MPA news

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

NEW! Free access to science for MPA managers and planners

Hi, everybody,

OCTO, the organization that produces MPA News, has just launched a new, free repository of research on marine conservation science and marine climate change science. It's called MarXiv (rhymes with *archive*). The site is just getting started so there aren't many papers there yet, but there will be soon. It's designed to give managers and planners free access to the science they need, which is usually otherwise hidden behind expensive journal fees.

If you're a researcher, check out the https://www.marxiv.org site for instructions on how to share your research. We have a few training webinars coming up, too.

We are also recruiting ten 'Ambassadors' to aid researchers in sharing their work in MarXiv. The selected Ambassadors will each be awarded US $1000 to help cover time spent advocating on behalf of MarXiv. We encourage applications from graduate students, post-docs, and early career researchers. More information is available at https://www.marxiv.org/apply-marxiv-ambassador.

Thanks! If you have any questions or suggestions for MPA News, or if you just want to say hello, please contact me anytime at mpanews@u.washington.edu. Best wishes for your work!

John Davis
Editor, MPA News

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What do you know now that you wish you knew when you got started in MPAs? Insights from practitioners

Much of what we learn – in the MPA field and in life in general – is not from formal education. It comes from learning it ourselves, or receiving advice from a colleague, or simply trial and error. This kind of knowledge is often difficult to find anywhere else.

In the 18 years that MPA News has been in publication, we have asked practitioners for lessons learned, and practices developed. We have published numerous tips on how to work more efficiently or effectively. But we have not asked you for the most fundamental, essential advice you have gained from your work.

We do make that request this month, and we'll continue to do so in future issues. We are asking practitioners:

What do you know now that you wish you had known when you got started in the MPA field?

Responses are below.

Make allies out of ocean users, instead of enemies

By Tundi Agardy

Tundi Agardy is founder and executive director of Sound Seas, which promotes marine conservation through science and sociology. Email: tundiagardy@earthlink.net

Looking back, I would have taken active steps to create allies out of ocean users, instead of enemies. We marine conservationists went down a different path, fueled by the knowledge that marine biodiversity was disappearing and ocean areas were becoming degraded. We claimed to have truth and the global commons on our side, and we were unconcerned about making enemies of the people who contested protectionist parks mostly because they were reacting to an "us and them" narrative. Many an MPA has faltered because of this disregard for the perceptions of the affected.

Had I known then what I know now, I would have endeavored to use two tactics of engagement:

continued on next page

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1) For local stakeholders, I would have taken the time to explain the science behind establishing refuges and creating spillover, and would have worked with local users to allow as much multiple-use as possible, creating stewards in the process; and

2) For large-scale vested interests like commercial fishers, multinational tourism operators, and national-level politicians, I would have taken the time to describe the myriad values coming from that place, to show why the investment of protection was worthwhile. I would have invested more time in this phase of MPA planning than in getting the science right, and I would have taken participatory planning seriously. We have come so far down this path we inadvertently set out on that there doesn't seem to be any turning back now, and our conservation work is harder than it ever was.

Be prepared to face challenges and work hard, and to reset your enthusiasm year after year

By Rodolfo Werner

Rodolfo Werner is an advisor to The Pew Charitable Trusts and the Antarctic and Southern Ocean Coalition. Email: rodolfo.antarctica@gmail.com

Although I have worked for a long time on MPAs in general, most of my experience in establishing them has been in Antarctica. For many years MPAs were not part of the agenda of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). But in the last 10 years, and especially since 2012, MPAs have been one of the most important and complicated issues being discussed under the Convention.

In a consensus-based, international organization like CCAMLR, which involves 25 signatories, closing an area for spatial protection represents a great challenge. Different countries perceive the use of natural resources and areas differently when it comes to balancing protection and use. Thus, understanding and managing cultural differences is key. In the context of achieving international consensus, understanding global geopolitics can also be valuable, including on issues outside the particular geographic area you're looking to conserve.

Another thing that I have learned is that you should be prepared to deal with personal frustration. The establishment of MPAs can involve many years of hard work where you need to reset your conviction and enthusiasm year after year. These are things that you do not learn in textbooks.

Be flexible, patient, optimistic, and creative

By Fiona Gell

Fiona Gell is the ecosystem policy manager with the Department of Environment, Food and Agriculture of the Isle of Man Government in the British Isles. Email: Fiona.Gell@gov.im

I have worked for over 12 years as an MPA practitioner, after spending nearly 10 years on the academic side of fisheries science and MPA function. The Isle of Man now has a network of ten MPAs, protecting over 10% of our territorial sea (up from 0.13% in 2007) and work continues to develop this network. The fishing industry is highly engaged, including through the co-management of a Fisheries Management Zone within the Ramsey Marine Nature Reserve and actively participating in data collection for fisheries science.

These are the things I wish I had known from the start:

Actively engage all those with concerns. I understood the key role of fishermen but I didn't appreciate the importance of fully engaging everyone who could influence the process. It only takes one disgruntled person with a lot of time on their hands to derail years of progress.

Be flexible. The theory is all very well, but big wins can come from being flexible and pragmatic. Aspire to the textbook ideals, but if the chance comes to do something unexpected and beneficial, take it.

Be patient. Laying the groundwork – and building the evidence and the community support – for MPAs can be slow and frustrating, but it will come to fruition and the success will be longer-term if you have strong foundations. Persistence, resilience, and a very thick skin are invaluable.

Be optimistic. Social phase-shifts for good can happen. What is happening now in Isle of Man waters really seemed impossible 10 years ago.

Be creative. In the midst of the science, the stakeholder engagement, and getting policies and management in place, it can be easy to lose sight of what connects people to their marine environment. Innovative events that involve those who would never normally engage can have a big impact and lead to big leaps forward. We recently created a 'Fun Palace', bringing arts and science together to explore Ramsey Marine Nature Reserve in a way that provided a new and creative public perspective on the MPA.

Once I accepted that theories of natural resource governance did not match realities, the world made more sense

By Peter Jones

Peter Jones is a Reader in Environmental Governance at University College, London (UCL), and author of the book Governing Marine Protected Areas: Resilience through Diversity. Email: p.j.jones@ucl.ac.uk

Look up and get out there! I wish I had not been so focused on studies of theories and policies, and had gone out into the field sooner to speak to people involved in actual MPAs. In my early years I spent too much time reading, trying to understand realities through the lenses of different theories, and sometimes even trying to mold realities to match theories. It then started to occur to me that many theories were based on ideals about how the world *should* work, rather than realities about how it actually *does* work.

Once I accepted that many theories of natural resource governance did not match realities, and decided to focus on developing a systematic understanding of actual MPA case studies, the world started making much more sense. It is only then that I began to develop a clearer understanding of why some MPAs are effective and why some are not, leading to the development of my own empirical-methodological framework and grounded theoretical basis (www.mpag.info).

While it is important to gain an understanding of theories and develop research agendas, it is even more important to leave our office and speak to people related to MPAs who live in the real world, employing empirical-methodological frameworks to systematically undertake multiple case studies. The needs of marine conservation cannot be understood or addressed if we do not look up, get out there, and critically test theories.

Understand the dynamics of decision-making

By Patrick McConney

Patrick McConney is senior lecturer in Marine Resource Management Planning at the University of the West Indies, and a former fisheries manager for Barbados. Email: patrick.mcconney@gmail.com

As a young marine scientist, my academic training led me to believe that providing good data and information was largely a scientific challenge that, once overcome, would lead almost automatically to great decisions for implementing meaningful change for marine resources. I got a serious reality check in my first projects working on MPA management effectiveness. Some MPA boards based their decisions on perceptions, personal experience and anecdotes, or ignored stated plan objectives, even when reasonable data and decision-making criteria were available.

The lesson was that the path from data to decisions for action (or for avoiding action) was strewn with obstacles, looked like a maze, and consequently had a lot of dead ends to be discovered only after much wasted effort.

But you have to tackle decision-making in order to make progress. This is not only about fancy quantitative and visual Decision Support Systems, but also about basic institutions for decision-making – from everyday management through to policy level.

So what do we do?

Most importantly, despite what may be on paper in a plan, understand how the dynamics of decision-making can change over time, due to external influences and other variables. For the Caribbean Protected Areas Gateway, we use the tagline "Linking data to better decisions" to focus our effort. We aim to provide a portal through which data on biodiversity, socioeconomics, and governance can be combined to improve decision-making with regard to protected areas. We will support this at the country level by building capacity to make better decisions, once we first understand the institutional dynamics of the multi-stakeholder decision-making system.

On listening, the virtue of failure, and passions outside of work

By Carol Bernthal

Carol Bernthal is Superintendent of the 8260-km^2 Olympic Coast National Marine Sanctuary, off the coast of the state of Washington in the northwestern US. Email: carol.bernthal@noaa.gov]

Understand that what motivates people requires great communication and deep listening skills. It takes a lifetime of discovery and practice and is as diverse and fascinating as the ecosystems we study and protect. The most successful people are those who don't become stuck in one paradigm. They listen both with their minds and their hearts and can weave information together for good outcomes without becoming lost in the complexity.

I have also learned that failure is a great teacher. When your well-ordered theory of how the world works has just crumbled, it requires a brutally honest evaluation of why you failed. Don't be afraid to fail: just pick yourself up and go at it again. You are in the human race, not the race to perfection.

Last but not least, it really helps to have passions outside of work that take you to your happy place. If you don't have that core foundation, you aren't going to be able to last on the long road ahead.

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Perspective: In building your MPA career, go outside your comfort zone and take calculated risks

Editor's note:
This piece started as a response to the question in this month's feature article (What do you know now that you wish you had known when you got started in the MPA field?) and grew from there. From 1986 to 2014, Jon Day worked for various agencies in the Great Barrier Reef, including 21 years with the Great Barrier Reef Marine Park Authority (GBRMPA). Jon served as one of the GBRMPA directors for 16 years (1998-2014). Initially he was responsible for conservation, biodiversity and world heritage; in that position he commenced the Representative Areas Program, a multi-year rezoning process for the 344,400-km^2 Great Barrier Reef Marine Park. Jon is now at James Cook University. Email: jon.day@my.jcu.edu.au

By Jon Day

When I started my undergraduate university course in the early 1970s, my interests were the natural sciences. I didn't really know what career I wanted, other than I was keen to work outdoors, so a degree around conservation sounded interesting.

The course in which I enrolled at the University of New England in Australia (Bachelor of Natural Resources) was multi-disciplinary and very progressive for its time. Our first two years gave us a broad grounding in the basic science subjects, but in our third and fourth years we were required to undertake a range of compulsory subjects that were far outside my areas of interest. We were given no alternative and so I reluctantly had to turn my mind to address such diverse subjects as:

- Resource Economics (including evaluating intangible environmental aspects such as air quality);
- Resource Policy and Administration (including the role of politics in conservation);
- Resource Technology (surveying, remote sensing, and air-photo interpretation); and
- Resource Management (an integrating unit for the entire degree).

Not only were these subjects outside my (narrow) areas of interest but they required completely different ways of thinking and assessment. I can remember my first pitiful attempt to write an essay about politics. Not only did I have little aptitude for, nor interest in, this subject but I also had no understanding that such social and non-natural science subjects would prove to be some of the most useful later in my career.

Taking calculated risks

I often tell my younger colleagues that, while it may seem easy to stay in your comfort zone, going outside that zone – and even taking a 'calculated' risk – is often well worth it.

I believe taking such risks has paid off at least three times during my career:

- For 11 years at the start of my career, I was involved in terrestrial park planning and management. My first risk was when I moved from being a park planner to being a park ranger. This involved a pay cut, and many of my peers and colleagues saw this as a step backward. However, this practical field experience paid off down the road by helping me to become a far better park planner and undoubtedly helped in other job applications. (I made a similar move later in my career when I left GBRMPA in 1990 after four years to take on a very different role in field management with the Queensland Parks and Wildlife Service [QPWS] – initially as an Area Manager and subsequently promoted to Regional Manager. Again, this was field management experience but, combined with greater staff management experience, it helped me considerably in my subsequent position as a Director in GBRMPA.)

- My second calculated risk was moving from terrestrial parks into marine parks. I was keen to work with the Great Barrier Reef Marine Park Authority because in the 1980s they were widely regarded as world leaders in marine park planning and management. But it took me three applications in 1985-86 before I was offered a job as a park management officer and planner with GBRMPA. Luckily I was able to adapt a lot of what I'd learned from my terrestrial park planning experience and apply the relevant bits to the Great Barrier Reef.

- In 1997-98 I took a year off as leave-without-pay (an unpaid sabbatical) from my job with QPWS and headed to Canada. I actually had no idea what I was going to do, but ended up at WWF Canada (in Toronto) where I met Professor John Roff from the University of Guelph. I helped John complete his report for WWF called *Planning for Representative MPAs – A Framework for Canada's Oceans*, but John also helped me develop my thinking about systematically protecting representative areas instead of just protecting important or significant places. This approach got me thinking of mapping the bioregions of the entire Great Barrier Reef and how a representative areas approach might be conducted. So when I applied to GBRMPA in 1998 for the Director's position responsible for conservation and biodiversity, this thinking held me in good stead. I subsequently applied much of that experience when GBRMPA did undertake the Representative Areas Program rezoning.

Caveats on taking risks

I do add some caveats to the above advice about taking risks:

- Make sure you accomplish something before you move on from any job. Preferably this should be tangible, like a report with you as the primary author.

- Don't 'burn your bridges' when you leave. You never know when you might want to return to a previous employer, or find that someone with whom you worked previously is now in a position of influence for your career. This also leaves open the possibility of returning to your old employer if your calculated risk does not work out.

- Have confidence in your own abilities. But if the risk you take does not work out, having given it your best shot, then retire gracefully.

To comment on this article

https://mpanews.openchannels.org/node/19779

Proposal for East Antarctic system of MPAs falls short again of international consensus

In October 2017, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) fell short again of reaching consensus on a proposal to designate a large new system of MPAs off the coast of East Antarctica. But objections to the plan are narrowing.

First put forward in 2012 by Australia, France, and the European Union, the proposal has undergone several changes since then to address concerns of CCAMLR members. The changes have included downsizing the proposal from 1.8 million km^2 to roughly 1 million km^2, and from seven distinct protected areas in the proposed system to three. The sites would be multiple-use, allowing commercial fishing.

With each change, opposition to the proposal has shrunk, and now counts just China and Russia as objectors among the 25 CCAMLR signatories. The proposal will be considered again at the next annual meeting of CCAMLR, in October 2018.

In addition to East Antarctica, CCAMLR is also considering newer proposals to designate MPAs in Antarctica's Weddell Sea and off the Antarctic Peninsula.

In October 2016, CCAMLR approved designation of a 1.55 million-km^2 MPA in Antarctica's remote and relatively pristine Ross Sea following years of negotiation. Russia was the final holdout among CCAMLR members on that proposal.

What remains to be negotiated on East Antarctica

MPA News spoke with Claire Christian, interim executive director of the Secretariat of the Antarctic and Southern Ocean Coalition, an organization dedicated to protecting and preserving the Antarctic environment, to see what remains to be negotiated on the East Antarctic proposal.

• **MPA News:** Media reports on the latest CCAMLR negotiations on East Antarctica suggest the sticking points remain around fishing, namely for krill and toothfish. But the three proposed MPAs off East Antarctica would be multiple-use, allowing commercial fishing. With that being the case, why are there still objections?

• **Claire Christian:** That is not quite the case. Fishing is restricted in these areas already, and the restrictions would increase under the MPA. Currently, under existing CCAMLR regulations, commercial fishing for toothfish is prohibited in depths shallower than 550m. There are currently some small fisheries in regions deeper than 550m, but these are limited to operating in fairly small areas. Under the proposed MPA, the 550m restriction would be expanded, and include all areas landward of the outer 550-m bathymetric contour, including areas that are deeper than 550m. Additionally, in the MPA, fishing for krill would be prohibited in the D'Urville-Mertz area as a management response to penguin-breeding failures there. The East Antarctica MPAs would therefore provide additional protections.

Aside from these areas, the East Antarctic MPA is multiple-use, which means that activities are allowed provided that they do not impact on the objectives of the MPA. This means that anyone can propose to do commercial fishing, but CCAMLR must first determine that the fishing will not impact on the objectives of the MPA before allowing it to proceed. For example, if fishing is proposed in part of the MPA where scientists have been studying the impacts of climate change, that proposal should not go forward since one of the objectives of the MPA is to serve as a climate reference area where scientists can conduct research in the absence of fishing. It might be more accurate to say that commercial fishing is *possible* in some areas.

In terms of why objections remain, Russia and China have not made it entirely clear what specific changes they would like to see in the proposal. In the past they have expressed that they do not understand how a multiple-use MPA works in practice and how proposals would be assessed.

• **MPA News:** When the Ross Sea MPA proposal was being negotiated in its final stages, one of its main proponents was the US, which at the time was led by President Barack Obama. The nation is now led by Donald Trump. How strong is the US's support for Antarctic MPAs at this point, and have you gotten a sense that high-level outreach by US officials will be an option for bringing China and Russia on board?

• **Christian:** We [ASOC] would love to see CCAMLR countries approach MPAs as a team effort. That is, even if a country is not an *official* MPA proponent, it would still work to get MPAs adopted. At this stage, however, I don't get the sense that the US is going to conduct high-level outreach on East Antarctica or any of the other MPAs on the table. We do expect they will continue to provide some technical or scientific expertise where needed, and continue to do lower-level outreach to their counterparts from CCAMLR countries.

Furthermore, while we believe Antarctic MPAs are a global issue worthy of global attention, for most of CCAMLR's existence its member state delegations have been able to negotiate with each other in good faith, with impressive results for the protection of the Southern Ocean. CCAMLR made a commitment to designate a circumpolar network of MPAs in 2011 and we would like to see delegations directly working together on this and other issues, such as climate change, so that CCAMLR can continue its leadership in high seas conservation.

To comment on this article: https://mpanews.openchannels.org/node/19780

For more information

Claire Christian, Antarctic and Southern Ocean Coalition. Email: claire.christian@asoc.org

For further reading

Nature: Plans rejected for East Antarctic marine park

The Conversation: Why are talks over an East Antarctic marine park still deadlocked?

CCAMLR: A proposal for a Marine Protected Area in the East Antarctic planning domain

Blue Solution

Kawawana indigenous community conserved area in Senegal: Good life recovered through conservation

Editor's note:
The Blue Solutions initiative supports the exchange of successful approaches to marine and coastal conservation and development, sharing what worked where and why. Each case is authored by a practitioner and published on the Marine and Coastal Solutions portal of the PANORAMA web platform. MPA News is drawing from these cases.

In the rural municipality of Mangagoulack in southern Senegal, uncontrolled fishing and other ecosystem exploitation depleted the area's biodiversity and the livelihoods that depended on it. By the year 2000, food quality and food security were low for Mangagoulack's eight villages. Governance by national and regional officials was inadequate.

How the challenges were addressed

With not a cent of outside support, local fishermen from the municipality set up a system to govern, manage, and provide surveillance for their own conserved area, called Kawawana. The word *kawawana* means "our local heritage to be preserved by us all." It is an indigenous and community conserved area (ICCA) in an estuarine territory of Mangagoulack.

The site's governance builds on traditional governance and management rules, which have been revived and agreed upon by the municipal and regional governments. It features a three-zone, multiple-use management plan.

Management has also included restoration of traditional anti-salt dikes to reclaim arable coastal land for rice cultivation.

Local call-in radio programs foster dialogue among all who need to know and respect the ICCA's rules.

Evidence of success

Monitoring of Kawawana since designation has shown strong recovery in biodiversity and species abundance including fish, dolphins, crocodiles, and birds. The "good life" is back in the villages: fish are available in good quality and quantity to households at an affordable price.

The management plan has fostered local food sovereignty and is credited with playing a role in reversing migration to cities outside the municipality. Rice cultivation has increased. The community has learned sophisticated monitoring methods and regularly monitors fishery and socio-economic results.

Elsewhere in Senegal, six more ICCAs are currently being planned and are seeking legal recognition, following the example of Kawawana.

Lessons learned

- The experience of putting Kawawana into operation has led to increased awareness of fishing communities about harmful practices and opportunities to build on cultural heritage to achieve sustainable development.
- There can be no effective and sustainable community conservation without functioning institutions and decision-making bodies.
- Radio is a powerful tool for reaching all segments of the population to make them understand and take an interest in resource management.

For more information on this case, please visit the PANORAMA web platform.

To comment on this article

https://mpanews.openchannels.org/node/19781

MPA Science Corner: North Atlantic MPAs - Fish movement and MPAs - Papahānaumokuākea - Large MPAs

These recent articles on MPA-related science and policy are all open access.

- **Article:** "Climate change is likely to severely limit the effectiveness of deep-sea ABMTs in the North Atlantic", Marine Policy 87, 111-122 (2017)

  Finding: In light of climate change pressures that are likely to affect MPAs and other area-based management tools in deep waters of the North Atlantic, a precautionary approach to management is warranted. This could include setting aside more extensive areas and strictly limiting human uses and/or adopting high protection thresholds before any additional human use impacts are allowed.

- **Article:** "Effects of fish movement assumptions on the design of a marine protected area to protect an overfished stock", PLOS ONE 12 (2017)

  Finding: Large MPAs can be effective in recovering overfished stocks, protecting pelagic fish, and providing significant increases in fisheries yields. The study's models provide a means to test large MPAs as a spatial management tool, including as an effective alternative to managing highly mobile pelagic stocks through other means.

• **Article:** "Papahānaumokuākea: Integrating Culture in the Design and Management of one of the World's Largest Marine Protected Areas", Coastal Management 436-451 (2017)

Finding: Current management of Papahānaumokuākea Marine National Monument (US) emphasizes the integration of science, policy, cultural knowledge, traditions, and practices to create successful management strategies appropriate for both natural and cultural resources. This biocultural approach has led to more effective management of the monument.

• **Article:** "Conceptualizing Social Outcomes of Large Marine Protected Areas", Coastal Management 416-435 (2017)

Finding: There has been an assumption that because many large marine protected areas (LMPAs) are designated in places with relatively few direct uses, they therefore have few stakeholders and negligible social outcomes. This article challenges that assumption with diverse examples of social outcomes that are distinctive in LMPAs.

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

Notes & news

Winners announced for last month's trivia question

We received many, many correct answers to our trivia question last month, "In what year was MPA News first published?" Thanks to all of you who participated! Originally we were going to draw one winning entry at random to receive an MPA News tote bag, but there were so many of you that we drew three instead. The winners of tote bags are Vainuupo Jungblut of Samoa, Lim Ai Gaik of Malaysia, and Fiona Wilton of Uruguay. Congratulations!

Primer for managers on ocean plastics

The current issue of Marine Ecosystems and Management, the sister newsletter of MPA News, features a review of the latest research on ocean plastics, with an audience of ocean managers in mind. The review covers how much plastic is in the oceans, what happens to it there, its ecosystem effects, and what can be done about it.

Number of natural World Heritage sites affected by climate change nearly doubles in three years

A new report from IUCN finds that the number of natural World Heritage sites threatened by climate change has grown from 35 to 62 in just three years. The report examines both terrestrial and marine World Heritage sites. Climate change impacts, including coral bleaching, now affect a quarter of all natural World Heritage sites – compared to one in seven sites in 2014 – and place coral reefs among the most threatened ecosystems. Other ecosystems, including wetlands and low-lying deltas, are also affected. The report IUCN World Heritage Outlook 2 warns that the number of natural World Heritage sites affected by climate change is likely to continue growing.

Contest: "Most Beautiful Office"

Some MPA managers, planners, and conservationists work in relatively plain office buildings. But others work in beachfront villas, or on-the-water ranger stations, or in an actual royal castle (as WWF Sweden does). Do you work in a beautiful office? If so, please send us a photo! We will print entries in MPA News and invite readers to vote in a future issue. The winner will be named "Most Beautiful MPA Office in the World" and receive a limited-edition MPA News tote bag.

Please send your entry to mpanews@u.washington.edu. Good luck!

Severe coral mortality in Chagos MPA; prospects for long-term recovery seen as poor

A study of coral reefs in the UK's 640,000-km^2 Chagos Marine Protected Area in the Indian Ocean has found that the global coral bleaching event from 2015-2017 resulted in severe coral mortality in the MPA. Over the two-year period, coral cover declined from 40-50% to less than 10%, and commonly just 5% in water less than 15-m depth. The prolonged warming also nearly eliminated soft corals. The study predicts that recurrences of mass mortalities will take place too frequently for significant recovery of reef health in Chagos by the late 2020s. The study "Coral Bleaching and Mortality in the Chagos Archipelago" is in Atoll Research Bulletin and is available for free here.

MPA News

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Milestone reached for project to breed bleaching-resistant corals

The Great Barrier Reef Foundation and the Great Barrier Reef Marine Park Authority are supporting a project to breed bleaching-resistant corals. The project, called Sea-quence, is examining coral genetics to determine why reefs of similar species are bleaching in Australian waters but surviving in the Red Sea. Through selective breeding, the project aims to ensure a future for healthy coral reefs in a climate-changed world. Started five years ago, Sea-quence reached a milestone in October: project researchers genetically sequenced a whole coral organism for the first time, including the coral animal, the plants (zooxanthellae) that live in its tissue, and associated microbes including bacteria and viruses.

New tool visualizes important seafloor features, and guides planning for improved protection

A new online tool helps users understand the seafloor features that occur in a particular managed area and how well those features are currently represented in MPAs. This information can be used to guide future planning of protected areas. The Protected Areas Impact Maps Virtual Research Environment (PAIM VRE) allows users to visualize, analyze, and report on a range of ecologically important seafloor features, including seamounts, canyons, ridges, trenches, seagrass beds, mangroves, coral reefs, and more. More information and a demo of the tool are available here.

To comment on any of these notes & news items

https://mpanews.openchannels.org/node/19783

Report on MPAs in EU overseas countries and territories

MPAs in the overseas countries and territories of EU member states contribute nearly 30% of global MPA coverage, despite accounting for just 5% of the world's marine realm. According to a new report from IUCN, five of the ten largest MPAs on the planet reside in EU overseas waters – almost 6 million km^2. The report *European Union Overseas Coastal and Marine Protected Areas* assesses current overseas sites' geographic coverage, management, representativeness, resilience against invasive alien species, climate change and anthropogenic pressures, and progress toward the achievement of international conservation objectives. The report is available here.

From the MPA News vault:

Features and news items from yesteryear

Five years ago: November-December 2012

- What Counts as a Marine Protected Area?
- Perspective: When NGOs Invest Long-term in an MPA's Management

Ten years ago: November 2007

- New Zealand Designates Network of Deep Sea Protected Areas Covering More than One Million Square Kilometers
- Special Feature: More Lessons from the European Symposium on MPAs

Fifteen years ago: November 2002

- Women and MPAs: How Gender Affects Roles in Planning and Management
- Shrimpers and Mexican Government Compromise on Fishing in Reserve

For these and all other issues of MPA News, go to https://mpanews.openchannels.org/mpanews/archives