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Innovation in Protecting Marine
Ecosystems and Managing Fisheries
and Tourism in the Coral Triangle –
Collaborative Approaches

A workshop organised in partnership with the Coral Triangle Initiative on
Coral Reefs, Fisheries & Food Security, Conservation International,
The Nature Conservancy, and WWF

September 2016

Introduction

Partners in the Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI-CFF) are implementing innovative approaches to increase the effectiveness of Marine Protected Areas (MPAs) and rebuild fish stocks for the benefit of local fishers and businesses. They also work with the tourism sector to encourage operators to be part of MPA management and protect high-value conservation areas through best practices and financing mechanisms. Collaborative management approaches are important for effective and sustainably funded and managed MPAs with roles, responsibilities and benefits shared between national and local authorities, communities, private sector, resource owners, and users.

The IUCN World Conservation Congress, held in Honolulu in September 2016, provided the opportunity for a workshop to showcase some of the approaches applied in the Coral Triangle region. A workshop organised in partnership with the CTI-CFF, Conservation International, The Nature Conservancy, and WWF, was held to share lessons from several MPAs designed in collaboration with key stakeholders and those that work to protect biodiversity, people, and their livelihoods and help manage industries such as fisheries and tourism. The target audience included key decision makers: MPA managers; government representatives; fisheries and tourism industry players; community members; and coastal resource owners and users.

Workshop Objectives

1. Contribute to efforts to expand networks of critical marine areas that are protected, effectively managed and sustainably financed in relation to sustainable fisheries and responsible tourism industries;
2. Improve understanding of and support for MPAs and to reverse the loss of marine biodiversity and declining sources of food and livelihoods; and
3. Identify key messages for lessons sharing and for policy and advocacy.

Case Studies

A) INDONESIA: Bird's Head Seascape

Designing for fisheries and tourism benefits in an Indonesian MPA Network

Presented by Laure Katz, Seascapes Director, Conservation International

Bird's Head Seascape, West Papua Province, Indonesia, is home to traditional indigenous communities, 75% of whom are dependent on fishing for dietary protein. In particular, Raja Ampat's marine ecosystems are also among the richest reservoirs of life on earth.

But with tremendous resources comes tremendous pressures. Over the past three decades, development that started in western Indonesia has moved increasingly eastward towards Papua. This development is bringing new opportunities, but also

significant new threats to the region's forests, coastal zones, and coral reefs and is having an enormous impact on traditional livelihoods and ways of life.

Papua is in a period of dramatic change. As development progresses, careful consideration is needed to ensure that it is done sustainably and in a way that protects the incredible ecological and cultural wealth of the region.

It was from this context, and with a commitment to protect the Bird's Head's globally unique biodiversity in a way that sustains local fisheries, generates livelihoods, and empowers local Papuan communities, that the Bird's Head Seascape Initiative was conceived.



Split level of a shallow coral reef and mangroves with local West Papuan man and his wife in their dugout canoe. North Raja Ampat, West Papua, Indonesia © Jürgen Freund / WWF

The Bird's Head Seascape Initiative started eleven years ago with a simple vision: *Empowered Papuan communities, governments, and local partners protect their critical coastal and marine ecosystems, thereby protecting the single greatest reservoir of tropical marine species on the planet, while enhancing food security, livelihoods, and their traditional way of life.*

Bird's Head Seascape is 22.5M ha, approximately the size of Great Britain and has 12 MPAs, 3.6M ha, 20-30% no take, 70-80% for communities.

Designed based on traditional practices, tenure, and science with effective management and strong enforcement, the MPA network has improved local fisheries and food security, and has been successful in:

- Reducing poaching by outsiders by over 90%
- Increasing fish biomass by 114%
- Increasing catch per unit effort of local fishers by 150%

In the past decade, marine nature-based tourism has transformed Raja Ampat's economy.

In 2001, Raja Ampat had: 1 resort; 1 liveaboard; ~300 guests/year (Raja Ampat only); no tourism fee revenues

In 2013:

- Raja Ampat – 8 resorts; 40 liveaboards; >11,000 guests/year; ~\$500K/year tourism fees; top national priority destination; global recognition
- Cendrawasih – 14 liveaboards; international excitement over whale sharks
- Kaimana – 5 liveaboards; entrance fee system; massive potential and has put the Raja Ampat MPA Network on a pathway to financial sustainability

Lessons Learned

- The Bird's Head Seascape had a vision and a concrete set of objectives
- The project design was based on the set of objectives so all activities and programs supported the achievement of the objectives
- Most of the activities were focused on capacitating the community members, local leaders, stakeholders and the institutions that will later on take on the program when the project phases out
- MPA co-management, funded by tourism revenues, has created 150 local jobs and built strong constituencies of support
- Still needs effective management, strong enforcement

B) INDONESIA: Koon Island and Cendrawasih National Park

Innovation in Protecting Marine Ecosystems and Managing Fisheries and Tourism in the Coral Triangle – Collaborative Approaches

Presented by Veda Santiadji, Coral Triangle Programme Support, WWF Indonesia

- ✓ **Koon Island, Kataloka Community in Seram, Maluku, Central Moluccas, Indonesia - Bringing the tourism industry to support fisheries improvement in Koon Waters**

In May 2011, WWF and Kataloka local leaders signed a Marine Conservation Agreement to protect 2,076 ha of reef fishery habitat and Fish Spawning Aggregation Sites (SPAGs). WWF data shows that the number of fish aggregating in the SPAG during the peak season from March to May increased from 100-200 in 2012 to 100-800 in 2014.

On tourism, there are annually more than 30 recreational boats that spend at least a day diving at Koon Island before cruising onwards to Raja Ampat or Banda Neira.

In November 2015 an agreement was signed between the recreation boat association JANGKAR and

the Kingdom of Kataloka for the implementation of a Payment for Ecosystem Services (PES) to benefit the Koon MPA and local communities. The PES supports community initiatives to protect reef fishes in the SPAGs through a fee paid by the liveaboard boats to access Koon Island waters.



✓ **Teluk Cendrawasih National Park, Papua, Indonesia - Improving community's role in coastal and fisheries management through Village Regulations (PERKAM) and applying rights-based fisheries management approaches**

Teluk Cendrawasih National Park is the largest marine park in Indonesia covering 1,453,500 ha. It was established on 2 September 1993. Approximately 5,694 people live in 17 villages in Teluk Cendrawasih National Park.



Small patch reef in Kepulauan Auri chain of islands Teluk Cendrawasih Marine Reserve © Ronald Petocz / WWF

In 2013, WWF facilitated participatory mapping in eight villages to identify critical areas and natural resources that the local community is most dependent on. In 2015, WWF facilitated the development of village regulations to help manage the resources. Village regulations on coastal and marine resource management have now been finalized for six villages: Yomakan; Isenebuai; Yomber; Syeiwar; Napan Yaur; and Sombokoro.

Bomb and cyanide fishing and fishing activities using liftnet, compressor, handspike and trawl are prohibited. However, bomb fishing is still common, especially in the outer area of the reef. Operationally, with limited budget and staff, surveillance by park rangers in Teluk Cendrawasih is limited and a challenge considering the scale of the area.

Outsider fishers are asked to contribute to the community patrol of Rp500.000 per fishing trip and are required to report to the village leader before and after fishing in the village water area. They are not allowed to fish in local community fishing spots.

Visitors who dive in the village reef area are not allowed to take any animals or plants and are asked to contribute Rp200.000 per person.

Lessons Learned

- Local communities can be trained to have relatively high skills in areas such as: scuba diving; basic ecological survey; reef fish data collection; and resource use monitoring even with limited formal educational background
- Through these skills, the local communities are able to effectively carry out environmental management through customary management systems
- Village regulations and community patrols can effectively improve national park surveillance to preserve the reef ecosystem especially those close to the village and their common fishing grounds
- Participation of tour operators and outsider fishers through diving and fishing fees can ease the cost of community patrols
- Local community institutions, such as Leawana, through intensive technical assistance and capacity building, have the ability to deal with the tourism industry to manage PES to support conservation work and community development programs in remote islands
- Tourism operators and visitors need a trusted bridging institution to manage their willingness to support local community initiatives to preserve natural resources
- Lack of communications can create misunderstandings and lead to distrust within communities and/or between tour operators

C) PHILIPPINES: Aborlan and Cagayancillo, Palawan

Marine Protected Areas (MPAs) and Local Governance in Aborlan and Cagayancillo Municipalities in Palawan Province, Sulu Sea, Philippines,

Presented by Jackie Thomas, Leader WWF Coral Triangle Coordination Team, on behalf of WWF-Philippines

In the Philippines, MPAs and fisheries management are devolved to the municipal government—municipal waters are defined as 15 km from shore.

Palawan, considered nature's last frontier in the Philippines, has a special law, the Strategic Environmental Plan for Palawan (SEP) Act.

✓ **Integrated Coastal Resource Management (ICRM) Process in Aborlan**

The Aborlan municipality has a population of 32,200 and land area of 80,733 ha. It is part of the Seven Line coral reef, which is 12,339 ha, 50% of which is within municipal waters.

Aborlan's municipal waters measures 81,374 ha and is declared entirely as an ICRM area. A partnership between the municipal, provincial and village government, NGOs and academia was established. Activities of this partnership include information and awareness-raising campaigns, habitat surveys of corals, seagrass, and mangroves, and community consultations.

The area faces threats from pressure on reefs and fisheries from outsiders and destructive fishing practices.

Managing Aborlan's municipal waters began with the initiative of the local government to declare Seven Line Reef an MPA, but expanded to cover the entire municipal waters. Aborlan is the first municipality to declare its entire municipal waters an MPA and fishery management area with core, buffer, and sustainable use zones.

✓ **Cagayancillo Municipality - Seeing the benefits of MPAs**

The Cagayancillo municipality has a population of 6,200 and a land area officially measuring 26,400 ha. Its municipal waters cover 588,259 ha. This includes Tubbataha Reefs: 10,000 ha of coral reefs; a premium dive site; 100,000 ha of MPA.

In 1988, Tubbataha Reefs was declared a Natural Marine Park.



WWF researchers studying map of coral reef monitoring, Sulu Sea Philippines © Jürgen Freund / WWF

In 2004, Cagayancillo declared its first set of small MPAs, after receiving increased fish catches since Tubbataha was closed to fishing.

From 2007 to 2015, Cagayancillo's income increased fivefold due to seaweed farming, which meant a reduction in fishing pressure. Fishing pressure on Cagayancillo's reefs was caused by transient fishers and fishers using destructive fishing methods.

At the time of the WCC workshop, Cagayancillo had also flagged its intention to declare its entire municipal waters as an MPA.¹

The drivers for conservation in both Aborlan and Cagayancillo:

- Food security was a catalyst for action by communities and local government
- Communities united against external fishers coming into their areas for fishing and using destructive methods
- Strong local government leadership and commitment
- Scientific information to support decision making – seeing the connectivity
- Seeing benefits from previous conservation efforts e.g. Tubbataha Natural Marine Park

As a result, the two municipalities have agreed to their entire municipal waters being declared MPA with zonings including for fisheries management.



¹ In September 2016, Cagayancillo declared one million hectares of municipal waters for management: 528,872 hectares as a municipal-wide MPA, and the remaining 484,462 hectares also declared to manage the zone between the municipal MPA and Tubbataha.

Lessons Learned

- Aborlan and Cagayancillo – models for MPA and fisheries management
- Aborlan – a model of collaboration between provincial, municipal, village governments, NGOs, and academia
- Cagayancillo – first resented Tubbataha Reefs' no-fishing policy, but after 28 years of benefiting from it, the communities declare their entire municipal waters an MPA
- Project successful due to it being anchored to the government's programme to declare areas for fisheries management; anchored to targets of both municipalities
- Broad consultation – with local government, fisheries, seaweed farmers, tourism sector, business sector, NGOs, and academia



Reef fish from Palawan © NCegalerba-JSzwernberg

D) PACIFIC: Community Perspective

Presented by Moira Dasipio, Vice President, Isabel Mothers' Union, Solomon Islands; and Anastasia Kaue, Chairperson for the Women in Agriculture and Fisheries Programme in Kimbe Bay, West New Britain Province, Papua New Guinea.

✓ Solomon Islands

Isabel Mothers' Union is a local Anglican Church women's network that has partnered with The Nature Conservancy (TNC) to lead conservation awareness across the entire Isabel Province. This awareness promotes a Ridges to Reef approach to natural resource management and supports communities to develop their own Locally Managed Marine Areas (LMMAs). The program has resulted in over 45 LMMAs. Moira Dasipio has spearheaded this ongoing partnership with TNC and is an inspirational leader to the women of Isabel. She has also received a Coral Triangle Women Leaders Forum Award in 2014.



Moira Dasipio, Vice President, Isabel Mothers' Union, Solomon Islands © Grady Timmons / TNC

Lessons Learned

- Applying the 'Tripod' approach is necessary to get local buy-in, this means engaging the Chief, Church and Government in decision making processes
- It is important to listen to each other and address each other's concerns
- When considering engaging with mining, it is important not to sign anything you don't understand
- Moira shared the feeling that 'Women are crying for their islands' – they see that destruction is taking place and they are often not involved in decisions about how resources are used
- At first, people did not accept protected areas but when they hear about and see real, local examples of the benefits that can come in terms of food security and cash, it helps them support protected areas
- Programs succeed when done in collaboration with partners e.g. NGOs, relevant government agencies, communities, the church, and private sector
- Women should be part of the decision making process in the community particularly on issues that affect them or the family like natural resource management
- Women have an important role to play in conducting awareness raising activities in the community
- In conducting awareness raising or information, education and communication (IEC) activities, it is important to present both sides - the good and the bad side of things, including fishing, mining, logging, etc. This helps the community make an informed decision about what will happen on their land
- In developing management plans, it is important to work with the communities for ownership of the plan, effective implementation of activities, and sustainability of programs



Women count seagrass as part of conservation programmes © Jürgen Freund / WWF

✓ Papua New Guinea

Anastasia Kaue has been a great supporter for conservation in West New Britain province and has organized women to be involved in conservation and food security initiatives all in a voluntary capacity. She related strong messages about the important role of women in natural resource management in her country.

Lessons Learned

- Scientific information helps to show the community what impacts of human activities are doing to their environment
- In this way, science is helping change the mindset of people to demonstrate that more sustainable management of resources can benefit people
- The Ridges to Reef approach links land to the sea
- Decisions at government level have to include communities and women
- The Women Leaders Forum (WLF) of the CTI-CFF is involving women in conservation
- Women are agents for change – in Papua New Guinea, women are taking leadership roles
- Women must hold hands and work together. One way they are doing this is by establishing a “Women in Nature” network in Papua New Guinea. This is a national level branch of the regional CTI-CFF WLF



Anastasia Kaue, Chairperson for the Women in Agriculture and Fisheries Programme, Papua New Guinea © Grady Timmons / TNC

Workshop Summary of Key Messages

The following elements were identified from the case studies as important for effective and sustainable approaches to protecting marine ecosystems and managing fisheries and tourism in the Coral Triangle:

- Community involvement from the ground up is important for building community ownership and support;
- Women's participation in decision making and management of natural resources is critical;
- Strong local leadership helps drive and champion an initiative;
- Scientific information aids communities and resource owners in understanding and awareness of impacts on marine ecosystems and the benefits of marine conservation and sustainable management;
- Local knowledge of natural resource management needs to be included in designing MPAs and management plans;
- Design programmes with clear objectives which meet multiple needs of stakeholders and observe local rights and tenure;
- Partnerships and collaboration across government, communities, civil society, private sector and academia are important;
- Capacity building should be included at all stages, where necessary, to build community skills for sustainability to manage and enforce their MPAs and initiatives;
- Communications and awareness, outreach to all sectors of communities is important; and
- Monitoring and enforcement are necessary for sustainability of marine conservation.

