

Launch of new “MPA List” email discussion list

Dear reader,

I am very pleased to announce the launch of a new email-based discussion list for the marine protected area community: the MPA List.

Created by MPA News, the MPA List provides a simple way for managers, researchers, and others to share knowledge, discuss current issues, and stay up-to-date on the latest news and announcements.

To join the MPA List, just visit:

<http://openchannels.org/community/mpalist>

...and fill out the simple form. You will receive a confirmation email in return. It has been over a decade since there was a dedicated email discussion list for the global MPA community, so we are glad to provide this service.

In the meantime, MPA News will continue to provide its bimonthly coverage of the MPA field, and our sister website OpenChannels.org will continue to offer regular news, blogs, its extensive literature library, and live events, including these next ones:

• **3 March: The five key features of successful MPAs — Graham Edgar and co-authors will answer your questions** (Office Hour chat)

• **13 March: The Global Ocean Refuge System (GLORES), with Lance Morgan of the Marine Conservation Institute** (webinar)

For more information on these events, go to <http://openchannels.org/upcoming-events-list>



John B. Davis, jdavis@openchannels.org
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P.S. MPA News has revised its issue identification system. From now on, future issues will be distributed near the start of the period with which they are identified (i.e., the start of March for our March-April issue) rather than partway through the period. To allow for this change, we have skipped the January-February 2014 issue in our normal sequence.

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Global study finds conservation success increases dramatically when MPAs have five key features

A study of 87 marine protected areas worldwide has found that conservation success — as indicated by fish biomass — improves exponentially when an MPA has five key features. Those recurring characteristics are:

- No fishing allowed;
- Well-enforced;
- More than 10 years old;
- Relatively large in area (larger than 100 km²); and
- Isolated from fished areas by habitat boundaries, such as deep water or sand.

Published in *Nature* magazine in February 2014, the study concludes that global conservation targets based on area alone will not guarantee protection of marine biodiversity. “More emphasis is needed on better

MPA design, durable management, and compliance to ensure that MPAs achieve their desired conservation value,” writes the 25-author research team.

The study will be the focus of a live interactive chat on 3 March on OpenChannels.org, featuring lead author Graham Edgar of the University of Tasmania (see box on page 2).

MPAs without the features are often indistinguishable from fished sites

The study’s results are not wholly dissimilar from previous analyses of MPA success, which found similar contributing factors (“On the Current State of MPA Science”, MPA News 13:4).

However, the new study may be the first to have
continued on next page



MPA News

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considered the factors simultaneously, using data collected globally with standardized methods.

Also noteworthy is its finding that aside from the few MPAs that display four or all five of the so-called "NEOLI" features — No-take, Enforced, Old, Large, and Isolated — most of the remaining sites display little difference in recovery of fish biomass compared to nearby fished sites. (Note: *Isolation* in the case of the NEOLI criteria does not necessarily mean remoteness: an isolated site, for example, could be a small reef surrounded by sand in an urban estuary. However, a small reef like that would not meet the NEOLI criterion for largeness, meaning that the site could possess only four of the five NEOLI features. In the study, MPAs with four NEOLI features were more successful than those with fewer, but not as successful as those with all five NEOLI features.)

In the study, just 4 of the 87 MPAs had all five NEOLI features: these MPAs were Cocos Island, Costa Rica; Malpelo MPA, Colombia; Kermadec Islands, New Zealand; and Middleton Reef, Australia. Compared to non-NEOLI sites, these MPAs had on average twice as many species of large fish per transect, eight times more large fish, and 20 times more sharks than fished areas.

"Management agencies around the world clearly need to focus on creating more of these effective protected areas," said Edgar in an editorial published the same day as the study (<http://theconversation.com/worlds-largest-survey-of-marine-parks-shows-conservation-can-be-greatly-improved-22827>). "At the same time they need to alter the design and management of the many existing protected areas that aren't working. The few conservation gems are presently hidden amongst protected areas that are ineffective because of inadequate regulations or poor enforcement."

Response from the MPA community

Matt Rand is director of the Global Ocean Legacy project at The Pew Charitable Trusts, which is working to create 15 marine parks of 200,000 km² or larger by 2022. He notes the project has used the NEOLI criteria to help secure the establishment of MPAs in Hawaii, the Northern Mariana Islands, the Chagos Archipelago, and the Coral Sea. "All these sites are no-take, very large, and isolated, and we are working hard to make sure they are well-enforced," he says. "They are not yet old, but that is only a matter of time."

Peter Jones of University College London, author of a new book on MPA governance (see Notes & News this issue), calls the study "a very important paper that makes an outstanding contribution to debates about the need for effective MPAs." However, in a blog post on [OpenChannels.org](http://openchannels.org) (<http://openchannels.org/node/5557>), he expresses concern that governments and NGOs might interpret the

Graham Edgar will answer your questions on the global MPA study

OpenChannels.org will host Graham Edgar and some of his co-authors (to be announced) as they take your questions on their just-published Nature article "Global conservation outcomes depend on marine protected areas with five key features".

The event will be held Monday, 3 March, at 2 pm PST / 5 pm EST / 10 pm GMT. (For those of you in eastern Australia, that is Tuesday, 4 March, at 9 am.) For full details or to join the live chat event, go to <http://openchannels.org/node/5628>

study as suggesting there is relatively little role for small MPAs near human communities. "Is it too easy to conclude that we should focus on large, no-take, isolated (particularly on remote islands), strictly enforced MPAs that are not compromised by stakeholder consultation processes?" he asks.

Tundi Agardy of Sound Seas (and contributing editor to MPA News' sister publication MEAM) agrees it is an important study that should make the MPA field take pause. But she suggests there should be more indicators of MPA success considered than just the recovery of populations of high trophic-level fish.

"Fishing restrictions, including no-take zones, are absolutely necessary," she says. "But fishing shouldn't be the only threat addressed by MPAs. MPAs can be designated to protect valued seascapes, protect highly productive habitats or benthic communities of organisms, reduce conflicts between user groups, elicit better behavior in visitors (controlling trash, diver damage, etc.), create living laboratories for studying anthropogenic impacts, or serve as a focal point for pushing regulations that reduce pollution and maintain water quality. To imply that an MPA that has achieved these goals but has not eradicated fishing is a failed MPA promotes only a limited view of what MPAs can achieve for conservation."

The global MPA study is at www.nature.com/nature/journal/vaop/ncurrent/full/nature13022.html 

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The emerging concept of marine biodiversity offsets and their potential uses with MPAs

Several presentations at IMPAC3 addressed a relatively new concept in the ocean management realm: marine biodiversity offsets. A biodiversity offset is a way to demonstrate that an infrastructure project is implemented in a manner that results in “no net loss” of biodiversity. If the installation of a proposed offshore oil drilling platform, for example, is anticipated to have certain negative impacts on benthic habitat, an offset could involve protecting similar habitat elsewhere, or fostering new habitat, to balance the habitat loss at the platform site. (If a project has already been implemented, an offset could involve restoring any habitat that has been degraded in the process.)

Such offsets, sometimes referred to as compensation, have existed in land management for a while. But the idea has only become more common in ocean management as industries such as petroleum exploration, renewable energy, and seabed mining establish a greater marine presence.

MPA News examines the challenges involved with biodiversity offsets and their potential uses in the context of MPAs.

Introduction to biodiversity offsets

When it comes to addressing the negative impacts of a development project, offsets are typically the third priority:

- The first priority is avoiding such negative impacts all together. In the Pacific Ocean, for example, where multiple nations are scrambling to stake seabed mining claims, the International Seabed Authority in 2012 enacted a network of provisional “Areas of Particular Environmental Interest” covering 1.44 million km². These

protected areas, designed to safeguard sites of high benthic biodiversity, are off-limits to mining claims and were implemented before mining began — www.isa.org.jm/files/documents/EN/18Sess/Council/ISBA-18C-22.pdf

- The second priority is reducing the negative impacts of a project. This can be achieved through better design of coastal and offshore installations, or through innovative construction techniques.
- The third priority, when avoidance and reduction are not enough or not an option, is offsets.

Offsets can take various forms. Some jurisdictions (like Brazil) assess a fee on development projects. That fee, a percentage of the projected cost of a development, goes to a fund that is intended to pay for offsetting measures. Such measures could include the creation of new protected areas or the enhancement of existing ones. Other offset frameworks are more reactive, assessing fines after impacts have occurred, such as from an oil spill. Such approaches are central to the Natural Resource Damage Assessment procedure in the US, as in the Deepwater Horizon oil blowout in the Gulf of Mexico. Another example would be the fines assessed by a Canadian court in 2013 in response to a spill of 70 liters of fuel into the Gilbert Bay MPA (“An overview of the Gilbert Bay MPA oil spill case”, MPA News 14:6). Half of the Cdn \$115,000 in assessed fines was allocated to support restoration and research pertaining specifically to the impacted MPA.

Conceivably there are ways for offsets to benefit MPAs, including as a new funding stream for existing sites (e.g., from a tax on each offshore development

Editor’s note:

The Third International Marine Protected Areas Congress (IMPAC3) — held in October in Marseille, France — engaged 1500 participants from 87 nations. There was an enormous amount of information shared. Continuing from our previous issue, MPA News is highlighting some of the novel ideas and developments that emerged at the meeting. In this issue, we cover the topic of biodiversity offsets.

More sources on biodiversity offsets

• Biodiversity offsetting: Guidance and information on biodiversity offsetting for providers and developers of offsetting schemes (UK Department for Environment, Food & Rural Affairs)
www.gov.uk/biodiversity-offsetting

• Business and Biodiversity Offsets Programme (Forest Trends)
http://bbop.forest-trends.org/pages/biodiversity_offsets

• Biodiversity Offsets and Marine and Coastal Development (Ecosystem Marketplace)
www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=7443

• Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting (Fisheries and Oceans Canada)
www.dfo-mpo.gc.ca/pnw-ppe/offsetting-guide-compensation/index-eng.html

• In-Lieu Fee Mitigation Program: Final Instrument ([Florida] Keys Restoration Fund)
http://aswm.org/pdf_lib/fl_keys_restoration_fund_ill_final_instrument_07012013.pdf

• “Assessing ecological equivalence in biodiversity offset schemes: Key issues and solutions”, by Fabien Quéfier and Sandra Lavorel, *Biological Conservation* (2011)
www.sciencedirect.com/science/article/pii/S0006320711003478

project) or as a lever for the designation of new MPAs in return for development. But Fabien Quétier, an ecologist with BIOTOPE, the leading biodiversity consultancy in France, says it is not that simple. The author of several publications on offsets, Quétier says that to be rigorous, the conservation outcomes of offsets must be quantifiable. Furthermore, you must demonstrate the offsets have achieved no net loss of biodiversity — a complex and inexact calculation, to be sure.

“I don’t know of any marine or coastal development projects yet that demonstrably achieved no net loss of biodiversity,” he says. “One of the key issues in designing offsets is ensuring ‘additionality’: offsets must fund actions — gains in biodiversity — that would not have occurred but for the offset. This is where the challenge of funding existing MPAs through offsets would lie: where is the gain?”

Quétier suggests that establishing new MPAs where the case for an “averted loss” can be made would be more reasonable. He cites the example of port developments in Corsica where offsets have involved giving money to an MPA agency to expand the MPA network there. The most tangible type of biodiversity gain, he says, would be the rehabilitation and restoration of degraded coastal and marine systems, although even these would still involve thorny considerations of feasibility and time lags.

Offsetting the impacts of an offshore wind farm on wildlife

At IMPAC3, a session on NGO/industry partnerships provided an example of the planning of offsets. Off the northern coast of France, wind power company La Compagnie du Vent, GDF SUEZ Group, is planning an offshore wind farm with 62 wind turbines. Nearly one-fifth of the project site would be within the boundary of a marine protected area — the

Marine Natural Park of the Picard Estuaries and Opal Sea — which serves as an important flyway for seabirds. (The MPA regulations allow for multiple human activities, including wind power.)

LPO, a conservation group that serves as the French partner for BirdLife International and as France’s coordinator on the FAME project (www.fameproject.eu), wants the wind farm development to be as environmentally friendly as possible to seabirds and other wildlife. And French regulations require that there be no net loss of biodiversity as a result of the wind farm project. The wind power company and the conservation organization are now working together to mitigate the potential development impacts, including through ideas for offsets.

Thomas Bordron, project chief for this project at La Compagnie du Vent, GDF SUEZ Group, says he appreciates this opportunity to find ways to avoid or reduce the project’s biodiversity impacts, even though these may involve increasing costs for the development. He would rather plan for those costs in this conception phase of the project than encounter them later when construction is already underway.

“We are contemplating choosing a type of foundation [for the turbines] that would involve a lower acoustic impact during construction,” says Bordron. “We have also discussed avoiding a sensitive fish nursery area.”

Despite these efforts to avoid and reduce impacts, the wind farm may still have effects on biodiversity. Some seabirds could collide with the turbines, for example. The government’s “no net loss” requirement will need to be met with offsets. What that requirement will look like in practice remains unclear. The partners are examining potential options, such as designation of a dedicated bird protected area or the establishment of seabird rescue center.

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More outcomes and insights from IMPAC3

French Polynesia announces process to designate a 700,000-km² MPA; New Caledonia reiterates intent for large MPA

At the MPA-focused ministerial meeting following IMPAC3, the government of French Polynesia announced that a process is underway to designate nearly 700,000 km² of the waters around its Marquesas Islands as a protected area. The MPA is likely to be multi-use, although details on its management or zoning have not yet been decided. “This protected and managed marine area will be based on a desire to preserve a unique heritage, but also on sustainable development for the benefit

of people,” said the country’s minister of marine resources, Tearii Alpha. The French Polynesia announcement (in French) is at <http://web.presidence.pf/index.php/mrm-filtre/630-la-polynesie-dans-le-concert-mondial-pour-la-preservation-des-aires-marines>

At the same meeting, the government of the French territory of New Caledonia reiterated its intent to designate a large multi-use MPA in its EEZ. The western Pacific territory first announced this intent in 2012 (“Cook Islands and New Caledonia Declare Intent to Designate Large Multi-Use MPAs”, MPA News 14:2). Its EEZ is 1.4-million km² in area.

Reflections on IMPAC3 from participants

MPA News asked participants in the Third International MPA Congress (IMPAC3) to provide their thoughts on the event and how it reflected the current state of MPA science and management. Here are some responses:

Leah Karrer, Senior Environmental Specialist The Global Environment Facility

IMPAC3 demonstrated that the marine conservation community has advanced in our discussions such that we are no longer only discussing the *what* and *where* of MPAs — we are also examining *how* we do business. Sustainable financing mechanisms; scaling up to networks and integrated coastal management; spatial planning tools; and private sector engagement were a few of the key topics highlighted at the conference.

Kalli De Meyer, Executive Director Dutch Caribbean Nature Alliance

For me there were three stand-out workshop topics:

- The increasing attention being paid to economic valuation of protected areas. Some of it was simply baffling, but some is clearly going to pave the way for a different way of viewing protected areas. Gaining insight into the jargon of ecosystem services and costs was very useful.
- The overriding need for effective communication to the public. It's clear that despite our best efforts we are still doing a mediocre job of persuading the public of the need to protect our oceans. We need to learn to communicate about the importance of marine systems at multiple levels to different audiences with messages that resonate with them. This means rethinking conservation messaging in terms of wellbeing, health benefits, cultural and spiritual values — things we still do not do particularly well.
- The workshops tackling the MPA sustainable financing conundrum were a clear attention-grabber. To judge by the high attendance, funding would appear to be one of the critical issues facing most protected areas. However, while there were examples of great fundraising (including innovative work by Donaccion.org, which is dipping its toes in the world of crowdsourced funding to raise small project funds), the focus was still on tried and tested strategies.

[Editor's note: for Kalli's unabridged post-congress remarks on IMPAC3, go to www.dcnanature.org/kalli-de-meyer-impac3]

Jeff Ardron, Senior Fellow Institute for Advanced Sustainability Studies (Potsdam, Germany)

In 2005, from far across the seas, we were called together to Australia and the "MPA tribe" was born. Four years later, combined with the International Marine Conservation Congress, IMPAC2 linked together the conservation biology community with the MPA community, and our tribe progressed toward "legitimacy" in the conservation world. However, it was not until IMPAC3 that MPAs were suddenly mainstream. A huge attendance, combined with live-streamed plenaries and a high-level ministerial segment, all pointed to ever-increasing recognition of the challenges facing the oceans and the potential roles for MPAs.

Ironically, the solutions shifted away from us and into the political realm. Indeed, most of us were not invited to the political session on Corsica that followed IMPAC3. While I recognize this as perhaps necessary progress in the course of effecting change, there were times at IMPAC3 when I missed the simpler days of IMPAC1, when we enthusiastically shared knowledge and ideas over Aussie beers in the belief that a small group of thoughtful, committed non-politicians could change the marine world.

Lynne Zeitlin Hale, Managing Director, Global Marine Initiative The Nature Conservancy

My main takeaways from IMPAC3:

- The link between conservation and benefits to people and economies has taken center stage. More attention needs to be paid to the full range and spatial distribution of the ocean's ecosystem services.
- The 10% target [for global MPA coverage under the Convention on Biological Diversity] is good, but not good enough. MPAs need to be embedded in integrated, more comprehensive management schemes. Islands of protection cannot exist within oceans of degradation.
- We need all types of MPAs. There is not a single solution to protecting the ocean. We need multiple types of MPAs — from MPAs designed and managed to deliver specific ecosystem services to growing coastal populations, to very large, remote MPAs that act as baselines.
- We are becoming a more cohesive community. While many different approaches in MPA planning and management were evident, there was a strong sense of community. This is recognition that we are much more effective when we support the diversity of approaches our community embodies. 

Coming up: Novel financing techniques and more from IMPAC3

IMPAC3 featured hundreds of presentations and other knowledge-sharing opportunities on MPA planning, management, and research. Our next issue will examine how some MPAs are using innovative techniques to generate revenue.

Regional recognition system for well-managed MPAs is already underway in Coral Triangle region

In our November-December 2013 issue, MPA News profiled two programs that aim to recognize (or certify) good management of MPAs worldwide, site-by-site — the IUCN Green List of Well-Managed Protected Areas, and the Global Ocean Refuge System developed by the Marine Conservation Institute (MPA News 15:3).

While those programs remain in development, a regional recognition system for well-managed MPAs is already underway in Southeast Asia and Melanesia. Launched in August 2013, the Coral Triangle Marine Protected Area System Framework and Action Plan (CTMPAS) aims to foster the development of a network of effectively managed MPAs across the region's six countries (Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, and Timor-Leste). The recognition system considers a range of factors from biodiversity criteria, to governance, to the fulfillment of fisheries and climate adaptation needs, to connectivity linkages within the region, and more.

Developed over five years within the multilateral Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security, the CTMPAS provides four categories for the region's MPAs:

- **Category 1 - Recognized CTMPAS Sites:** sites that meet the minimum data requirements to be included in the Coral Triangle MPA Database.
- **Category 2 - Effectively Managed Regional Sites:** existing sites that meet agreed minimum criteria for design and management effectiveness as specified in the CTMPAS Framework.
- **Category 3 - Priority Development Sites:** sites of ecological, governance, or socioeconomic importance that are not yet effectively managed and thus need additional assistance, or new sites added to the system (as recommended by a regional gap analysis) because they make a specific contribution to the regional system as a whole.
- **Category 4 - Flagship Sites:** large, already effectively managed sites that have ecological, governance, or socioeconomic importance to the region.

The basic level of recognition, Category 1, has already been populated with 931 sites across the region. Below, we talk about the MPA system with Alan White of The Nature Conservancy, who serves as

technical adviser to the Coral Triangle Initiative MPA Technical Working Group.

MPA News: Category 1 for the CTMPAS has already been populated. When will sites be approved for the other categories?

Alan White: Category 2 is not yet populated because each country has to develop its internal management effectiveness review system, and only Philippines and Indonesia have done this so far. For Categories 3 and 4, the nominations from each of the countries are being submitted this month and next [February-March 2014] so that by May 2014, each country will have Category 3 and/or 4 sites in the System. These will be launched at the World Coral Reef Conference in Manado, Indonesia, in May.

MPA News: Under the CTMPAS Framework and Action Plan, what factors go into determining whether a site is “effectively managed” (Category 2)?

White: In brief, Category 2 defers to the national systems in place that are the equivalent of the MPA Management Effectiveness and Assessment Tool, or MEAT, adopted in the Philippines (<http://bit.ly/MPAMEAT>). The MEAT goes beyond just meeting the objectives of a given MPA. It focuses on good governance and has four levels of attainment. Those levels, in turn, are communicated through about 40 questions that are specific to MPA planning, governance, design, and ultimate sustainability. Each country is developing a similar system.

MPA News: In the CTMPAS, Category 1 and 2 sites are decided by in-country entities, while Category 3 and 4 sites are decided by a regional committee. What is the reasoning behind breaking it up this way?

White: The reason Categories 1 and 2 are national-level decisions is so the diversity among the countries can more easily be accommodated. Each country will develop its own system, based on the basic criteria set out in the CTMPAS Framework. This allows the CTMPAS to work through national and local governments and not be a top-down system, which in the end would be almost impossible to implement and police.

In contrast, for Categories 3 and 4, a regional review process will be followed since these levels focus on sites of truly regional value, either existing or potential. 

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The CTMPAS Framework and Action Plan, including detailed descriptions of the four categories, is at www.coraltriangleinitiative.org/library/action-plan-coral-triangle-marine-protected-area-system-ctmpas-framework-and-action-plan

The Coral Triangle MPA Database (part of the Coral Triangle Atlas) is at <http://ctatlas.reefbase.org/mpadatabase.aspx>

To comment on this article:

<http://openchannels.org/node/5780>

Perspective: Designating Marine Conservation Zones in England – a phased approach

By Sue Wells, Natural England

[Note: For a version of this essay that contains full references to the publications cited here, go to <http://mpanews.org/Wells.htm>]

As described in MPA News November-December 2013, 27 new MPAs were designated in England in November 2013. Called Marine Conservation Zones (MCZs), these are a new type of MPA for the UK, designed to complement the existing MPA designations and to contribute to the developing UK MPA network. As described by Jen Ashworth in MPA News January-February 2011, recommendations for MCZs were developed by four regional stakeholder projects working concurrently so that the planning for this new network involved an “all-at-once” approach.

The four projects recommended that, in order to meet ecological coherence as described in the Ecological Network Guidance (ENG) Bodies (Natural England and JNCC, 2010), it was necessary to protect 173 sites in 127 locations, including 65 reference areas (in some cases proposals for reference areas are within the less highly protected MCZs) (Defra, 2012).^{*} The reference areas were planned to be highly protected, where no extractive, depositional, or damaging activities would be allowed.

Although the concurrent planning process had a number of advantages, as described in MPA News January-February 2011, such an approach was not feasible when it came to designation. The need to respond to the public consultation, incorporate new evidence, prepare documentation and legal materials, refine boundaries and develop management mechanisms made it impossible to designate over 100 sites at once. The risks associated with going ahead with designations too quickly have recently been illustrated in Australia, where work to implement the 33 sites designated in 2012 has had to slow down (see MPA News November-December 2013).

The Government thus adopted a phased approach (Defra, 2011) and in 2013 selected 31 MCZs that it considered suitable for designation to go forward for public consultation. The choice of sites reflected confidence in the scientific evidence for the presence and extent of the features to be protected, and the balance between a site’s conservation advantages and its socio-economic costs (Defra, 2012). There was also opportunity for feedback on all the other recommendations apart from the reference areas. Two further phases were confirmed in November 2013 that will address the remaining recommendations and

any new evidence (Defra, 2013b). On 27 February 2014, Government published a list of the 37 sites that will go to public consultation in early 2015 (www.gov.uk/government/publications/marine-conservation-zones-february-2014-update).

One major concern for some stakeholders has been that reference areas have not gone forward. These have been controversial, and the regional projects had great difficulty getting stakeholder agreement on those that were recommended. Defra decided not to include them in the 2013 designations following advice from the SNCBs that these recommendations did not meet the requirements laid down in the ENG and that a further review of both the sites and the process used to identify them is needed (Defra, 2012).

Given the complexity of the process and the large amount of evidence that has been processed, the 27 new MCZs need to be recognized for what they are: an important step in the process to complete the UK’s MPA network, developed with a level of stakeholder involvement that had not been seen in the UK to date. The public consultation received over 40,000 responses, of which 97% were generated by the campaigns calling for the establishment of the full network, indicating the strong feelings in the country for better protection of the marine environment.

There are of course challenges for the next phases. The UK’s feature-based approach to MPA establishment (reflecting that used for Natura sites, an ecological network of protected areas in the EU) means that intensive effort goes into assessing evidence for individual species and habitats. Only those species and habitats listed on the MCZ designation orders are protected within the MPA, and Government needs a certain level of evidence for their occurrence and distribution within a site before designation. The original regional project recommendations were based on “best available” evidence, as required at the time; but following independent scientific reviews that recommended a better evidence base, Government funded a major program of survey work (£8 million so far and a further £2 million in 2014) to support decisions on the designation of MCZs.

In the UK, the management of each marine protected area depends on the habitats and species being protected, their sensitivity, and the pressures and activities that impact on them. Management may change over time if new threats arise. This makes it difficult for stakeholders to engage meaningfully as they cannot predict the impact of

Editor’s note:

Sue Wells is Senior Advisor (Marine) at Natural England, the UK Government’s advisory body on England’s natural environment.

^{*} In the case of the 2010 guidance (which recommended 173 sites in 127 locations), that would have been 108 MCZs, 46 reference areas within MCZs, and 19 stand-alone reference areas.

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a designation on their activities. It also results in uncertainty around the Impact Assessment which accompanies each recommendation and which weighs up the costs of implementation against the benefits. However, an understanding of how MCZs will be managed will be generated through the 27 new sites, which will greatly assist the designation process for the next two phases.

New MCZs will thus benefit from the lessons learned in the first phase, and this adaptive process will lead to further development and stream-lining, thus contributing to global understanding of effective approaches and mechanisms for MPA establishment and implementation. 

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Notes & News

Report: Measuring the impact of climate change on MPAs

A new IUCN report offers guidance on measuring the impact of climate change on the biodiversity of MPAs in the Mediterranean region. The 56-page report *Mediterranean Marine Protected Areas and Climate Change: A Guide to Regional Monitoring and Adaptation Opportunities* is available at <https://portals.iucn.org/library/efiles/edocs/2013-019.pdf>

Report gives overview of European MPA coverage

A new briefing from the European Environment Agency on the condition of Europe's 12 regional seas includes an overview of each sea's MPA coverage, including area covered, percentage covered, and number of MPAs. It marks the first time such an overview has been published. Of the seas under EU jurisdiction, 5.9% is protected within an MPA. The 32-page briefing *Marine Messages* is available at www.eea.europa.eu/publications/marine-messages.

Great Barrier Reef Marine Park approves dredging plan

The Great Barrier Reef Marine Park Authority (GBRMPA) has approved a proposal to dump three million cubic meters of dredge spoils inside the marine park area. The dredge spoils, to be produced during the substantial expansion of a coal export terminal at Abbot Point (adjacent to the park), could smother nearby coral and seagrass habitats, according to more than 200 scientists who urged GBRMPA in a letter to oppose the proposal (www.abc.net.au/news/2014-01-29/scientists-lobby-to-halt-expansion-of-queensland-port/5225068).

Defending its decision, GBRMPA said there are no coral reefs or seagrass beds within the boundaries of the approved disposal area. The Authority also said it would continue to investigate alternative disposal sites, and would support sites found to be equal to or better in terms of environmental or heritage outcomes.

The GBRMPA decision is available at <http://bit.ly/abbotpointdecision>

Report identifies gaps in marine World Heritage

Ecosystems in temperate and polar regions are under-represented among marine World Heritage, which has focused primarily on tropical ecosystems, according to a recent report on marine gaps in World Heritage sites. The report also points out that the 46 marine sites currently on the UNESCO World Heritage List represent just 5% of the listed sites, despite oceans comprising over 70% of the Earth's surface. To provide guidance for identifying more marine sites that possess "outstanding universal value" (as required to qualify as World Heritage), the report proposes 16 broad themes of marine and ocean features — ocean currents, seamounts, ice, and more — to which natural World Heritage criteria might be applied. The report *Marine Natural Heritage and the World Heritage List* is available at <https://portals.iucn.org/library/efiles/documents/2013-033.pdf>.

New books on MPA governance

• **Governing MPAs: resilience through diversity**, by Peter Jones (Earthscan, 2014)
www.routledge.com/books/details/9781844076635/

This new book explores questions relating to the effective and equitable governance of MPAs and options for addressing them. A key theme is that MPA governance needs to combine different approaches. Building on ideas concerning the governance of common-pool resources, author Peter Jones of University College London puts forward a more holistic and less prescriptive approach to the governance of MPAs. This trans-disciplinary analysis is aimed at supporting the development of MPA governance approaches that build social-ecological resilience through both institutional and biological diversity.

• **Contested Forms of Governance in Marine Protected Areas: A study of co-management and adaptive co-management**, by Natalie Bown, Tim Gray, and Selina Stead (Earthscan, 2013)
www.routledge.com/books/details/9780415500647/

This book, published in the latter half of 2013, uses the case of a particular MPA — Cayos Cochinos Marine Protected Area off Honduras — to compare two forms of governance: co-management and adaptive co-management. At this MPA, a co-management framework was introduced in 2004 to involve local stakeholders in the MPA's decision-making process. Four years later, to address perceived shortcomings of that governance scheme, an adaptive element was added. The authors examine the ecological and socio-economic outcomes of these governance changes and the degree to which management adhered to the principles of each governance strategy. An essay on the book by its co-author Tim Gray of Newcastle University (UK) is at <http://mpanews.org/Gray.htm> 

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