

MPAs as “eco-cultural systems”: Indigenous people and the intersection of culture and conservation

The relationship between indigenous people* and MPAs can be one of shared advantages and cultural transfer. Many indigenous cultures have a history of managing natural resources sustainably. If MPA practitioners can harness that cultural knowledge — and cultural support — while accepting native people as partners, all may benefit.

In 2010, MPA News reported on co-management efforts involving indigenous people. In that issue, Miwa Tamanaha of KAHEA — an alliance of Native Hawaiian cultural practitioners and environmental advocates — described this relationship:

“Indigenous people...should not be treated simply as advisors to a process that is imposed upon them. Marine areas, however remote, are part of an eco-cultural system in which people, place, and culture are inextricably intertwined. MPAs must responsibly become part of that eco-cultural system, and when done right, will be appropriate to their place.” (MPA News 12:2)

But what does an “eco-cultural system” look like in practice? Can co-management of such systems be designed to ensure sustainability, both of the ecosystem and indigenous culture? And what role should non-indigenous culture play in it?

Right now there are several MPA planning efforts in progress — in the US, New Zealand, Chile, Canada, and elsewhere — where those questions are under discussion. Perhaps more than at any time in the MPA field, native peoples are central players in the planning of several high-profile MPAs. And a consistent theme in these efforts is the call by indigenous populations for a greater say in decision-making.

*** Note:** An indigenous population is an ethnic group whose ancestors inhabited a place prior to the arrival of another, eventually dominant culture. By definition, indigenous peoples are distinct from the prevailing culture that surrounds them. In this article, MPA News uses “native people” and “indigenous people” interchangeably.

Papahānaumokuākea: Expanding an MPA that has fostered the re-emergence of cultural traditions

With a name that commemorates the union of two Native Hawaiian ancestors, the 362,000-km² Papahānaumokuākea Marine National Monument encircles the Northwestern Hawaiian Islands (NWHI). The remote, nearly uninhabited archipelago and its waters are considered sacred to the indigenous population of the main Hawaiian Islands to the east: Native Hawaiians view the region’s islands, ocean, and wildlife as their spiritual kinfolk.

Although Native Hawaiians historically did not live or fish significantly in the NWHI, the waters are a link to a once-thriving, centuries-long culture of open-ocean voyaging and wayfinding that they conducted, similar to other Polynesian cultures. They consider the NWHI waters and wildlife vital to the survival of these traditional practices, which rely on natural phenomena — from winds and waves to the presence of marine life and birds — to signal key moments and locations.

The seaward boundaries of the Papahānaumokuākea Marine National Monument (PMNM), in which all commercial fishing and mining are banned, extend 50 nm from shore. When former US President George W. Bush designated PMNM in 2006, the only other very large MPA in the world was the Great Barrier Reef Marine Park, whose boundaries extend between 40 nm and 135 nm from shore. A seaward limit of 50 nm for PMNM seemed a reasonable compromise at the time.

Now 10 years later, a campaign championed by several Native Hawaiian leaders is calling for expanding the boundaries out to the full 200-nm limit of the EEZ. Like the current MPA, the expanded area would be off-limits to commercial extraction. In the name of improving protection of the region’s marine ecology — including 110 seamounts in the proposed expansion area — and management of the cultural seascape, the expansion would increase PMNM’s size to a giant 1.6 million km² in area. Incidentally this could make it the larg-
continued on next page

Table of Contents

MPAs as “eco-cultural systems”: Indigenous people and the intersection of culture and conservation.....	1
More examples of the eco-cultural discussion	3
The other roles of MPAs, part 4: How MPAs can help address underwater noise.....	3
Following the Brexit vote, what is the future for the UK’s MPAs?.....	4
Race against time?: Before the seabed mining rush, scientists try to determine which sites need protection	5
Notes & news	7
From the MPA News vault.....	8
MPA Science Corner ...	8



est MPA in the world. (A report presenting the full cultural and ecological case for expansion is at <https://oct.to/ZZE>.)

The campaign, called Expand Papahānaumokuākea (www.expandpmnm.com), launched in early 2016 and has already gained political traction, including seemingly with US President Barack Obama. Officials from his administration held a listening session on the idea with some stakeholders earlier this year. Obama could designate the expansion — via executive powers he wields under the US Antiquities Act — before he leaves office in January 2017. The campaign received backing from 1500 scientists at the International Coral Reef Symposium (held in Hawai‘i in June), who co-signed a letter in support to the President.

There has been opposition as well, namely from Hawai‘i’s tuna longline fishery, the largest fishery in the state. Although the fishery does most of its fishing outside the NWHI’s 200-nm limit, it sometimes works inside the proposed expansion area, too. (The fishery has been managed sustainably in terms of tuna, but proponents of PMNM expansion point to bycatch: the fishery catches thousands of sharks each year, among other non-target species.) Backing the longliners are the regional fisheries management council and various restaurants on the main Hawaiian Islands. Even some Native Hawaiian leaders have suggested that permanent fishing closures are not wholly consistent with traditional Hawaiian resource management, which favored temporary closures (called *kapu*) instead.

One of the champions of the Expand Papahānaumokuākea campaign is Kamana‘opono Crabbe, CEO of the Office of Hawaiian Affairs

(www.oha.org), a semi-autonomous department of the state of Hawai‘i. “We as Native Hawaiians have matured as a people and culture,” says Crabbe. He notes the recent re-emergence of voyaging and wayfinding in Native Hawaiian and Polynesian society — including canoe trips to PMNM and the current worldwide Hōkūle‘a voyage to spread awareness of ocean protection (www.hokulea.com) — as well as a joint research trip to PMNM involving federal and Native Hawaiian researchers. “We have become whole in recognizing our role as stewards of land and sea, and have recognized the ecosystem value of expanding the boundaries.”

The Expand PMNM campaign leaders would also like Native Hawaiians to have more of a say in the policy of the protected area. Their proposal calls for the Office of Hawaiian Affairs to be elevated from co-manager of the monument (from which they help oversee day-to-day management of the MPA with six other co-managers) to the level of co-trustee, from which they would wield more influence over MPA policy. The monument’s current management system has just three co-trustees — the US Secretary of Commerce (through NOAA), US Secretary of the Interior (through US Fish & Wildlife Service), and the State of Hawai‘i (through the Department of Land and Natural Resources): <https://oct.to/ZZR>.

Crabbe says an example of such high-level policy-making could include how to address the zoning of wilderness areas in PMNM, a topic that has arisen at another US MPA in the Pacific region (the Pacific Remote Islands Marine National Monument). Should the concept of wilderness mean an area that is free of the imprint of humans, or should it allow for a Native

New map shows overlap of indigenous peoples with marine ecosystems and MPAs in Central America

A new map by IUCN shows where indigenous peoples live in Central America and how their territory overlaps with ecosystems and protected areas. The map indicates that the bulk of still-productive marine habitats remaining in the region — coral reefs, mangrove forests, seagrass beds — are found within or bordering the areas occupied and used by indigenous peoples.

IUCN says credit for this goes to the traditional management and use of those areas’ natural resources, as well as conventional conservation efforts by national governments. “The map provides clear evidence that the most effective way to protect the region’s ecosystems and their biodiversity is by providing support to those peoples who have traditionally been their stewards,” states IUCN.

In total, native populations use and occupy over 80,000 km² of marine area in Central America, most of which is not officially designated as protected area. Of the MPAs that do exist in the region, examples of co-management by indigenous peoples include Cayos Miskitos in the Autonomous Region of the North Caribbean Coast of Nicaragua; Q’eqchi territory in Izabal, Guatemala; and Rio Platano Reserve in the Muskitia of Honduras.

The map *Indigenous Peoples, Protected Areas, and Natural Ecosystems of Central America*, which also shows indigenous peoples’ overlap with terrestrial ecosystems, is available at <https://oct.to/ZZy>.

presence? Crabbe says the Office of Hawaiian Affairs, with strong connections to the Native Hawaiian community, could help inform such a discussion.

The current management plan for PMNM was approved in 2008 and was intended to last 15 years (www.papahānaumokuākea.gov/management/mp.html). An expansion of the MPA would likely require the plan to be rewritten, allowing Native Hawaiians and others to re-envision, and shape, what the MPA could be for them for the next 15 years. “We are opening a door,” says Crabbe about what the MPA has meant to Native Hawaiians. “The past 10 years have been like a child who hasn’t seen his grandparents for a very long time being able to see them again. It’s been emotional and spiritual. We’ve also learned invaluable lessons on how to be better managers.”

Kermadec/Rangitāhua Ocean Sanctuary: Requesting more power for indigenous voices

In September 2015 at the United Nations, the New Zealand Government announced its plan to designate the Kermadec Ocean Sanctuary, a 620,000-km² no-take area around its Kermadec Islands archipelago, located to the northeast of New Zealand’s two main islands. The MPA would include a chain of underwater volcanoes and the world’s second deepest ocean trench, and would be 35 times larger than the country’s existing 44 marine reserves combined. The Government introduced legislation to the NZ Parliament to enact the new sanctuary (<https://oct.to/ZZD>).

The plan immediately encountered questions or outright opposition from indigenous Māori leaders, who had not been consulted on it. The Māori people hold fishing rights in the Kermadecs region under a treaty with the government. Although Māori have not fished there for several years, they did not want the government simply to take their rights from them, particularly with little to no consultation. (An explanation of Māori fishing rights in the Kermadecs is at <https://oct.to/ZZz>.)

Te Ohu Kaimoana — the Māori Fisheries Trust, which represents all Māori tribes (or *iwi*) on fisheries matters — filed suit in March 2016 to block the designation, calling it an illegal confiscation of Māori rights. The case is currently before the High Court of New Zealand.


Rick Witana is chairman of the Te Aupōuri iwi from the far north region of New Zealand. The cultural importance of the Kermadecs — or Rangitāhua in Māori language — stems in part from the fact that

Te Aupōuri iwi descend from crew on canoes who voyaged to and through the islands over centuries. Witana has expressed support for the sanctuary bill’s conservation goals but has questions about the proposed MPA’s management.

“The iwi of Te Aupōuri, like other iwi in Aotearoa [New Zealand], are conservationists,” says Witana. “We live the values of *kaitiakitanga*, which is a Māori term that equates with environmental sustainability. We support protection of the environment where needed, and which is reflected in our traditional management terms of *rahui* (temporary closures) and *mataitai* (fishing reserves).”

Witana believes the fisheries in the Kermadecs region are being sustainably managed and protected under New Zealand law — including via existing no-take areas out to 12 nm from the shore of the Kermadec islands. (The proposed Kermadec/Rangitāhua Ocean Sanctuary would effectively expand the no-take area from 12 nm to 200 nm.) He says Māori fishing rights in the region are perpetual and can co-exist with biodiversity protection measures as proposed through the Kermadec Ocean Sanctuary Bill. “We do not believe it has to be one thing or the other,” he says. “Continuing Māori fishing [in the sanctuary] will not detract from the measures proposed to protect the biodiversity. We are open to discussing options around fishing that do not legislate away Māori rights.”

The Te Aupōuri iwi have also called for equal representation for Māori on the sanctuary management board. Under the government’s original Kermadec Ocean Sanctuary Bill, the minister of conservation and minister of Māori affairs would have the power to appoint a majority of the board: five members appointed by the ministers, and two appointed by iwi. In contrast, Te Aupōuri would prefer three and three, with the board seeking to make all decisions by consensus. (Incidentally, equal board representation would be similar to that of the management board for Canada’s Gwaii Haanas National Park Reserve and Haida Heritage Site, which has an equal number of representatives from Canadian Government and the indigenous Haida Nation — MPA News 12:2.)

Lastly, says Witana, the board should be chaired by one of the representatives appointed by iwi. “This would reflect the importance of the area — geographically, culturally, spiritually and historically — to Māori,” he says. 

For more information:

Keola Lindsey
(Papahānaumokuākea program manager), Office of Hawaiian Affairs, Hawai‘i, US. Email: keolal@oha.org

Rick Witana, Te Aupōuri, New Zealand. Email: rgwitana@xtra.co.nz


To comment on this article:
<http://openchannels.org/node/14095>

For more examples of eco-cultural discussions, see next page

More examples of eco-cultural discussions

Chile: In 2015 the Chilean Government announced its intent to designate a 631,000-km² MPA around Easter Island, and has been consulting with the island's indigenous Rapa Nui people on zoning. Under a plan proposed by the Rapa Nui, the MPA would allow fishing by locals to continue within 50 nm of the shoreline; for non-locals, all fishing would be banned from the shoreline out to the 200-nm limit. The MPA co-planning is in contrast to the island's terrestrial national park, which Chile designated in 1935 with no Rapa Nui consultation.

Chagos Archipelago: In 2010 the UK designated the waters around the Indian Ocean archipelago of Chagos as an MPA, with most of it as a no-take zone (MPA News 11:6). The designation was opposed by many Chagossian islanders, whom the UK forcibly removed from the archipelago in the late 1960s in favor of building a US military base there. Displaced Chagossians have sued the UK government for the right to return to the islands, and would like to determine their own management of marine resources.

Canadian Arctic: The petroleum company Shell Canada made news in June 2016 when it relinquished its claim to 8000 km² of oil exploration leases in Lancaster Sound on the Arctic coast of Canada. The move renewed discussion of what the boundaries of a proposed National Marine Conservation Area (NMCA) for the region should look like. Parks Canada (the national parks agency) has stated for years that the long-planned protected area would need to exclude the oil claim area, as NMCAs by law do not allow any petroleum exploration or exploitation. Leaders of the indigenous Inuit people have argued for the need to protect those waters, which provide critical habitat for narwhals, beluga whales, and other marine mammals (<https://oct.to/ZZK> and <https://oct.to/ZZr>). 

The other roles of MPAs, part 4: How MPAs can help address underwater noise

To comment on this article:
<https://openchannels.org/node/14096>


The political spotlight that often shines on MPAs has fostered a view among some that MPAs pertain only to addressing the effects of fishing, as that is the role that attracts the most media attention. But that view sells MPAs short. In truth, MPAs can play valuable roles in addressing a variety of non-fishing-related threats facing the oceans.

This year MPA News is helping to shed more light on these roles. So far we've shown how MPAs can help address climate change (MPA News 17:2), marine litter (MPA News 17:3), and land-based runoff and water quality (MPA News 7:4). In this issue, we spotlight our past coverage of how MPA practitioners have worked to address the impact of underwater noise on protected ecosystems, including from ships and oil/gas exploration:

"Seismic Surveys and MPAs: How Should Managers Address the Issue of Underwater Noise?", MPA News 11:3
<http://mpanews.org/MPA111.htm#seismic>

"Letters to the Editor: Seismic Surveys and MPAs", MPA News 11:4
<http://mpanews.org/MPA112.htm#letters>

"In Colombian MPA, Management Files Suit to Stop Oil Exploration Inside Boundary", MPA News 12:5
<http://mpanews.org/MPA119.htm#Seaflower>

"News & Notes: No Oil Exploration in Seaflower", MPA News 13:3
<http://mpanews.org/MPA123.htm#notes> 

Following the Brexit vote, what is the future for the UK's MPAs?

The decision by UK voters in July to withdraw from the European Union is likely to have significant impacts on the UK economy and policy in general. The Brexit vote — for British exit — could impact the nation's MPA policy as well.

Under the EU's Habitats and Birds Directives, the UK has been obligated to designate Special Areas of Conservation (SACs) for flora and fauna, and Special Protection Areas (SPAs) for birds. As a result, the UK has designated over 200 SACs and SPAs combined, with more still in the planning stage. But due to Brexit, the future of all of these sites — protected in UK waters under EU law — is now in limbo.

The UK's departure from the EU will involve several months of negotiations, and there is even some chance Brexit could be reversed by UK officials. But assuming Brexit continues forward, can we anticipate what it will entail for the UK's European MPAs — or, for that matter, the UK's national MPAs? MPA News asked two experts:

- **Samantha King** of Natural England, the statutory body that advises the British Government on marine conservation and seascape issues in England's territorial waters; and
- **Jean-Luc Solandt**, Principal Scientist, MPAs, for Marine Conservation Society UK, an independent NGO.

Samantha King

“At the moment it is very much ‘business as usual’ for MPA designations and management:


- We are still a member of the EU, and we will continue to engage with EU business as normal and be engaged in EU decision-making in the usual way.
- Once Article 50 is invoked [the provision of the EU Treaty that triggers a country to leave the union], we will remain bound by EU law until the withdrawal agreement comes into force. The period between invocation of Article 50 and our eventual exit from the EU is two years unless the other Member States agree to extend it.”

Jean-Luc Solandt

“The current message from the UK's Department for Environment, Food & Rural Affairs (Defra) is that the program of work in introducing new sites — including extensive new SACs for harbour porpoise and SPAs for birds — will go on, as will managing damaging activities in current sites. This is somewhat encouraging. Even if the UK were to invoke Article 50 of the EU Treaty, nothing would happen for two years.

“A huge number of issues have to be resolved as to *how* we leave, including negotiating a new trade agreement with the EU. So I don't foresee our country signing Article 50 anytime soon.

“We do unfortunately have the situation in the medium term of telling all our fishermen that EU law, quota on stocks, and EU MPA management measures still remain. We understand that some individuals are believing the referendum result to be an immediate license to fish where and how they like. This is not so, and some regulators are having a difficult time of it.

“In terms of UK law, the major marine policy driver in recent years has been to complete a network of MPAs — a so-called ‘blue belt’ — by 2020. That includes both designation of new marine conservation zones under UK law and management of all existing sites. In so doing, governments of our four devolved countries (England, Northern Ireland, Scotland, and Wales) and their statutory nature conservation advisors have all included the habitats and species within SACs and SPAs as major contributors to the entire UK MPA network. Indeed, most of the significant estuaries and reefs of inshore English and Welsh waters are included in these European marine sites. So should SACs and SPAs be de-designated as part of Brexit, we'd have to replace them with relevant sites, thus wasting time and effort.” 

For more information:

Samantha King, Natural England, UK. Email: Samantha.King@naturalengland.org.uk

Jean-Luc Solandt, Marine Conservation Society, UK. Email: Jean-Luc.Solandt@mcsuk.org

To comment on this article:
<https://openchannels.org/node/14097>

Race against time?: Before the seabed mining rush, scientists try to determine which sites need protection

Deep sea mining of minerals is coming. The International Seabed Authority, which governs such mining in areas beyond national jurisdiction, has granted 23 contracts so far for exploration of potential mining sites. Of those contracts, most of them (13) are in just one region: the Clarion-Clipperton Fracture Zone (CCZ), a 6 million-km² area swath of the eastern Pacific Ocean.

The CCZ, relatively rich in the polymetallic nodules that seabed mining targets, has been in the sights of nations and mining companies for years. Although market prices for seabed minerals are currently too low for exploitation to be cost-effective, that will likely change in time. By then, thanks to exploration, countries and companies will know where the best seabed mining sites are.

Anticipating the eventual mineral rush, the ISA in 2012 adopted a precautionary approach. It enacted a network of “Areas of Particular Environmental Interest” in the CCZ where even exploration would be off-limits for five years to allow scientists to study the sites. Believed to contain higher-than-average benthic biodiversity (based on preliminary models), these provisional sites cover 1.44 million km² in total — one of the largest MPA networks in the world. By safeguarding the areas before exploration began, the ISA could decide whether to protect them permanently or not.


It will be five years in July 2017. Scientific understanding of the APEI ecosystems — thousands of meters below the surface, in the middle of the ocean — remains very limited. What is the future of the APEIs — or, for that matter, of other sensitive sites in the deep ocean?

Adrian Glover of the Natural History Museum in London led a workshop this past May on the regional biodiversity, connectivity, and biogeography of the CCZ. Thirty-two scientists from around the world gathered to discuss the state of knowledge. MPA News spoke with Glover.

- **MPA News:** Drawing from your workshop, do you believe the APEIs represent the areas of the CCZ that are in greatest need of protection from mining?
- **Adrian Glover:** There are, as yet, no published studies that compare connectivity across the APEIs and contracted regions. Until we have at least some data, we cannot say from a biogeography or connectivity basis if the APEIs are representative, or could act as buffers or refugia from impacted regions.

The APEIs were created using a precautionary approach based on modeled data. At the time, a temporary regional management plan was a perfectly reasonable approach from the ISA. The problem has been that no organization has been willing to find the funding for detailed study of the APEIs or the assumptions on which they were based. Currently we are mostly reliant on individual studies by contractors [mining firms] that are focused only on the contracted regions, following ISA guidelines. There have been just two research cruises to APEIs that are only now delivering some data on connectivity.

- **MPA News:** The general lack of baseline data for CCZ biodiversity makes effective environmental management of the region a significant challenge. Considering the fact the ISA is already awarding contracts for mineral exploration, is it a race against time for scientists?
- **Glover:** Whilst it is true that contracts for mineral exploration have been awarded, there have been no contracts awarded for mineral exploitation. In addition, the mineral exploration contracts require contractors to undertake baseline scientific survey. So it could be argued that the ISA and the regulatory regime it has created have effectively put the brakes on resource extraction whilst science is being undertaken. This is in stark contrast to what has happened with regard to high-seas fisheries, for example.

However, the problem has been that the number of useful data publications with quality biological information from the CCZ is woefully poor, despite many research cruises taking place. This is simply because the funding has been made available for the research cruises, but not for the post-cruise specimen identification, analysis, and data archiving, particularly using the latest molecular methods. This in my view is the greatest issue that is preventing sustainable environmental management of the CCZ. 

For more information:

Adrian Glover, Natural History Museum, London, UK.
Email: a.glover@nhm.ac.uk

International Seabed Authority:
www.isa.org.jm

Deep Sea Conservation Coalition:
www.savethehighseas.org

Deep-Ocean Stewardship Initiative:
www.dosi-project.org

To comment on this article:
<https://openchannels.org/node/14098>

Notes & news

We are live-blogging the International Marine Conservation Congress

MPA News' affiliated website OpenChannels.org will be at the Fourth International Marine Conservation Congress in St. John's, Newfoundland, Canada and will be live-blogging the event. The conference lasts from 30 July to 3 August. You can stay abreast of the conference's main outcomes, news, photos, and more at www.openchannels.org/chat/imcc4.

To protect local fisheries, Cambodia designates first MPA

In June, Cambodia designated a 405-km² MPA — the country's first purely marine protected area — to protect local fisheries around the Koh Rong Archipelago. The Koh Rong Marine Fisheries Management Area will be multiple-use with some zones dedicated to local fishing, recreation, and other activities, and other zones no-take.

The designation marked the culmination of five years of planning by local communities, NGOs, and Cambodia's Fisheries Administration. Kate West, coastal and marine project manager at Fauna & Flora International, said, "Given that around 60-80% of people in communities around the archipelago are engaged in fishing or related activities such as tourism, this government commitment is a critical milestone that will help ensure that the waters around Koh Rong can continue to support not only marine life but also local livelihoods long into the future."

The site contains coral reef, mangrove, and seagrass habitats, and represents 0.7% of Cambodia's marine waters.

For more information:

Kate West, Fauna & Flora International, Cambodia. Email: kate.west@fauna-flora.org

The Nature Conservancy is working with six small island states on marine-related debt swaps

A project in Seychelles to restructure some of its international debt in return for improved marine planning, including a goal to designate up to 30% of its waters as MPAs (MPA News 17:2), is now being replicated in other small island developing states (SIDS). The Nature Conservancy, which brokered the debt conversion for Seychelles, is actively working on six similar debt conversion projects with SIDS in the Caribbean and Pacific. Interviewed in the July-

August 2016 issue of MEAM (<https://oct.to/ZZH>), the NGO's director of conservation finance Robert Weary said, "We expect to close three of these debt conversions during 2017. Similar to the Seychelles, we will complete marine spatial plans with all six countries as part of the projects."

World Heritage Committee inscribes two marine sites

In July 2016, the UNESCO World Heritage Committee inscribed two more marine sites to its World Heritage List:

- Archipiélago de Revillagigedo, Mexico: Comprising four remote islands and their surrounding waters, this site is part of a submerged mountain range and provides critical habitat for sharks, whales, dolphins, and other pelagics.
- Sanganeb Marine National Park and Dungonab Bay - Mukkawar Island Marine National Park, Sudan: Providing a diverse system of coral reefs, mangroves, seagrass beds, beaches, and islets, this site has a globally significant population of dugongs, as well as large populations of seabirds, turtles, and marine mammals.

With these new inscriptions, there are now 49 marine World Heritage sites. The World Heritage Marine Programme is at <http://whc.unesco.org/en/marine-programme>.

US committee endorses principles for Arctic MPAs

The US Marine Protected Areas Federal Advisory Committee, which advises the federal government on ways to strengthen the nation's system of MPAs, has endorsed a set of guiding principles for the designation of Arctic protected areas. Among other measures, the principles call for meaningful participation of local and indigenous communities in decisions; consideration of climate change impacts already observed in the region; consideration of cultural, economic, and biological diversity in the US Arctic; and application of the best available science, technology, and indigenous knowledge in the design and management of MPAs. The principles are at <https://oct.to/ZZV>.

Webinar on UN treaty negotiations for protecting high seas biodiversity

A recording is available of a 26 July webinar on negotiations toward a new United Nations treaty to

MPA News

EDITOR-IN-CHIEF:

John B. Davis

OPENCHANNELS

MANAGER:

Nick Wehner

EDITORIAL BOARD:

Chair - David Fuharty
University of Washington

Patrick Christie

University of Washington

Michael Murray

Channel Islands National
Marine Sanctuary

CORRESPONDENCE:

MPA News

School of Marine &

Environmental Affairs

University of Washington

3707 Brooklyn Ave. NE

Seattle, WA 98105, USA.

mpanews@u.washington.edu

Tel: +1 425 788 8185

MPA News is published bimonthly by Marine Affairs Research and Education (MARE), a 501(c)(3) not-for-profit corporation, in association with the School of Marine & Environmental Affairs, University of Washington.

Financial support for MPA News comes from the David and Lucile Packard Foundation and the Gordon and Betty Moore Foundation.

All content has been written by the MPA News editorial staff unless otherwise attributed. The views expressed herein are those of the author(s) and should not be interpreted as representing the opinions or policies of the Packard Foundation, Moore Foundation, or other funders of MPA News.

Note on website links:

MPA News shortens long URLs using our <https://oct.to> shortener. This makes it easier for our paper-version readers to type the URLs, and easier for our PDF readers to click on them.

Subscriptions to MPA News are free.

To subscribe, go to <https://www.openchannels.org/subscribe-mpanews>

You can choose email or paper delivery. Thanks!

protect the biodiversity of the high seas, including through the use of MPAs. The webinar was co-hosted by the MPA Action Agenda, MPA News, and the EBM Tools Network. The recording is at www.openchannels.org/node/14066.

Blog on value of vast, remote MPAs versus smaller ones

The World Conservation Congress is approaching (1-10 September). With it will come the latest assessment of global progress toward Aichi Target 11, by which the UN Convention on Biological Diversity calls for 10% of marine areas worldwide to be conserved by 2020. In this context, the debate on the relative value of very large MPAs (hundreds of thousands of square kilometers in area) versus smaller, local MPAs is sure to be renewed. Peter Jones of University College London has authored a blog post asking whether the designation of vast, remote MPAs is leading the MPA field down the wrong track. It is at <https://www.openchannels.org/node/13806>.

To comment on these notes & news items: <https://openchannels.org/node/14099>

From the MPA News vault Features and news items from yesteryear

Five years ago: July-August 2011 (MPA News 13:1)

- Marine Mammal Protected Areas: What Makes Them Special, and How Their Management Can Be Advanced
- UN Working Group Recommends Path toward Multilateral Agreement on High Seas Conservation, Including MPAs

Ten years ago: July 2006 (MPA News 8:1)


- US Designates “World’s Largest” MPA in Northwestern Hawaiian Islands
- MPAs in Indonesia: What Progress Has Been Made Since 1984?

Fifteen years ago: July 2001 (MPA News 3:1)

- How Climate Change Could Affect MPAs: What Practitioners Need to Know
- Plan for MPA System in Victoria (Australia) Faces Impasse on Issue of Fisher Compensation

For these and all other issues of MPA News, go to www.mpanews.org/issues.html

Study: Why some coral reefs are healthier than others

A recent global study of coral reefs in *Nature* journal examines ‘outliers’ — places where ecosystems are substantially better (‘bright spots’) or worse (‘dark spots’) than expected, given the environmental conditions and socioeconomic drivers to which they are exposed. Examining reef fish biomass at more than 2500 reefs worldwide, the study identified 15 bright spots and 35 dark spots. The bright spots were characterized by strong sociocultural institutions such as customary taboos and marine tenure, high levels of local engagement in management, high dependence on marine resources, and beneficial environmental conditions such as deep-water refuges. Dark spots were characterized by intensive capture and storage technology, and a recent history of environmental shocks. The abstract of the paper is available at <https://oct.to/ZZj>. 

MPA Science Corner

• **Article:** “Ordinary and Extraordinary Movement Behaviour of Small Resident Fish within a Mediterranean Marine Protected Area”, *PLOS ONE* 11, e0159813 (2016). <https://oct.to/ZZ9>

Finding: The daily movement behavior of the economically important white seabream in Mediterranean MPAs is more complex than previously thought, holding implications for conservation of the species and the management of benthic fishes in MPAs.

• **Article:** “A synthesis of genetic connectivity in deep-sea fauna and implications for marine reserve design”, *Molecular Ecology* 25, 3276 - 3298 (2016). <https://oct.to/ZZC>

Finding: In this study of dispersal distances across a range of deep-sea species, the distances varied widely, from a hundred meters for some species to almost 5000 km for others. The range is comparable to or only slightly larger than for shallow water ecosystems, suggesting MPA design principles that have been developed for shallow water may be transferable to the deep sea.