Challenges, successes, and lessons from building effective MPA manager networks: Part II - The regional networks

When each of us faces a challenge in life, our first reaction is often to ask a trusted friend or colleague, “Have you also faced this? If so, how did you handle it?”

It’s the same in MPA planning and management. Practitioners face a common set of challenges – enforcement, engaging stakeholders, monitoring, fundraising, and more – and an array of solutions have been developed at sites worldwide. It benefits all practitioners for these solutions and other MPA knowledge to be shared widely.

For that reason, the value of MPA manager networks* is substantial. Whether at the national, regional, or global scale, such networks can foster the transfer of knowledge in ways, and at a depth, that other methods – reports, trainings, conferences – cannot match. Effective MPA manager networks are a continuous and ever-growing source of guidance.

Notably, the networks themselves face challenges, too. Transferring knowledge across massive areas and multiple languages and cultures can be difficult. As is finding adequate funding to support years of important but often-unglamorous knowledge-sharing activities. To make MPA manager networks successful in the long term takes dedication and creativity.

Last month, MPA News examined the challenges and successes of global MPA manager networks. This month we survey seven regional networks:

- MedPAN, the network of MPA managers in the Mediterranean
- RAMPAO, the regional network of MPAs in West Africa
- LMMA Network International, the Locally-Managed Marine Area Network in the Indo Pacific
- CaMPAM, the Caribbean MPA Management Network and Forum
- MPACconnect, a network of Caribbean MPA managers
- NAMPAN, the North American Marine Protected Areas Network
- SMART Seas Africa, a network of MPA managers in the Western Indian Ocean

This article is not a comprehensive coverage of regional MPA manager networks. There are several other active ones around the world. If you operate a regional MPA manager network and would like it to be profiled in a future issue of MPA News, please let us know: mpanews@openchannels.org.

* In our last issue, we used the term MPA manager networks. However, we recognize that some regional networks refer to themselves instead as MPA manager networks (or MPA managers networks), to highlight the human connections they provide. In appreciation of that point, we generally refer to them in this article as MPA manager networks.

A. MedPAN, the network of MPA managers in the Mediterranean

The Mediterranean Protected Areas Network (MedPAN) was at first an informal association of MPA managers in the region. Created in 1990 and led for several years by Port-Cros National Park (France), the network had periods of activity and dormancy through the 1990s and early 2000s. Network activities were re-launched in 2004 through an EU project led by WWF France. And in 2008, by request of MPA managers, the formalized MedPAN Association was created, with nine founding members (a mix of MPAs, NGOs, and management agencies). It has been highly active since then, producing dozens of publications, holding workshops and trainings, providing small grants, conducting manager-exchange visits, informing policies, and more.

As of December 2017, MedPAN had 66 member organizations that manage over 100 MPAs in the region, and 47 partners (non-management organizations) from 19 Mediterranean countries. The Secretariat of the Organization has seven employees.

Website for MedPAN

By Marie Romani, Executive Secretary, MedPAN Association

Challenges

Having sustainable financing is key to ensuring networking activities that are, for the most part, recurrent: regular training, exchange events, sharing tools, updating our website and database of Mediterranean MPAs, producing our newsletter, and more.

Since creation of the MedPAN Association, we have been continuously supported by several strong donors: the private MAVA Foundation and the FFEM (the French Facility for Global Environment), as well as the French MPA Agency (which is now the French Biodiversity Agency). We also have continuous support from local public authorities, like the city of Marseille and others. And we receive project-oriented support from various EU programs as well as the Prince Albert II of Monaco Foundation.

However, our main source of funds, the MAVA Foundation, will end its support for the network by 2022. So we need to find new private donors who believe in the added value of MPA manager networks and who are ready to support recurrent and core costs of the network.

We also need to explore possibilities to attract new public funds from bilateral and multilateral cooperation agencies and other public donors. One idea would be to explore these possibilities together with other regional networks of MPA managers to present larger projects operating in different regions.

We are currently developing the 2018-2022 financial strategy for MedPAN.

Successes

MedPAN has produced some marked results:

- From the technical side, our comprehensive MPA assessments, timely and updated technical tools, small grants mechanism, and experience-sharing events are all widely recognized.
- MedPAN has brought the voice of the Mediterranean and its human networks to marine international fora, joining efforts with other regional MPA networks around the world in support of more effective MPA management.
- Together with its regional partners, MedPAN has accomplished important goals, including hosting the Mediterranean MPA Forum as a major event every four years, and producing the MPA Mediterranean Roadmap that envisions a comprehensive, representative, connected, and well-managed network of MPAs by 2020. The roadmap has been officially adopted by the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.
MedPAN has succeeded in building a regional MPA community by gathering managers, local and regional management authorities, other key national and regional institutions, scientists, local stakeholders and resource users, and donors to share views and learn from each other. And evolution of the network in 10 years has been fast: from 23 members and partners in 2009 to more than 100 today, and from 17 MPAs in 2009 to more than 100 MPAs now. The MedPAN budget has grown from 100,000 euros in 2009 to almost 800,000 euros in 2017.

**Lessons learned**

We see several strengths of the MedPAN Association, including that it is a science-based organization, possesses technical expertise on multiple relevant MPA topics (fisheries, tourism, funding, enforcement, monitoring, etc.), and has strong partnerships with donors and with other key regional marine institutions (among these the UNEP Regional Activity Center for Specially Protected Areas, WWF, IUCN, Global Council for the Mediterranean, the Mediterranean Small Islands Initiative, and the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area [ACCOBAMS]).

That being said, there remains a lot of work to do with regard to supporting Mediterranean MPAs. In a recent survey of 73 MPA managers in the Mediterranean by MedPAN and its partners, only six sites reported having enough staff members to meet the management requirements of the MPA. In addition, many sites are not actually implemented and there are no regulations in place to curb existing pressures or enough means to enforce them.

The human and financial resources allocated to MPA management in the region are too limited, thereby compromising successful conservation. Considering the high pressures exerted on the Mediterranean marine environment with growing trends (overfishing, land-based pollution, expanding offshore oil extraction, climate change), it is clear that willingness to invest in marine conservation needs to be boosted, and the network can help.

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**B. RAMPAO, the Regional Network of MPAs in West Africa**

The acronym RAMPAO stands for Réseau régional d’aires Marines Protégées en Afrique de l’Ouest, or the Regional Network of MPAs in West Africa. Founded in 2007, RAMPAO’s mission is to ensure the maintenance of critical marine habitats in the region that encompasses Cape Verde, the Gambia, Guinea Bissau, Guinea, Mauritania, Senegal, and Sierra Leone.

RAMPAO currently comprises 32 member MPAs. The network aims to promote exchange and learning among members, to create synergies on issues of common interest, to make MPAs of the region operational and functional, and to strengthen the mutual capacities in terms of advocacy.

Website for RAMPAO

By Marie Traoré, General Secretary, RAMPAO

**Challenges**

West African countries are characterized by a wide range of political, cultural, and social diversity. This diversity at different levels is reflected in different modes of management and types of governance (and their related policies and practices) from one country to another, and from one MPA to another. Thus the main challenge of RAMPAO is to bring the managers together to "speak the same language" to the extent that they can communicate with and learn from each other as effectively as possible.

Furthermore, RAMPAO MPAs do not always have proper finance mechanisms or qualified personnel. This situation leads to inefficient or ineffective management. RAMPAO has conducted a range of capacity-building projects, including on sustainable financing, alternative income-generating activities, scientific research and monitoring of MPAs, and raising local community awareness on environmental protection. In addition, in collaboration with other organizations working in conservation in West Africa (IUCN, the Sub Regional Fisheries Commission, the Regional Partnership for Coastal and Marine Conservation), RAMPAO has established the RAMPAO Task Force – a team of regional experts with various kinds of expertise in MPA management and governance. The Task Force brings technical support to MPA managers as needed. In addition, thanks to the constant and ongoing financial support of the MAVA Foundation, RAMPAO’s traditional small grants program is continuing to provide financial support to managers to initiate improved management actions.

**Successes**

In the 10 years since its creation, RAMPAO has become a network where managers, local communities, small fishermen, policy makers, and scientists from the West African region meet, discuss, exchange, decide, plan, and implement MPAs together. Today the network members are working together on an assessment of the effects of climate change, offshore oil and gas exploitation, and marine pollution on the West African coastal region.

In addition, RAMPAO shows the connectivity, complementarity, and representative and functional characteristics of the region’s MPAs. In the context of the general overexploitation of marine resources in West African waters, the MPAs and the network can serve as a basis and inspiration for regional cooperation and harmonization of measures to address overfishing.

**Lessons learned**

Building an effective network of West African MPA managers promotes exchange and mutual learning among managers by creating synergies between sites on topics of common interest. The diversity and variety of ecosystems within the network enrich and strengthen each manager’s knowledge of conservation practices, and establish a culture of continuous learning.

Effectively, each MPA of RAMPAO is no longer managed by one manager but by the 38 managers who compose the network. That’s the spirit of RAMPAO.

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**C. LMMA Network International: The Locally-Managed Marine Area Network in the Indo Pacific**

In the late 1990s, staff from various conservation organizations working in Southeast Asia and the Pacific recognized there were several initiatives in community-based marine management taking place in the region, but only limited knowledge sharing among them. From this, they proposed bringing the isolated projects together to learn collectively and improve their conservation impact.

Thus, the Locally-Managed Marine Area Network was born in 2000. Starting with a handful of sites in three countries, the Network has grown to include over 600 sites in seven country networks: Fiji, Indonesia, Micronesia, Palau, Papua New Guinea, the Philippines, and the Solomon Islands. (The LMMA Network is decentralized: it is a voluntary association of independent country networks of LMMA.)

The Network has five objectives:

- Learn about the LMMA approach through systematic monitoring and other assessment approaches
- Protect biodiversity at specific sites
- Promote the LMMA approach in the Indo Pacific and globally
- Build capacity for learning and implementation of community-based adaptive management
- Develop the policy environment at local, regional, country, and international levels to support widespread adoption of LMMA

Website for LMMA Network

By Jovy Cleofe, Assistant Manager, LMMA Network International

**Challenges**

Over the years, we have engaged in a number of strategic partnerships – with NGOs, donors, and other institutions – to achieve Network goals at all levels (site, country, regional, and international scales). These partnerships increase technical support, financial resources, and opportunities for sites and country networks. The Network in turn weighs in on partners’ strategies and initiatives, which contributes to improved policy and regional programming for LMMA approaches.

However, getting core Network operational support from these partners remains a challenge. As a result, building and nurturing these strategic partnerships, and moving concepts to the implementation stage, rely on a regional network team that operates largely on part-time schedules.

At the country level, with well-recognized capacity constraints in the region, Country Networks find challenges in recruiting and retaining qualified staff. To address this, the broader Network assesses the capacity needs of each Country Network and assigns a technical adviser to consult on gaps.
Successes

Improved governance:
In 2010, Network members agreed to establish a council to govern the Network, clarify and improve Network governance and management, and ensure the communities continued to be central to the LMMA Network in the future. All seven Country Networks are represented on the Council.

Regional policy work and government partnerships:
The LMMA Network has forged strategic partnerships to ensure Network programs and ideas are recognized at appropriate forums in the region. These include the Secretariat of the Pacific Community (SPC), the Pacific Islands Roundtable for Nature Conservation, and others. The partnership with SPC, for example, has resulted in co-production of several information materials and access for the LMMA Network to provide input to regional fisheries policies and dialogues.

Scaling up:
In Fiji, currently 79% of the country's inshore fishing area (from the coastline to the outer barrier reef) is now actively under local management, with 11% of that under permanent or periodically opened no-take reserves, and 71% of coastal villages involved. The Fiji commitment is to achieve 100% inshore management by 2020.

Outreach:
Our dozens of reports, guides, bulletins, policy briefs, videos, and other tools have assessed and reported the experience of the LMMA Network over the years. As the LMMA approach has spread through the Indo Pacific, it has also inspired and influenced a number of other country networks and subnational networks – including LMMA-style designation efforts in Myanmar, Madagascar, and elsewhere.

Lessons learned
We need to develop a larger funding portfolio for the LMMA Network**, both at the international and country levels, and work to leverage existing funding partners with other donors that have similar objectives. To some extent the funding is a chicken-and-egg situation: we need more funding to have the capacity to deliver specific products and outputs, but we probably need more physically tangible products and outputs in order to attract more funding.

The Network will need to remain relevant in terms of the new and emerging conditions that coastal communities face. There is growing recognition, for example, of the need to work from ridge to reef, to empower women, to consider alternative livelihoods, and to prepare for climate change. It's not just the local communities that are learning; the Network is needing to learn, too.

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** The work of the LMMA Network is made possible through funding support from the John D. and Catherine T. MacArthur Foundation and the David and Lucile Packard Foundation. Although the Packard Foundation ended its funding of the LMMA Network as a whole in November 2017, the Foundation has started bilateral partnerships with Country Networks like Fiji LMMA and Indonesia LMMA.

D. CaMPAM: Caribbean Marine Protected Area Management Network and Forum

The Caribbean Marine Protected Area Management Network and Forum (CaMPAM) was formed in 1997 under the framework of UN Environment’s Caribbean Environment Programme (UNEP-CEP) and the Speciality Protected Area and Wildlife (SPAW) Protocol of the Cartagena Convention. Since then, CaMPAM has grown to be a comprehensive regional program that uses a variety of mechanisms to strengthen Caribbean MPAs. These include a longstanding email list and online forum; workshops; site exchanges; a regional MPA database; a mentorship initiative that is being replaced this month by a larger Expert Group (described below, in ‘Lessons’); small grants program; and CaMPAM’s Training of Trainers courses, which have been in operation since 1999. The courses offer lessons on MPA planning, management, stakeholder participation, research, monitoring, and regional policy, along with general skills in communication and teaching.

In 2016, CaMPAM founder Alessandra Vanzella-Khouri and coordinator Georgina Bustamante received IUCN’s Fred Packard Award for their outstanding service to protected areas.

Website for CaMPAM

By Georgina Bustamante, Coordinator, CaMPAM

Challenges

In 2016, UNEP-CEP commissioned an external evaluation of the CaMPAM program, conducting dozens of interviews with organizers, partners, network members, and training and grants beneficiaries. The assessment identified various challenges facing CaMPAM:

- Ensuring and increasing funding for the network. UNEP-CEP does not have permanent funding for CaMPAM, and the grants that typically sustain the network run on two- to three-year cycles. So it requires CaMPAM to scramble every couple of years to sustain the network and its activities.
- Continuing to adapt our Training of Trainers (ToT) courses to the changing needs of managers, and to incorporate evolving technological tools. We conduct course assessments with participants after each of our ToTs. Some of the changes we’ve made as a result of the feedback have included adding more field trips to MPA sites; recruiting more regional and local experts as instructors, because many managers in the region have become experts and good lecturers themselves; focusing on emerging issues such as decision support systems, marine spatial planning, community-managed areas, and online communication tools; and adding virtual classes, with some instruction now provided via Skype.
- We also need to continue developing and improving partnerships. For example, we have involved other institutions (both national and international) in the planning and funding of the ToTs. In 2009 the Organisation of Eastern Caribbean States and Biscoo Reef Trust partnered with UNEP-CEP to implement the regional course in Tobago. The 2011 course in Guadeloupe was funded by the IUCN European Overseas Territories office, which also provided a translation of the course manual into French. In 2015, IUCN’s Biodiversity and Protected Areas Management Programme (BIOPAMA) organized the course and covered much of the cost. And this year, the regional course will take place in Barbados in partnership with IUCN’s Regional Office for Mexico, Central America and the Caribbean (ORIMAC) and University of West Indies-CERMES as part of their SocMor and BIOPAMA programs.

Successes

The most highly visible success of CaMPAM has been the ToT program. We’ve conducted 13 training courses to date, alternating among English-, Spanish-, and French-speaking locations. Graduates of the course are required in turn to develop follow-up activities (supported by a small grant) within their home countries, sharing with their peers what they learned in the ToT course. This helps build local capacity while exercising the graduates’ communication skills. More than 190 individuals have taken the course since 1999, and an estimated 1500 MPA practitioners and stakeholders have experienced the follow-up trainings. Most countries and territories of the wider Caribbean have now benefited from the courses via their practitioners. The 2016 external review of CaMPAM interviewed graduates of the ToT courses:

- 98% of graduates reported an increase in their understanding about how MPAs work, from the course;
- 97% acquired skills from the course that improved their communication with staff and stakeholders;
- 99% of graduates said the ToT positively impacted their ability to use and disseminate best practices to solve local problems.

CaMPAM’s Small Grant Program has become a popular capacity-building tool in the region. It provides supervised financial support with technical assistance to governmental and non-governmental institutions involved in MPA management.

Another success has involved partnering beyond the Caribbean. Since 2016, CaMPAM has participated in a transatlantic initiative of regional networks of MPA managers (profiled in MPA News 19:4). After a few exchange workshops of network coordinators, and presentations in several international conferences (IUCN World Conservation Congress, UN World Ocean Conference, International Marine Protected Areas Congress), four members of the CaMPAM-Expert Group (see below) participated in an exchange on coastal resilience in Gabon with MPA managers of Africa, the Caribbean, and Europe.

Lessons

What is great about CaMPAM is that the ToT courses are just one of many methods in which knowledge is shared. For example, the CaMPAM mentorship initiative – created in 2013 to assist junior MPA managers one-on-one – has grown up to become the CaMPAM Expert Group. This group serves as a cadre of experts to advise, coordinate projects, lecture, and represent CaMPAM in international meetings. The Expert Group’s 31 initial members, from 15 different countries, represent different professional skills related to MPA science, education, and management, and have a record of collaborating effectively with CaMPAM as project and exchange coordinators, course lecturers, project reviewers, etc. Twelve are MPA managers and staff; nine are Training of Trainers courses; all have Master’s degrees, and 13 hold Doctorate degrees on environmental sciences applied in advancing marine conservation and MPA management effectiveness.

Together, CaMPAM’s continually expanding array of programs allows us to understand the region’s MPA community. We have a good grasp of what managers’ issues and needs are, and we can respond through different mechanisms. Additionally the link to UNEP and SPAW gives us a good understanding of governments’ priorities and expectations in the region. I might be biased but I think the CaMPAM structure is pretty close to ideal.

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E. MPACConnect: A network of Caribbean MPA managers

MPACConnect is a learning network of Caribbean MPA managers, managed through a partnership between the Gulf and Caribbean Fisheries Institute (GCFI) and the Coral Reef Conservation Program of the National Oceanic and Atmospheric Administration (NOAA). It is separate from CaMPAM, although there are occasional opportunities to collaborate. Started from a regional management capacity needs assessment in 2011, MPACConnect now coordinates various MPA capacity-building activities in the region, including workshops for peer-to-peer sharing, follow-up site-specific support, and regional and international networking opportunities.

MPACConnect comprises 31 MPA sites in 10 Caribbean countries and territories that were selected based on several factors, including the health of their coral habitats and their governments’ commitment to relevant conservation initiatives. The member MPAs are formally nominated by their national protected area agencies to participate in the network.

Website for MPACConnect

By Emma Doyle, Coordinator, MPACConnect

Challenges

At MPACConnect’s regional peer-to-peer workshops, managers focus in depth on a specific element of MPA management. They learn new practices and gain confidence to apply them, and receive ready technical support from the MPACConnect network. Our main ongoing challenge as a network has been engaging other organizations to lend the financial support that is often needed to help MPA managers apply new practices for effective MPA implementation.

To help our network and potential partners understand the real needs of Caribbean MPA managers, MPACConnect applies a self-assessment tool to analyze sites’ management capacity. This tool helps managers identify their capacity-building priorities from among 20 different elements of MPA management. We then share the findings about these priorities with potential partners so they can immediately apply that information to design their support for Caribbean MPAs. The most recent management capacity assessment across MPACConnect sites was conducted in 2017.

Successes

First, the management capacity assessment process has given managers the opportunity to provide candid and reliable input about their sites’ needs as well as their strengths, and the latter has served to highlight credible mentors within the network. MPACConnect has come to be valued by its members for the motivation and support they receive from these mentors, their peers, and from network coordinators.

To date, we’ve targeted the highest-priority management needs identified in the 2011 capacity assessment—law enforcement, sustainable financing, socio-economic and biophysical monitoring, and outreach and education. Site-specific technical assistance, small project support, learning exchanges, and networking further reinforce regional sharing to help managers better address their unique local needs and enable the implementation of best practices.

The latest re-assessment underlined core priorities, such as financing and enforcement, and indicated new needs, such as capacity building for fisheries management by Caribbean MPA managers. The re-assessment also enabled member sites to evaluate where they have made progress. For example:

- Enforcement: Our strategy of implementing practical enforcement training for MPA managers and field officers jointly with their local law enforcement partners is producing more active and consistent enforcement of MPA rules and regulations. Compared to the 2011 assessment, in 2017 nearly twice as many MPAs reported having active and consistent enforcement programs.
- Financing: Site-specific projects and creative solutions tailored to individual sites are helping managers implement long-term MPA financing mechanisms. In the 2017 capacity assessment, fewer MPAs reported having no reliable sources of financing.
- Management planning: In 2017 we found that there are fewer MPAs without a management plan, which is consistent with efforts by MPACConnect to ensure that all member sites are implementing an approved management plan, and we’re helping managers update and re-shape plans to achieve their MPA objectives.

Lessons

The best way to respond to local capacity needs is to share the extensive knowledge that already exists among Caribbean MPA managers. MPACConnect’s members know better than anyone the local context and realities of MPA implementation. While the network certainly benefits from technical guidance and coordination by GCFI and NOAA, MPACConnect’s overall approach is to bring managers together, in some cases from beyond the Caribbean region, to share with and learn from other managers.

Keeping our finger on the pulse of members’ preferred communications tools has been essential to ensuring their ongoing engagement with the network. MPACConnect is using new tools such as videochat for sharing and networking between face-to-face meetings. Through other tools like ArcGIS StoryMaps we’re making the capacity assessment findings readily accessible to anyone looking to provide support for MPA implementation in the Caribbean region. We’ve learned that focused, sustained assistance, even with limited funding, can have a more consequential impact than larger initiatives that come and go.

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F. NAMPAN: The North American Marine Protected Areas Network

NAMPAN is a network of resource agencies, MPA managers, and other relevant experts from Canada, Mexico, and the US. It originated in 1999 under the umbrella of the Commission for Environmental Cooperation (CEC), a tri-national governmental organization. After working periodically through the CEC to implement projects to enhance knowledge and tools for more effective MPA management, NAMPAN is now establishing itself as an independent regional MPA network, outside of the CEC.

Website for NAMPAN

By Lauren Wenzel, US Coordinator, NAMPAN

Challenges

The biggest challenge NAMPAN has faced so far is the need to establish itself as an independent, funded network. Although NAMPAN has been around in some form for a decade, it is still in the early stages as a true regional MPA network. We began under the umbrella of the Commission for Environmental Cooperation (CEC), which funds and implements projects to foster environmental cooperation across the US, Canada and Mexico. While CEC was pivotal in getting NAMPAN off the ground, we now need to develop our organizational structure and funding so we can greatly expand our support to MPA managers across North America. We’re currently doing this by working through a strategic planning process, including financing options. We’ve also launched the NAMPAN website, so we can share information about the network.

Successes

Our biggest successes so far have been through our partnership with CEC. With CEC and the Coastal Ecosystem Learning Centers – a network of aquaria and zoos – NAMPAN worked on videos to highlight the importance of MPA networks across North America. We’ve also worked through CEC to develop scientific guidance and practical tools to help MPAs plan for and adapt to climate impacts. In addition, CEC produced maps of blue carbon habitats and conducted blue carbon research that NAMPAN has helped to promote and share. These are all practical tools that MPAs across North America can use to help inform their management and engage with the public.

Lessons learned

Some of the main lessons we’ve learned have been through our experience as an informal, project-based network under the CEC, and then engaging with other regional MPA networks. We’ve learned that a project-based structure isn’t a good match for the ongoing needs of a network, and that long-term goals, planning, and funding are needed to sustain regional networks.

In addition, we’ve learned about the benefits of engaging on issues in person and on site, but also the practical need to sustain our efforts through strong virtual communication tools like our website. We have plans as well to build an online list of experts on specific issues who can assist MPA managers. Our goal for 2018 is to build a basic framework for NAMPAN, and then work to reach out to a broader group of MPA managers once that’s in place.

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G. SMART Seas Africa Programme: A network of MPA managers in the Western Indian Ocean

The SMART Seas Africa Programme works with MPA managers and coastal communities to improve MPA outcomes in the Western Indian Ocean. Its work involves: 1) helping MPAs develop agreed-upon and peer-reviewed objectives with numeric targets; 2) developing monthly MPA-led monitoring of MPA ecosystems and helping MPAs to access external data; 3) building capacity of MPA managers; 4) providing decision-making tools; 5) providing long-term mentoring in a process of change; and 6) building a regional network of MPA practitioners.

SMART Seas is partnering formally with all national MPAs in Kenya, Tanzania, and the Seychelles. It also has a Facebook group that informally facilitates networking in MPAs across other nations of the Western Indian Ocean (Comoros, Madagascar, Mauritius, Mozambique, and South Africa). The Facebook group has 405 members.

Website for SMART Seas Africa

By Jennifer O'Leary, Co-Founder and Co-Director, SMART Seas Africa

Challenges

We have found three main challenges: institutional adaptive capacity, the need to train entire agencies, and long-term funding to support a sustainable process of system change within MPAs.

Adaptive capacity is a system’s ability to adapt to change. Because MPAs are in a constantly changing social and environmental context, adaptive capacity is critical. It requires having adequate knowledge, flexible governance, and an ability to innovate.

To strengthen the adaptive capacity of MPAs in the region, SMART Seas Africa focuses extensively on building knowledge and the capacity to implement innovations. However, in some nations, trust and willingness to take risks – which are part of innovation – are intrinsically low. In these cases we need to engage with social scientists and anthropologists to understand the reasons behind low adaptive capacity and address these before engaging the agency in a larger process of management. We urge conservation groups working with MPAs to first evaluate the culture of communities or agencies and address adaptive capacity before training in other areas.

Another reason we have found that trainings do not always result in uptake of new approaches in MPAs is that they typically focus on a few individuals. Most trainings are single events bringing in 1-2 people from an agency. Those people are then asked to return to their agency to implement new approaches. But often the larger agency, including the trainer’s supervisors, does not understand the new skills or approaches and may not be ready for change. Across the three nations with which we’ve worked over the past decade, we have seen that most MPA managers have been to 5-10 management training events, but the skills they’ve learned are often not being applied.

Thus, SMART Seas Africa now only partners with a new agency when there is an agreement that we will train the entire agency, including staff from all levels. We have found that this approach is more effective in creating new agency cultures and multiple champions who work together to integrate new ideas from our trainings to management.

Finally, the process of creating sustainable change in complex governmental institutions and coastal communities is not fast. Moving toward effective, evidence-based management as a national institution – from site level to whole-agency level – can take 10 years or more. While a long-term approach is clearly necessary, it is hard to fund it in short-term grant cycles (often 1-3 years). Thus far, we have been able to expand from one nation to three, and to visit each nation twice annually through generous support from the Western Indian Ocean Marine Science Association, the Pew Foundation, and SwedBio.

However, our dream of expanding our formal networking to nine nations will require longer-term investments than grants can provide, and we are still developing our financial strategy.

Successes

MPAs affiliated with SMART Seas have shown dramatic improvement in staff skills, assessment of status, and effective implementation of conservation actions.

One site-level example of success is Kenya’s Mombasa Marine National Park and Reserve. It has a no-take zone of 10 km² where fishing and other extractive uses are prohibited. The area is well-protected but very small. Surrounding this area is a 200-km² sustainable use zone in which fishing is allowed but only with sustainable gears. Gears such as seine nets that rake the seafloor are prohibited by regulation. However, for years the MPA allowed non-sustainable gears to be used because to actively prohibit them would entail a major social and political battle. In addition, MPA staff did not think the gears would cause extensive ecosystem damage.

When the MPA joined SMART Seas Africa, it began instituting our monthly ecosystem monitoring program. Through that monitoring, the MPA staff discovered that seagrass density in the sustainable use zone was less than half of that found in the no-take zone and, in fact, lower than in any other MPA in Kenya. On seeing this, the MPA embarked on a long process of working with communities to remove the illegal gears. After months of preparation, illegal gears were removed in March 2016. Since then, seagrass has recovered to the level of that in the no-take zone, and fishers using sustainable gears report increased catch.

Another success involves something as simple as swimming. Prior to the launch of SMART Seas Africa, only 15-20% of MPA managers in Kenya could swim. This meant they could not see the ecosystems they were managing. Through peer-to-peer training facilitated by SMART Seas, 90% of Kenya MPA managers now swim. Seeing the reef and seagrass ecosystems has instilled a new conservation ethic among practitioners who previously saw themselves more as soldiers.

SMART Seas Africa has also coordinated with MPAs across Kenya and Tanzania on beach cleanup events. Through these efforts, over 1.5 million kilograms of plastic trash have been removed from beaches over the past four years.

Lessons Learned

First, prior to launching a formal capacity-building program on specific management skills, social dynamics within organizations should be the original focus. Some of the most dramatic changes we have seen through a long-term mentoring process in Kenya (our longest-running program) have been increases in trust, empowerment, and teamwork. These building blocks help ensure that gained skills get used and transferred through peer-to-peer networks.

We have also found that linkages between MPAs and scientists remain weak in this region. Scientific data rarely gets passed to MPA managers, and when it does, it comes in the form of scientific papers that do not target management needs. We have worked to resolve some of the challenges associated with this by having managers ask scientists for data specific to indicators for clearly defined objectives. We have also instituted data request forms with a built-in Memorandum of Understanding indicating that data shared by scientists with the MPA will be used simply to assess MPA status, and will not be published or shared by the MPA. However, we find that MPA managers still do not often reach out to scientists with requests; and when they do, the scientists still do not share data. As the scientific community moves more and more to open access data, it would be useful if managers could be involved in conversations on what formats and types of data are the most useful.

We have also found that as MPAs gain access to data, there are increasing needs for adequate data management and analytic support. Some MPAs in our program have lost years of data through poor backup systems and computer crashes. Thus a key need is for a cloud-based data management framework that is flexible enough to be adapted to individual monitoring programs, but that can also provide some formatting and consistency in the way data is entered and stored. Such a system could also greatly help managers view trends through quick, click-button graphing applications. (In our network, where managers in some nations have only a high school level education, even basic averaging and graphing is challenging and poses a major barrier to data use in management.) Having a data visualization system where indicator targets are programmed to appear on graphs, and managers can view data trends – above or below targets, as well as toward or away from them – and variability in data would greatly enhance system understanding.

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