

Monthly news, analysis, and guidance on marine protected areas worldwide

## The Big Picture: The continuing debate over the value of large vs. small MPAs, and what it means for the field

An opinion piece published in the New York Times in March 2018 – [“Bigger Is Not Better for Ocean Conservation”](#) – raised anew the issue of whether MPA designations should focus on large offshore sites or smaller inshore ones. The author, Luiz Rocha of the California Academy of Sciences, called the trend of designating large offshore MPAs disturbing, and recommended such protection should not come before coastal waters are secured.

This criticism of large offshore MPAs is not the first published, nor likely the last. The main criticism of large offshore MPAs is usually that they protect areas where current use levels and threats to biodiversity are relatively low – in other words, areas that are not in immediate need of protection. At MPA News we have heard this argument many times in the past decade, particularly as very large MPAs have grown more common.

However, if the world is to reach [Aichi Target 11](#) under the UN Convention on Biological Diversity (that 10% of marine areas are effectively conserved by 2020) ... or [Target 5](#) under the UN Sustainable Development Goal 14 (also 10% by 2020) ... or, more ambitiously, the [call by IUCN members for 30%](#) of the ocean to be set aside in MPAs by 2030 – then large MPAs are a necessity.

According to the World Database on Protected Areas, [MPA coverage is now 7% of the global ocean](#), and nearly all of that is from large offshore MPAs. The 20 largest sites make up 70% of global MPA coverage. Although there are thousands of inshore MPAs worldwide, their median size is less than 3 square kilometers each. If the world were to withhold designations of large offshore MPAs until coastal waters were all protected, we might never get to 10%. (All of this, of course, raises the issue of numerical targets, which are driving much of the designation of large offshore MPAs. Such targets have strengths and weaknesses as MPA News has covered, [as far back as 2002](#).)

The opinion piece by Rocha drew support from several individuals in the MPA community, as can be seen in comments later in this article. But it also drew a range of public critiques:

[“Embracing Yes/Also: Marine Protected Areas Are Not An Either/Or Proposition”](#) by Rick MacPherson

[“To Save the World’s Coral Reefs, Bigger – and Smaller – Are Better”](#) by ‘Aulani Wilhelm

[“Palau’s Ocean Protections”](#) by Palau President Tommy Remengesau

[“Addressing Criticisms of Large-Scale Marine Protected Areas”](#) by Bethan C. O’Leary et al. (This article was authored prior to the Rocha piece but was published in *Bioscience* journal after it, and effectively serves as a rebuttal.)

Assuming that a size range of MPAs is necessary – large offshore ones to help meet the global targets, represent offshore ecosystems, and provide other potential services\*; and smaller inshore ones to protect areas that are under more immediate threat – the argument that one type is less worthy than the other may be counterproductive. A better question for the long term might be: How do we achieve both in ways that are successful ecologically, politically, and socioeconomically?

MPA News reporter Christy Reed asked several MPA experts – Rick MacPherson, Tundi Agardy, José Truda Palazzo, David Obura, Enric Sala, and Luiz Rocha – for their insights on the ongoing debate over MPA priorities. Their responses are below.

\* For example, large offshore MPAs have been proposed to serve as essential [climate change refugia](#) by encompassing the range shifts of marine species that have been thermally displaced.

### “Establish MPAs where there is need, opportunity, and willingness”

Rick MacPherson, [rickmacpherson@me.com](mailto:rickmacpherson@me.com)

*Editor’s note: Rick is a marine ecologist, conservationist, and science writer, and is principal and founder of [Pelagia Consulting](#). He has worked worldwide in field-based tropical marine science and coral reef conservation, MPA planning and management effectiveness, community-based conservation, and more.*

### On why the debate over large vs. small MPAs keeps happening

Look, we are working on trying to reverse ocean health trajectories that are declining in almost every way. People

continued on next page

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have invested their lives into their science or their conservation work and have strong attachments to the ecosystems. The stakes are very high, and the cost of losing is being measured in unimaginable losses to biodiversity, impacts to ocean function, and future livelihoods of people who are dependent on that healthy ocean. So I understand that arguments and passions will flare now and then.

### On what MPA planning efforts should ideally look like

There is a lot of ocean out there in need of protection. And that's going to mean a lot of people, communities, organizations, and governments working on all levels along a continuum of MPA size and scale, near-shore to remote, as well as a diversity of habitats. The process should be guided by urgency that factors threats, community interest, and willingness, as well as what the science tells us.

But another calculus might also factor in the presence of political will for protection, or the lack of conflicting interests on use. I recognize that may play into the (incorrect) trope used by some critics that big MPAs are "easy" to create because they are established in areas with little conflict over restricting use or areas of little urgency. This is a false dichotomy of choices. The reality is that we need to establish MPAs where there is need, opportunity, and willingness. The creation of new MPAs should be motivated out of a reaction to existing threats, but MPA planning must also consider an anticipatory approach. Otherwise we are only playing defense. Our lists of where these characteristics are met may not match, but that should not stop the process of moving forward where we can on seeking protection.

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## "I would be happy with a world in which no Aichi or other targets are met but 100% of the ocean is protected from direct and indirect degradation"

Tundi Agardy, [tundiagardy@earthlink.net](mailto:tundiagardy@earthlink.net)

*Editor's note: Tundi is a marine conservationist and founder of Sound Seas. She is also Contributing Editor to [Marine Ecosystems and Management](#) newsletter.*

### On the large vs. small debate

I have pretty strong feelings that we urgently need to invest time and money in using spatial protections where they are *most needed*. So I agree with the idea that forsaking complicated coastal areas suffering from an onslaught of pressures in order to quickly establish flashy, large MPAs (that are often too big to manage) is not strategic. It can lead to animosity that has huge opportunity costs. And there are issues, too, with efficacy: with limited conservation funds and energy, we should be targeting the areas that are the most

ecologically important to the wider set of ocean ecosystems. And these areas are predominantly coastal or estuarine.

I believe there could also be much broader support for MPAs in these coastal regions, especially if they are pitched as a means to protect current and future values that broad groups of stakeholders enjoy. I don't believe that large MPAs in remote areas, especially those quickly decreed by governments being pushed by donors, will ever garner the same broad support, since people do not see the connection between that kind of conservation and the quality of their own lives. In contrast, big MPAs like the Great Barrier Reef Marine Park, and small ones like Apo Island in the Philippines, have solid support because the benefits of protection are widely understood.

So to be really strategic, I would advocate identifying where the critical areas are, identifying which of those are under the most threat, determining the precise nature of those threats (because this will inform what kind of MPA can provide a solution), and *then* finding opportunities where MPAs can realistically be implemented in a successful manner. Maybe that will lead to large MPAs offshore or in remote archipelagos, or maybe that will lead to small coastal MPAs. I don't think it has to be an either/or. But I do think we need to be honest about what an MPA can and cannot achieve, and we absolutely cannot tolerate paper parks.

### On numerical targets for MPA coverage

Targets have become a necessary evil. Necessary because we do need ways to know how we are faring with our collective investments in protection, and we need ways to hold countries accountable to the commitments they make in the heat of the moment. But evil because we see time and time again that targets are misused, with claims being made of "protection" when none exists, and where the rush to make targets means that mechanisms for building trust with communities and users are pushed aside as being too time-intensive.

I would be happy with a world in which no Aichi or other targets are met but 100% of the ocean is protected from direct and indirect degradation, with the broad support of wide swaths of society.

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## "I used to be a skeptic of numerical targets"

José Truda Palazzo, [josepalazzo@gmail.com](mailto:josepalazzo@gmail.com)

*Editor's note: José is a marine conservation consultant, activist, and writer in Brazil.*

### On how the large vs. small question plays out in Brazil

Over time I have worked to identify, write proposals for, and undertake the political lobbying to get MPAs designated in Brazil. The earliest and smallest MPA (0.5 sq. miles) was Ilha

dos Lobos Wildlife Refuge, a rocky outcrop that harbors an important pinniped colony. Then the National Marine Park of Fernando de Noronha in 1988, in one of our oceanic archipelagos, with 109 km<sup>2</sup>; the Environmental Protection Areas of Anhatomirim/Bay of Dolphins in 1992 and Right Whale in 2000, both coastal areas off Santa Catarina State with 44 km<sup>2</sup> and 1549 km<sup>2</sup> respectively. Then, [last month](#), the two large oceanic archipelago and seamount mosaics of São Pedro & São Paulo and Trindade & Martin Vaz with over 900,000 km<sup>2</sup> combined, of which approximately 111,000 km<sup>2</sup> will be no-take zones.

In countries like Brazil you have two main hurdles to get MPAs established. One relates to the issue of inspiring people to do it. We face (as many other developing countries do) socio-economic and structural problems that make most of the population – and politicians – disregard biodiversity conservation as a priority, or its importance to sustain economic development and quality of life. The other is the fact that certain sectors, such as fisheries and mining (especially the oil industry), have a disproportionate influence within government bureaucracies and parliaments, doing what they can to impede any progress in marine conservation. As a result, it is difficult to get coastal MPAs established – with the exception of “extractive reserves”, which are multiple-use areas designed for sustainable artisanal fishing but rarely managed to achieve it.

### On numerical targets

I used to be a skeptic of numerical targets. But seeing how they influence the mindset of my own government bureaucrats towards the need to *do* something in a certain time frame, I revisited my skepticism and I have to admit that they do work.

And as someone who works also with the conservation of whales and sharks, I very much support the large oceanic MPAs. It is simply not true that they make coastal MPAs become neglected. We are now working towards bringing up several coastal MPAs for Brazil that are already in the government pipeline. Whether or not they are designated will have nothing to do with targets or the previous establishment of oceanic ones, but rather with our capacity to overcome the domestic political hurdles to their establishment, which is (and has always been) a step-by-step and case-by-case struggle.

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## “We need to move toward the perspective that the right modes of protection are needed”

David Obura, [dobura@cordioea.net](mailto:dobura@cordioea.net)

*Editor's note: David is the coordinator for [Coastal Oceans Research and Development - Indian Ocean](#) (CORDIO) East Africa, supporting activities in mainland Africa and In-*

*dian Ocean island states. The primary focus of CORDIO East Africa is the implications of threats to the health of coral reefs and their long-term prospects and provision of socio-economic benefits.*

### On the large vs. small debate

It is not that we shouldn't protect the least impacted sites, which may be large and offshore. But we have to develop a diverse portfolio. In the long run, 100% of the planet's surface will have to be managed somehow, and hopefully in all cases to improve condition (except where full transformation is unavoidable, e.g., a city or mine, etc.). Species need a size, type, and location of protection that is relevant to their life history, and in many cases this may not mean a large MPA in remote, not-impacted places.

We need to move toward the perspective that the right modes of protection are needed. In many cases a spatial tool such as a no-take zone is the most effective and practical, especially where there is high diversity and limited knowledge. But as knowledge increases, more and more nuanced management can be developed. Also, the scale of protection needs to match people: their awareness, use types, tenure, etc. In moderately to densely populated locations (which coastlines are increasingly becoming), this also means the size of no-take zones must necessarily be limited, so that an individual can access use zones with the relevant technology that they have access to.

What we don't know yet is if this requires 10% or 50% targets (or whatever) for no-take or highly restricted use.

### On numerical targets

Targets are useful for motivating action, but they are arbitrary (certainly the timeframes). So meeting a 10% target by 2020 in which, say, only 1/4 or less of sites are effective could even be damaging, as the rancor in these debates suggests it could be. If better work would help us meet a longer-term goal more successfully, that would be a better outcome.

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## “Every dollar we put in a large and ineffective MPA is a dollar we take from potentially effective conservation”

Luiz Rocha, [lrocha@calacademy.org](mailto:lrocha@calacademy.org)

*Editor's note: Luiz is Associate Curator and Follett Chair of Ichthyology at the California Academy of Sciences. He is also an adjunct professor at the University of California Santa Cruz and San Francisco State University.*

### On numerical targets

I think the targets should be changed or removed entirely. If changed, they should not be based on area, but rather on



other measures that reflect a biological outcome. For example, instead of protecting 10% of the oceans, we should be talking about improving the situation of endangered species. I do a lot of work for IUCN, mainly in the form of evaluating the extinction risk of coral reef fishes to assign them a Red List category (vulnerable, endangered, etc.). One of the groups I work on is groupers. Their status has to be evaluated every 10 years, and we (a group of about 20 biologists) did the first evaluation in 2006. We met again in 2017 to re-evaluate the groupers, and even with the creation of all of these large MPAs, not a single species had their status changed. About one-third of the groupers (30 species or so) remain in the same threatened category they were 10 years ago. Our current approach is not working.

### On the large vs. small debate

We are losing the fight against the biodiversity crisis. We have limited resources. Every dollar we put in a large and ineffective MPA is a dollar we take from potentially effective conservation. With large offshore MPAs it is possible that we are protecting against future threats, but I would argue that our resources are much better used protecting areas from current threats, and there are many areas in desperate need of urgent protection.

This is not unique to marine ecosystems – the same thing is happening in the Amazon, for example. The protected areas there are as far from the edges of the forest as possible: we are “protecting” areas in inaccessible zones of the Amazon while letting deforestation continue unchecked along all of its edges. The end result of this will be 90% of the Amazon gone, and that’s optimistic. I simply do not want this for the oceans. It is not good enough and will lead to many species going extinct.

The worst thing about large offshore MPAs is that they give the impression of protection without actually protecting anything (example: banning commercial fishing where commercial fishing never happened). Classic bluewashing. Everyone goes home thinking they did something good but species continue declining.


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## “Arguing against large MPAs is a zero-sum-game view”

Enric Sala, [esala@ngs.org](mailto:esala@ngs.org)

*Editor’s note: Enric is a National Geographic Explorer-in-Residence. He founded and leads National Geographic’s Pristine Seas, a project that combines exploration, research, and media to inspire country leaders to protect the last wild places in the ocean.*

### On large MPAs

Arguing against the creation of large MPAs is a zero-sum-game view of conservation. Academic wishes of optimality should not trump opportunity in the real world. We [need more fully protected areas](#) (at least 30% of the ocean), large and small, nearshore and offshore – and to manage fisheries much better. Would anyone seriously argue against the creation of large national parks on land? Let’s not demonize current large no-take areas. They are not the problem; they are part of the solution. 

- Article by Christina Reed, MPA News reporter

To comment on this article:

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- Perspective: An Overview of the Gilbert Bay MPA Oil Spill Case and Successful Prosecution of the Company at Fault

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- Creating Endowments for Sustainable Funding of MPAs: Experts Describe the Opportunities and Challenges
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# The Commonwealth Blue Charter: From zero to fifty-three in less than a year

By Jeff Ardron

One unseasonably warm April afternoon this year in London, I sat in a packed media center watching five foreign ministers from Commonwealth countries explain why their governments were going to become 'Commonwealth Blue Charter Champions.' It was a pinch-me moment. One full day before fifty-three Commonwealth Heads of Government were due to adopt the Commonwealth Blue Charter, and already ministers were stepping forward to lead on it!

A short year ago, the 'Blue Charter' was just a catchy name, meant to represent the Commonwealth's deepening engagement in ocean issues. Our Secretary-General liked it, and so we took the still rather open-ended notion to the United Nations in June 2017. There, at a side event to The Ocean Conference, member countries were enthusiastic about cooperatively tackling ocean-related issues.

But there were some caveats. Foremost, the smaller coastal and island states felt like they were drowning in a sea of commitments – at global, regional, and national levels. (The UN [Sustainable Development Goals](#) alone come with 169 targets and 230 indicators.) What they needed, they made clear to us, was not more of the same. Rather, there was a vast gap that needed to be bridged between high-level government commitments and national and local actions.

## Bridging the gap between commitments and actions

In the ensuing months, I travelled to various meetings and forums and heard similar messages, expressed in a variety of ways. People were universally keen and concerned about the ocean, but equally worried about how these issues could be addressed.

Thus, from the beginning, early drafts of the Commonwealth Blue Charter highlighted existing commitments, but did not make new ones. Rather, it focused on the creation of (what became known as) 'Action Groups' to cooperatively tackle them. In policy wonk-speak, it was to be an 'implementation vehicle' for these many commitments, particularly [SDG 14 \(Life Below Water\)](#).

So far, so good. Then, towards the end of 2017, as the Commonwealth Heads of Government Meeting (CHOGM) in April 2018 loomed on the horizon, a couple of developed countries began pushing for new commitments on their particular topics of interest. But the many developing countries, especially the small island states, remained adamant. They didn't want more commitments; they wanted actions.

This was the darkest hour. Friends and colleagues began gently to question us: why were we not in favor of mak-

### Editor's note:

The Commonwealth – formerly the Commonwealth of Nations – comprises 53 countries, 46 of which have a marine coastline. Altogether, Commonwealth countries contain about one-third of all marine waters in national jurisdiction. As a result, any coordinated effort on sustainable management holds the potential to effect significant change for the world ocean.

In April 2018, leaders of the Commonwealth countries [agreed to the Commonwealth Blue Charter](#) – a coordinated push to protect the ocean from the effects of climate change, pollution, and overfishing. Among its priority areas of action is the protection and restoration of coral reefs, an action that will be led by Australia, Belize, and Mauritius.

Jeff Ardron is an Adviser on Ocean Governance with the Commonwealth Secretariat, and leads the [Commonwealth Blue Charter](#) project. Here he provides his insights from inside the process to secure the agreement. The views expressed here are his, and do not necessarily reflect those of the Commonwealth Secretariat or its member countries.

ing a commitment on the [x, y, z] ocean crisis? At times, I questioned myself. But each time we went through the rationale, we arrived back at the same conclusions: 1) The list of issues facing the ocean is pretty much endless – much broader than what was being proposed; 2) Prioritizing them amongst 53 countries would take months, if not years; and 3) Getting consensus on language might well not happen before the April CHOGM meeting; and if such language were found, the lowest common denominator would inevitably dominate.

## A bottom-up, country-driven approach

Thus, the Commonwealth Blue Charter prevailed as a cooperative, principled approach to addressing existing ocean issues. The principles contained in the [Charter of the Commonwealth](#) would provide the bedrock for all decision-making, and the countries stepping forward as Champions would identify issues that would be addressed. The bottom-up, country-driven approach was both pragmatic and morally the right thing to do, but also potentially risky: would any countries step forward? In February 2018, with just two months to go before CHOGM, we set ourselves a target of finding five countries willing to (co-)lead on topics that were critical to them. Bearing in mind, all this was premised on the Commonwealth Blue Charter being adopted, which was not guaranteed either.

We need not have worried. Without prompting, countries began to approach us. Sometimes two or more would highlight the same issue, and we put them in contact with one another. The pieces began to fall rapidly into place.

Soon, after a blur of meetings, webinars, correspondence and urgent phone calls, I found myself one unseasonably warm late afternoon in a press tent, watching five foreign ministers from Commonwealth countries....

"My work is done," I joked to a colleague next to me. In actual fact, the work has just begun.

To date, eleven countries have stepped forward to lead on eight different topic areas relevant to sustainable ocean development and conservation (see table at right). While the details, and indeed the membership, of these Action Groups are still being sorted out, it is nonetheless an auspicious beginning. If the past year is any indication, the one ahead will be very full indeed. Keep an eye out on [the website](#) and #BlueCharter to see how it all unfolds. 

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## Action Groups and Champions

### 1. Aquaculture

Champion: Cyprus

### 2. Blue economy

Champion: Kenya

### 3. Coral reef restoration

Champions: Australia, Belize, Mauritius

### 4. Mangrove restoration

Champion: Sri Lanka

### 5. Marine plastics (aka 'Commonwealth Clean Oceans Alliance')

Champions: UK, Vanuatu

### 6. Ocean acidification

Champion: New Zealand

### 7. Ocean and climate change

Champion: Fiji

### 8. Ocean observations

Champion: Canada

## Perspective

# The MPAs of Central America: An introductory view of their successes, lessons learned, and ongoing challenges

## By Carlos A. Espinosa

The colors and warmth of the tropics make Central America unforgettable. These rich, vibrant coastal landscapes have inspired marine scientists, foreign visitors, and local inhabitants alike in their efforts to protect and conserve the most pristine marine zones throughout the region, on both the Pacific and Caribbean sides.

Beginning with Nicaragua in 1958, the Peninsula de Cosiguina (Pacific) was the first official protected coastal area in Central America. Neighboring countries soon followed suit: Costa Rica in 1963 with the creation of Cabo Blanco (Pacific); Guatemala in 1969 with National Park Sipacate – Naranjo (Pacific); Panama in 1976 with National Park Portobelo (Caribbean); Honduras in 1980 with Rio Platano (Caribbean); Belize in 1982 with Natural Halfmoon Caye (Caribbean), which was the first specified *marine* – not coastal – protected area in Central America; Honduras in 1993 with Cayos Cochinos (Caribbean); and most recently El Salvador in 2008 with Los Cobanos (Pacific).

Central America now possesses at least 197 different areas that directly protect vital ocean and coastal habitats. These areas are not necessarily all categorized as MPAs

due to their different management categories. But a rough breakdown of protected areas per country has Belize with 86, Panama with 45, Costa Rica with 24, Honduras with 23, Nicaragua with 8, Guatemala with 7 and El Salvador with 4.

With a collection of anywhere from ten to sixty years of experiences since their respective formations and legal recognitions, what are the individual stories behind these protected areas? What successes have they celebrated? What challenges have they overcome? In a region subject to continuous political instability, socioeconomic changes, obscure economic interests and widespread poverty, what have been some of the most valuable lessons learned?

## Exploring success stories in Central American MPAs

To begin to find answers, I spoke with Juan Carlos Villagran, a Guatemalan biologist with a wealth of experience in MPA management throughout Central America. He is currently Deputy Director of the Mexico and Northern Central America Conservation Program at The Nature Conservancy. (I'll be drawing from my discussion with him, as

**Editor's note:** The countries of Central America possess several decades of experience with coastal and marine protected areas. MPA News invited Carlos Espinosa, founder and director of [Dos Mares](#), to contribute insights on the past, present, and future of MPAs in Central America. Dos Mares promotes MPA sustainability in the region by disseminating marine science knowledge and conservation tools, and by fostering green business opportunities. Carlos is originally from Nicaragua, and worked for several international agencies in Central America, Mexico, Puerto Rico, and United States before founding Dos Mares. This is the first of three articles by him.

well as talks with other regional experts, through this brief series in MPA News.)

During the course of our conversation, Juan Carlos highlighted Belize as having several successful MPAs. In particular he noted three Belizean sites that stand out for their achievements in local leadership and stakeholder inclusion: Port of Honduras, Gladden Spit, and Glover's Reef. In his opinion, those areas exemplify good management activities while also including strong communal participation despite the many socioeconomic threats prevalent in their surrounding areas. With regard to the rest of Central America, Juan Carlos highlighted Cayos Cochinos in Honduras, Bahía de Jiquilisco in El Salvador, La Flor in Nicaragua, Isla Cocos in Costa Rica, and Isla Bastimentos in Bocas del Toro, Panama, as protected areas that warrant recognition and discussion of what makes their management practices strong. Stay tuned for those insights.

We'll continue to look more in depth at some of the most successful marine and coastal protected areas throughout Central America. While there are others that have achieved

relatively successful management strategies, historically most areas in the region have not achieved a high level of management success (i.e., have not met their goals). Why is this? What is happening within the hundreds of other protected areas in Central America that is preventing their success? In subsequent articles, we will begin to unpack some of the challenges and reflect on those lessons learned at both the national and broader regional scopes.

Read more about the protected area systems of each country with this Dos Mares storymap:

[¡Ahora Más Que Nunca Ellas Te Necesitan!](#) (Now More Than Ever They Need You!) 

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## MPA Science Corner: MPA trade-offs – Addressing criticisms of large-scale MPAs – Curbing threats

These recent articles or preprints on MPA-related science and policy are all free to access.

- **Article:** Davies, T. E. et al. "[Assessing trade-offs in large marine protected areas.](#)" PLOS ONE 13, e0195760 (2018)

**Finding:** Although the ideal for MPAs is that they provide beneficial outcomes for people *and* the environment, the reality is that there are often trade-offs. In this study of the outcomes of 12 large MPAs, the authors found evidence of three types of trade-offs: (1) between different ecological resources (supply trade-offs); (2) between ecological resource conditions and the well-being of resource users (supply-demand trade-offs); and (3) between the well-being outcomes of different resource users (demand trade-offs). The study suggests that large MPAs may improve their performance across multiple social and ecological objectives if integrated with larger-scale conservation efforts.

- **Article:** O'Leary, B. C. et al. "[Addressing Criticisms of Large-Scale Marine Protected Areas.](#)" Bioscience 68:5 (2018)


**Finding:** Large-scale MPAs are 100,000 km<sup>2</sup> in area or larger. This paper identifies several common criticisms of large-scale MPAs along three themes: (1) placement, governance, and management; (2) political expediency; and (3) social-ecological value and cost. The authors conclude that although some criticisms are valid and need addressing, none pertain exclusively to large-

scale MPAs, and many involve challenges ubiquitous in management.

- **Preprint:** Zupan, M. et al. "[How good is your marine protected area at curbing threats?](#)" Biological Conservation 221, 237 - 245 (2018)

**Finding:** This study applies indices to quantify MPA effectiveness in reducing anthropogenic threats (extractive and non-extractive) in and around 15 Mediterranean MPAs. The authors show that fully protected areas effectively eliminated extractive activities. However, within *partially* protected areas the intensity of artisanal and recreational fishing was actually higher than that found outside MPAs. In addition, both fully and partially protected areas attracted non-extractive activities (tourism) that posed potential threats.

For a free, weekly list of the latest publications on ocean planning and management, including MPAs, [subscribe to the OpenChannels Literature Update here.](#)

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**To comment:** <https://mpanews.openchannels.org/node/22285>



## Notes & News

### Study: Due to global warming, today's MPAs could be uninhabitable to most of their current species by year 2100

A new study provides a grim forecast of what could happen to ecosystems and species inside current MPAs as a result of global warming. Assuming the global continuation of “business-as-usual” emissions of greenhouse gases (i.e., no new control measures), the resulting warming and reduced oxygen concentration would make today's MPAs uninhabitable by 2100 to most species now in those areas. Even worse, many MPAs in the tropics would become uninhabitable to their current species as soon as 2050.

The main takeaway: we need significant emission reductions and we need them now. The study “Climate change threatens the world's marine protected areas” in Nature Climate Change journal [is here](#). If you don't have access to the article (most of it is behind a journal paywall), [a press release is here](#).

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### Thailand moving to cap marine national park visitation at 6 million annually

Thailand will [cap visitation at its marine national parks](#) to 6 million visitors a year, according to a plan drafted by a national committee on environmental issues. The parks are experiencing a rise in tourism: 4.8 million foreign tourists visited in 2017, and 5.6 million are expected this year. The cap must still be approved by Thailand's Department of National Parks, Wildlife and Plant Conservation. Thailand already has [annual seasonal closures](#) for some of its national parks to allow for ecological recovery time.

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### Report on innovative financing opportunities for coral conservation

A significant barrier to marine biodiversity conservation is that the funding currently needed to achieve effective, lasting conservation is greater than the available funds. A new report from the International Coral Reef Initiative explores several innovative financing mechanisms that could help bridge that gap. These include green taxes, marine biodiversity offsets, debt-for-nature swaps, payments for ecosystem services, impact investments, green bonds, and parametric insurance. The report [Innovations for Coral Finance](#) also walks readers through four different business models that can be customized and integrated with conservation needs.

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### Report addresses impact of sporting events on biodiversity, and opportunities for improvement

IUCN has released a new report with guidance on managing sporting events to minimize their potential negative impacts on biodiversity. This includes impacts on marine biodiversity, such as from the staging of sailing events or other outdoor aquatic sports. The report [Sport and Biodiversity](#) also explains how sporting events can be harnessed to generate opportunities for biodiversity conservation, including by financing or increasing the size of protected areas.

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### Partnership releases guidelines on how businesses can safeguard biodiversity

The [Key Biodiversity Area Partnership](#) – involving several of the world's leading conservation organizations – has released a new report outlining steps that businesses can take to safeguard biodiversity and avoid contributing to its loss. The publication [Guidelines on Business and KBAs: Managing Risk to Biodiversity](#) calls on businesses to adopt 15 guidelines to better manage their direct, indirect, and cumulative impacts on key biodiversity areas.


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### Story map shows percentages of key habitats protected and unprotected in Caribbean

Story maps are highly visual tools that allow stories to be told through maps and other visual information. Their use is increasing in the MPA community. A recent example is [a story map created by BIOPAMA](#) (the Biodiversity and Protected Areas Management Programme) on Caribbean MPAs, and what percentage of particular key habitats – coral reefs, mangroves, and seagrasses – are protected or unprotected in the region. The findings are broken down by country.

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### Ocean Awards recognize several MPA-related winners for 2018

The Ocean Awards – co-presented by Blue Marine Foundation and *Boat International* magazine – have [announced their winners for 2018](#). Among the recipients, several MPA practitioners were recognized including Norlan Pagal for his work to protect local MPAs in the Philippines; Kristina Gjerde for her work to strengthen ocean governance, including through high seas MPAs; and several individuals associated with the successful campaign to designate Antarctica's Ross Sea MPA. 

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