN's World Commission on Protected Areas (WCPA). WCPA developed the MPA layer with Google, and premiered it at the World Conservation Congress in October 2008 (*MPA News* 10:4).

Ocean in Google Earth also incorporates several new layers of potential interest to MPA practitioners and stakeholders, including data from animal tracking projects and the Census of Marine Life, multimedia from National Geographic, and even shipwreck locations. Furthermore, viewers may upload their own information about ocean sites. "The three-dimensional canvas in Google Earth 5.0 will enable everyone to better appreciate our oceans and seas," says Laffoley. "With our MPA layer, now anybody can share pictures and other information about ocean protection with hundreds of millions of people around the world. All you need to do is add your own data, pictures and

videos to the companion site www.protectplanetoocean.org." That site, operated by IUCN, is where the MPA layer is being continuously updated, creating what Laffoley calls "the world's only mass user-driven interactive multimedia map of how we're protecting our seas." To download Google Earth 5.0, go to <http://earth.google.com>. **For more information:** Dan Laffoley, WCPA – Marine, Peterborough, U.K. E-mail: dan.laffoley@naturalengland.org.uk

Registration open for International Marine Conservation Congress

Registration for the International Marine Conservation Congress (IMCC) is now open. The meeting will last from 19-24 May 2009 in Washington, D.C. (U.S.), and will include the Second International Marine Protected Areas Congress as a track. In days preceding the congress, there will be a series of courses for MPA managers, specialists, practitioners, and decision-makers. For more information on the MPA courses, the IMCC in general, or how to register, go to www2.cedarcrest.edu/imcc/index.html.

Advisory committee: Guidance on linking ocean-observing systems, MPAs


In December 2008 the U.S. Marine Protected Areas Federal Advisory Committee (MPA FAC) released new guidance on improving the linkage of ocean-observing systems to MPA management. Such observing systems capture data on a broad array of measures relevant to

Planning Spotlight: Using "sliding windows" to design MPAs

A paper in the December 2008 issue of the journal *Ocean & Coastal Management* describes a new approach to designing MPAs. Rather than defining the size and shape of an MPA's boundaries at the end of a planning process, as is typically done, the described approach sets the size and shape as the first step, even before any aspects of physical location are considered. The paper calls this the "sliding windows" approach. Once the outline of the potential MPA is set, planners can shift it back and forth throughout the study area to gauge its ideal location, similar to how a sliding window of consistent size and shape can be moved from side to side.

The paper suggests this method may be useful in cases where protection of contiguous habitats is necessary, such as for species that migrate daily or change habitats over the course of their lifecycle. "Home range size of target organisms is increasingly known from tagging, telemetry, and marine

landscape ecology studies, thereby enabling informed selection of reserve size and necessary core area," according to the authors. "The same data may indicate that a combination of habitats must be included adjacent to each other to accommodate daily or ontogenetic migrations. In such cases, analysis should focus only on reserves with size, shape, and orientation suitable for capturing a contiguous series or cross-section of these habitats; merely including some of all bottom types in a discontinuous reserve network is insufficient."

Lead author Matt Kendall of the U.S. National Oceanic and Atmospheric Administration (NOAA) notes the approach can also result in simple boundaries that may be easy to explain to stakeholders and enforce. "For situations where complex boundaries are not a concern, or where the region is largely homogeneous, or where there is no need for ensuring habitat adjacency, some other optimization tool would likely perform more appropriately," says Kendall. He notes the sliding window approach has not been tested for MPA network design yet, something that he hopes to do in coming years. 

For a PDF copy of the paper "MPA Design Using Sliding Windows: Case Study Designating a Research Area", e-mail Matt Kendall at matt.kendall@noaa.gov.

MPA management, including sea surface temperature, water quality, ocean ecosystem productivity, and larval dispersal, among others. The committee also released guidance on a framework for evaluating the U.S. national system of MPAs. Both sets of guidance are available at <http://mpa.gov>.

Guidance available from workshop on vertical zoning in MPAs

In nations where recreational pelagic fishing is popular, advocates for the activity have often challenged the scientific justification for completely no-take MPAs. This has particularly been the case where the primary goal of an MPA is protection of *benthic* resources (i.e., on the seafloor), as opposed to the *pelagic* species (i.e., in the water column) that recreational fishers are targeting. It has raised the question: Can vertical zoning of an MPA — namely, allowing fishing in the water column while banning it on the seafloor — be ecologically sustainable without compromising the protected area's effectiveness?

A new article in the December 2008 issue of *Fisheries* magazine offers guidance on this question, generated by

an expert workshop in 2005. The paper analyzes ecological linkages between pelagic and benthic communities, and provides general advice on which ecological conditions — such as depth and habitat type — may allow for pelagic fishing to be compatible with benthic protection. For example, where the habitat type is coral reef, the depth is relatively shallow, and the primary fish group of concern is coastal pelagics (e.g., jacks, mackerel, bluefish), the benthic/pelagic linkages are predicted to be strong and direct. Under these conditions, recreational pelagic fishing is most likely not compatible with the objectives of a benthic-focused MPA. In contrast, where the habitat is open ocean and the target fish are oceanic pelagics (tuna, sharks, marlin), the benthic/pelagic linkages are most likely weak. Under these conditions, pelagic fishing may be compatible with benthic protection goals.

The issue of *Fisheries* containing the article “Vertical Zoning in Marine Protected Areas: Ecological Considerations for Balancing Pelagic Fishing with Conservation of Benthic Communities” is available at www.fisheries.org/afs/docs/fisheries/fisheries_3312.pdf.

MPA Tip: On a simple method for gap analysis

“MPA Tip” is a recurring feature that presents advice on MPA planning and management gathered from practitioners and publications. Below, Nick Pilcher, a sea turtle biologist and Executive Director of the Marine Research Foundation in Malaysia, describes how to address a challenge often faced in MPA-planning processes — the perceived need for more data before conservation decisions can be made. He offers a simple method for identifying what is already known and where knowledge gaps exist.


“I managed a workshop for a conservation planning group that was looking at prioritizing research and conservation needs for marine turtles in the Sulu/Sulawesi Seascape. The workshop came at the end of a training session on marine turtle biology and conservation, and was designed to lead into the development of a Regional Action Plan for the conservation of marine turtles and their habitats. There were some 35 people in the group, all of them involved to some degree in turtle conservation in the region: park rangers, government officials, university researchers, and NGO members.

“We were discussing what needed to be done for turtles, and someone raised the point about how little we knew about them relative to management needs. Although some participants had decades of data on turtle biology, there was a perception that we didn't know what we needed to know to manage and conserve turtle populations.

“So I ran through a very fast ‘let's see what we do know’ exercise, using a rough Powerpoint slide I made up on the spot. I took a map of the region from an earlier presentation, wiped it clean, and then asked a series of questions to establish what we knew. In our case it was, ‘Okay, do we have any satellite tracks of turtles?’ Yes, we did, so we drew those in roughly. Then it was, ‘Do we know of any tag returns?’ Yes, okay, let's plot those on the map. Then,

‘What about key nesting areas?’ Oh yeah, we know those — up they went. ‘What about current protected areas?’ Yes, we know those too.... ‘Major fishery overlaps? What about tourism links?’ Yes and yes, they all chimed in....

“Little by little, the map on the screen went from blank to covered in information, and eventually we were left with the gaps: ‘What about foraging grounds?’ Don't really know where they are, said the group. ‘Mortality in fisheries?’ Nope, no idea. Etc. The whole thing took 10 minutes.

“This is a useful exercise to kick off a gap analysis process, particularly when you have a group of people who are each focused narrowly on only what he or she does. It shows quickly how much information is actually available, and highlights where that information resides. It does not fill all the gaps, and can't because of the simplicity of the exercise. But it does focus the group down to the areas where folks need to start paying attention. When using this for an MPA process, the concept would be identical, and could help identify candidate sites quickly. Follow-up would then be needed to narrow down choices among sites.” 

For more information

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