

# FINAL PROJECT REPORT

## Expanding Community Marine Managed Area Networks and Institutional Capacity to Support Coral Reef Conservation in Papua New Guinea and the Solomon Islands

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## Introduction

The Solomon Islands and PNG are located within the Coral Triangle, the world's epicenter of marine biological diversity. Both countries are home to over 500 species of coral and over 1,000 species of marine fish. Additionally, in both countries, as much as 70% of the local population depends on subsistence fishing and farming for their food and livelihoods. Unfortunately, threats to coral reefs and nearshore fisheries are growing across the Coral Triangle. In the Solomon Islands and PNG, growth in the demand for cash has driven increased overexploitation of marine resources, habitat alteration, and destructive fishing practices. Coastal development is resulting in increased pollution and sedimentation in coastal areas, while climate variability and change is impacting coral reefs, fish populations, and fueling shoreline erosion. Illegal, unregulated, and unreported (IUU) fishing by foreign boats is growing in some areas of these countries. As threats continue to grow, communities have increasingly been requesting support for management. Fortunately, many marine and coastal areas of the Solomon Islands and PNG remain in relatively healthy condition when compared to heavily exploited areas of the Coral Triangle. Likewise, given growing community interest in management, this presents a great opportunity to address cumulative threats, conserve coral reefs, and strengthen food security through strengthening of Community Marine Managed Areas (CMMAs) and establishment of CMMA networks.

In both the Solomon Islands and PNG, local communities have constitutionally protected tenure of marine resources and are the primary decision makers on management of inshore marine resources. Under the CTI, the National Plans of Action for both countries focus heavily on the role of community-based management as the key to long-term conservation success for coral reefs and to achieve sustainable fisheries and food security. In both countries, national policies on marine management emphasize supporting community-based marine management areas as the most important approach to achieving conservation of marine biological diversity, ecosystems services, and food security. Given the pivotal role of communities in management, strengthening existing CMMAs and creating networks of CMMAs is the best way to bring large expanses of coral reefs under management.

Over the past two decades there have been many projects to support the establishment of community-based marine management areas in both countries. While these initiatives have largely been successful, hundreds of communities have not yet received information and support on how to pursue marine management. However, as mentioned, communities have increasingly been requesting support for management. To address this growing demand, it is extremely important to develop more efficient and effective ways to build the capacity of communities and the institutions that support them so they can establish and expand CMMA networks.

In both Solomon Islands and PNG, the scale of support to communities for establishment of CMMAs remains limited and has primarily been pursued by international NGOs directly training communities on management. However, in numerous cases when support from the international NGO ends, so does the conservation activity. While some capacity may be built in specific communities, little lasting capacity for the long-term delivery of management support has been established. As we work to expand the numbers of communities that establish CMMAs and move to create CMMA networks, it is particularly important to develop the capacity of local permanent institutions. In this way, they can then directly train and mentor local communities over the long-term. This has been the basis of CI's work in the Coral Triangle and is the focus of this proposal.

This project will invest in existing and new CMMAs and in the creation of CMMA networks, where several CMMAs are developed relatively near one another. CI's long-term goal is to establish CMMA networks through the Solomon Islands and PNG. However, we also support the creation and strengthening of individual CMMAs as this is often a first critical step to creation of CMMA networks. In many areas, one or two communities will be early adopters of management and establish a CMMA. Often over time, through peer-to-peer learning, neighboring communities also establish CMMAs thus creating networks. These CMMA networks are both biological and social in nature. They are biological networks in that they are typically located along one coastline or in an island chain thus providing ecosystem connectivity and conservation benefits. Trainers and mentors provide communities with information on how to effectively design their CMMAs considering ecological needs of key species and ecosystems. They also support communities to consider ecological and connectivity considerations in developing networks of CMMAs. The CMMA networks are social in nature as they are typically developed by neighboring, related communities that become inspired by the success of other communities that have already established successful CMMAs. These related communities typically work collaboratively, both learning from their successful neighbors and working together on the implementation of their individual CMMAs and the CMMA network overall.

The goal of this project fully supports Goal 1 of the NOAA International Coral Reef Strategy, and is to:

Improve and maintain resilience of coral reef ecosystems and the human communities that depend on them by working with the governments and communities of the Solomon Islands and Milne Bay, PNG to strengthen and expand community-based managed marine areas (CMMAs) and CMMA networks.

The two objectives of this project fully support the achievement of this goal:

1. By the end of September 2020, CMMAs and CMMA networks in the Solomon Islands and in Milne Bay, PNG are demonstrating improved management as measured by assessment approaches that will be developed by the project.
2. By the end of September 2020, capacity and institutional mechanisms for the long-term delivery of support to communities to pursue CMMAs and CMMA networks have been strengthened in the Solomon Islands and in Milne Bay Province of PNG.

### **About Conservation International**

Founded in 1987, CI works in more than 30 countries with over 900 employees and over 1,000 partners – to help move societies toward a healthier, more sustainable development path that values nature's role in human wellbeing. In 2009, CI created its Coral Triangle Initiative program. The mission of the Coral Triangle Initiative program is to support the member countries and Regional Secretariat of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), which includes the countries of Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, and Timor-Leste. The CTI-CFF is a multilateral partnership of these six countries working together to sustain the extraordinary marine and coastal resources by addressing crucial issues such as food security, climate change, and marine biodiversity. CI's Coral Triangle Initiative Program serves as a founding partner and technical advisor to the CTI-CFF and is well suited to support partners to implement a wide range of marine and coastal resource management projects within the Coral Triangle.

## Alignment with CRCP Priorities

This project aligns with the following CRCP Priorities:

- NOAA International Coral Reef Strategy Goal 1: Work with regional initiatives to build MPA networks and strengthen local management capacity to improve and maintain resilience of coral reef ecosystems and the human communities that depend on them.
  - Objective 1.2: Develop and implement comprehensive long-term capacity building programs for existing MPAs, based on capacity assessments to provide training, technical assistance, and follow-up support.
  - Objective 1.3: Increase local enforcement capacity to improve compliance with MPA regulations and conservation-oriented customary practices.
- NOAA International Coral Reef Strategy Goal 3: Strengthen local and national capacity and policy frameworks to reduce impacts of fishing on coral reef ecosystems.
  - Objective 3.1: Provide support and technical assistance to strengthen fisheries policy, governance, and regulatory measures at national and regional levels to foster an ecosystem-based approach to fisheries management.

The project will assist the Solomon Islands and PNG in achieving their targets and commitments under Goal Three of the regional Coral Triangle Initiative on Coral Reefs Fisheries and Food Security (CTI), “Marine Protected Areas (MPAs) Established and Effectively Managed.” The project will pursue this by working with partners in both the Solomon Islands and in Milne Bay, PNG to advance individual CMMAs and networks of CMMAs. The project will also support government agencies and partners in both countries to greatly strengthen their own capacity and institutional systems to support expansion of CMMAs and CMMA networks in the long-term including the development of appropriate protocols for communities to pursue formal recognition of their CMMAs under the national marine management policies of each country. Furthermore, the project will develop and apply capacity assessment tools to efficiently measure progress and capacity needs for CMMAs, CMMA networks, and institutions that support CMMAs. Last, the project will work with local communities as they strengthen and establish CMMAs to train them in techniques to encourage compliance and local enforcement of CMMA rules.

## Project Activities in the Solomon Islands

### Outcomes Achieved During Project - October 1, 2018 to March 31, 2022

1. **Activity:** Refine and Apply Capacity Needs Assessment Tools for Establishment of CMMAs and CMMA Networks to be Appropriate to the Local Context

**Outcomes Achieved:** Prior to the start of this project, CI, along with partners from Papua New Guinea and the Solomon Islands, developed a Capacity Needs Assessment Tool to be used by conservation practitioners in the field to advance CMMAs and CMMA networks. The tool was developed based on experience under a previous project supported by the Department of Foreign Affairs and Trade of the Australian Government. The original tool consists of a set of scales; one to measure a community's progress on the implementation of CBRM and one to measure the community's ability to advocate for themselves to gain support for their CBRM efforts. The two scales were developed in a collective and consultative approach and included accompanying templates and worksheets to aid field practitioners in their use and implementation. At the conclusion of the previous project, field practitioners expressed that the scales, templates, and worksheets had several flaws that prevented their seamless use and implementation. Primarily, the field practitioners felt that the stepwise nature of the scales, which required that a community be rated on a series of steps, was too rigid and did not accurately reflect the different paths a community may take toward successful implementation of CBRM. Also, the full set of scales, templates, and worksheets were too complicated and confusing for some field practitioners to use efficiently.

Under this project, CI and local partners with the Solomon Islands Ministry of Fisheries and Marine Resources (MFMR), as well as local Papua New Guinea partner, Eco Custodian Advocates (ECA), sought to revise and improve the tool to use within their own national efforts to expand community-based resource management (CBRM). During this project, the feedback from partners in the previous project was integrated into the tool to create a second, simpler and more streamlined version that replaced the scales with independent themes to allow for more flexibility and accuracy. When evaluating individual communities or protected areas, the tool could be used to measure the community's ability to implement and advocate for CBRM through several themes: Community Engagement & Participation; Ability to Act (Knowledge, Skills, Resources); Community-Led Resource Management Action; Sustainable and Ongoing Community-Based Resource Management (CBRM); Advocacy; and Change (Biological and Community). Furthermore, with helpful insight from partners at MFMR, the tool was expanded to help practitioners identify the skills and knowledge; resources (human and financial); equipment, supplies and materials; and support that the community, clan, or group would need in order to advance in the effective management of their marine resources.

The second version of the Capacity Needs Assessment Tool was trialed by field consultants and partners with MFMR in the community of Tiaro, Western Guadalcanal Province,

Solomon Islands. This on-the-ground trial provided in-depth feedback on the feasibility and benefit of the tool. The field consultants felt that the new tool was beneficial and assisted field practitioners to assess capacity needs and prompt key discussions with communities. In addition, they recommended that the tool be further refined to better reflect the presence of traditional management and could be improved to better capture complexities in certain themes, like advocacy. Further improvements to the tool were made for use in Indonesia by CI and project partners under an ongoing Cooperative Agreement with NOAA. CI and local partners revised the tool for local context in Sumba, Biak and Morotai. They used the tool to assess capacity of the communities at the beginning of the project and plan to use it again within the next 6 months to review any changes or improvements over the course of the project.

While still considered in development, the tool, and this project's efforts to improve assessment of capacity in communities to advance CBRM contributed significantly to ongoing national efforts in the Solomon Islands. This tool and other inputs were referenced in the recent development of the Solomon Islands National Strategy to Scale Up and Improve Support for Community-based Marine Resource Management (CBRM). Following the initial drafting of the strategy in March 2019, the CBRM Section in Ministry of Fisheries and Marine Resources (MFMR), under the guidance of field consultants, advanced the strategy and further elucidated activities and desired outcomes for the five-year strategy. Under Programmatic Area #4 in the Strategy, which focuses on the development of a National CBRM Capacity Building Training Program, a series of activities were laid out to effectively equip technical staff and NGO partners with the knowledge and skills to implement CBRM work as well as to develop a series of capacity building trainings. The Capacity Needs Assessment Tool provided important inputs into this strategy development process and may also be used by government CBRM Officers in the future implementation of strategy activities with local communities in the Solomon Islands.

**2. Activity:** Provide CMMA Outreach and Management Education to at Least 30 New Communities

**Outcomes Achieved:** The following table outlines the community management and education outreach events that took place during the project. This list includes all the outreach trainings and events conducted by members of the CBRM Section under the direction and guidance of the project's field consultant, Duta Bero. The staff and capacity of the CBRM Section has been built up over the course of the past several years with direct training and mentorship from Duta Bero. The community training events are a direct result of this project's continued support for her role and for the CBRM Section. The table below includes information on activities undertaken by CBRM Officers working in various regions of the country under the direction of the project consultant, Duta Bero.

<b>Month/Location</b>	<b>CBRM training/awareness outreach event description</b>	<b>Communities Reached</b>
Nov 2018 / Malaita Province	<ol style="list-style-type: none"> <li>1) CBRM Training in Kwa'a, West Kwaio, Malaita Province.</li> <li>2) A two-day training conducted at Kwa'a, West Kwaio attended by 50 community members</li> </ol>	Kwa'a, Ngariwane, One'One, Lato, Ano'ano, Busule'e (6)
Nov 2018 / Western Province	<ol style="list-style-type: none"> <li>1) Community awareness at Mono community Shortland Islands</li> <li>2) Community Awareness at Gaomae community, Shortland Islands</li> <li>3) Community awareness at Harapa community Shortland Islands</li> <li>4) Community awareness at Pirumeri community, Shortland Islands</li> <li>5) Community awareness at Kariki community, Shortland Islands</li> </ol>	Mono, Gaomae, Harapa, Pirumeri, Kariki (5)
Nov 2018 / Choiseul Province	<ol style="list-style-type: none"> <li>1) Community awareness at Moli community</li> </ol>	Moli (1)
Dec 2018 / Central Province	<ol style="list-style-type: none"> <li>1) Nagotano community. A two-and-a-half-day training attended by 17 community members. A simple management plan was developed during the training.</li> <li>2) Niu Uvu community. A two-day training attended by 33 community members. A simple management plan was developed during the training.</li> <li>3) Community awareness at Haroro with multiple communities</li> <li>4) Saraikodo community, a two-day training attended by 26 community members. A simple management plan was developed during the training</li> <li>5) Community awareness at Saraikodo with multiple communities</li> </ol>	Nagotano, Niu Uvu, Haroro, Belagu, Saraikodo, Vuturua, Malipogosapa, Langapolo, Lukuvaka, Toa, Dende (11)
April 2019 / Central Province	<ol style="list-style-type: none"> <li>1) Community awareness in Louna community, Russell Islands</li> </ol>	Louna (1)
April 2019 / Renbel Province	<ol style="list-style-type: none"> <li>1) Tepogima community, West Rennell, a one-day training attended by 21 community members representing multiple communities.</li> </ol>	Tepogima, Ngongonoa, Kagua, Gagoniu, Segena, Uvea, Tokegau,
		Magalea, Tehakapaia (Bellona Islands) (9)

May 2019 / Makira Province	<ol style="list-style-type: none"> <li>1) Tawatana community, a two-day training conducted resulting in a simple management plan.</li> <li>2) Boro'oni community, a two-day training conducted resulting in a simple management plan.</li> </ol>	Tawatana, Boro'oni (2)
May 2019 / Isabel Province	<ol style="list-style-type: none"> <li>1) Kmaga community, a two-days training is conducted attended by 50 participants.</li> <li>2) Lelegia community, a two-day training is conducted attended by 48 participants</li> <li>3) Community awareness at Talise</li> </ol>	Kmaga, Lelegia, Talise (3)
May 2019 / Malaita Province	1) Collection of community awareness materials distributed to communities in North Malaita on awareness tour. Materials included posters on "Are we finding is hard to catch fish?" and Marine Life Books.	Manakwai, Galilee, Fiti, Rade, Ba'ako, Ngalifesi, Darawarau, Kwene, Mana'abu, A'ama, Aenata'erae, Raubabate, Bubutarake, Diula (14)
July 2019 / Western Province	1) Mbili community, Marovo Lagoon. A two-day training was conducted.	Mbili (1)
August 2019 / Malaita Province	<ol style="list-style-type: none"> <li>1) Collection of community awareness materials distributed to Pipisu community in West Are'are. Materials include posters on: <ul style="list-style-type: none"> <li>- What if we lost our mangrove?</li> <li>- What if we lost our seagrass?</li> <li>- Most dangerous species of our coasts and lagoons</li> <li>- Are we finding it hard to catch fish?</li> <li>- Marine life book</li> </ul> </li> </ol>	Pipisu (1)
<b>Total communities reached = 54</b>		

In addition to the outreach and awareness activities summarized above, the CBRM Section of MFMR also spearheaded a series of school-based awareness activities. The table below outlines the school awareness activities that took place during the project.

Month/Location	School Awareness Activity Description
Nov 2018 / Honiara	1) School Awareness at Lunga World War II Memorial School 2) Guest lecturing at Solomon Islands National University School of Marine Studies and Fisheries, Ranadi Campus
Feb 2019 / Honiara	1) School awareness at Woodford International School
April 2019 / Honiara	1) School awareness at Mbua Valley Community High School 2) School awareness at White River Community High School
May 2019 / Honiara	1) School awareness at Tamlan School
May 2019 / Makira Province	1) School awareness at FM Campbell High School 2) School awareness at Tawatana Secondary School
May 2019 / Isabel Province	1) School awareness at Kovala Primary School 2) School awareness at Kalena Primary School
<b>Total schools reached = 10</b>	

**3. Activity:** Expand the Peer-to-Peer Learning Approach to Support CMMA Network Creation

**Outcomes Achieved:** The use of peer-to-peer learning to support the creation and improved management of CMMAs has a strong history in the Solomon Islands. As is reflected in description of outcomes achieved for Activity 2 above, trainings and awareness events undertaken during this project often included multiple communities. This promotes coordination, cooperation, and shared learning between the communities, which strengthens the overall management of the marine environment across larger areas. Over the course of the project, the CBRM Section and MFMR took several steps to use peer-to-peer learning and plan for its future use. For example, in the draft National Strategy to Scale Up and Improve CBRM, peer-to-peer learning was identified as an important tool to leverage local knowledge and experience to grow CBRM networks. Furthermore, peer-to-peer learning is considered a priority activity for MFMR and is prioritized in CBRM annual work plans. In these activities, experienced communities are paired with nearby, less experienced communities to foster peer-to-peer learning and promote the growth of CMMA networks.

In addition, peer-to-peer learning has also been implemented in collaboration with other NGOs operating in the Solomon Islands. In April 2019, an exchange took place between Provincial CBRM staff in Western Province and the staff from World Wildlife Fund working in Western Province. During this time, staff shared the challenges and successes in similar initiatives in the province and were able to learn from each other's experiences. Finally, peer-to-peer learning is an important approach for the training and capacity building of CBRM Officers and Provincial Fisheries Officers (PFOs). Ongoing training and mentorship are

being fostered through peer-to-peer learning techniques to build capacity of new officers and grow the overall capacity of Provincial CBRM Offices. Through CI's partnership with MFMR, CI has continued to support peer-to-peer learning as a key strategy to achieve holistic and sustainable advancement of CBRM at the national level.

**4. Activity:** Continue to Train Staff Member of the CBRM Section on How to Facilitate and Support Establishment of CMMAs

**Outcomes Achieved:** A few years ago, only Duta Bero, the field consultant under this project, and one or two other senior officers were confident and capable enough to deliver field trainings with communities and support/guide them to establishing their own CMMAs. Today, in part due to the support this project provided, today, there are more than a dozen officers and partners who are trained, confident and equipped to conduct field trainings with communities simultaneously in different provinces across the country. One especially important achievement that has enabled this growth in capacity is the development and finalization of the CBRM Facilitator's Guide.

The CBRM Facilitator's Guide, which was approved and finalized by MFMR just prior to the COVID pandemic, constitutes a complete and standardized set of materials, guidance, and training activities to support Provincial Fisheries Officers (PFOs) to support and mentor communities' intent on establishing their own CMMAs. With this foundational curriculum, PFOs and partners have access to a catalogue of best practices tailored to the Solomon Islands that can be used to train staff of the CBRM Section on how to facilitate and support the establishment of CMMAs. A set of presentations were completed that outline the key messages of the CBRM Facilitator's Guide and facilitate a standardized training platform. These materials are provided with this report in Appendix A. After the finalization and approval of the Facilitator's Guide, CBRM Section staff and PFOs from several provinces received at least one training on the key messages of the Facilitator's Guide. Trainings took place in conjunction with meetings of the CBRM Section and PFOs in Honiara as well as at workshops and other exchanges. This model of integrating these messages and materials from the Facilitator's Guide into other meetings and activities helps to normalize and familiarize the key messages of the Facilitator's Guide broadly and integrate these practices into the ongoing CBRM activities. This wide-base capacity building for CBRM Officers and PFOs has led to a huge expansion in the number of communities reached with community trainings and awareness events/workshops and has expanded the overall capacity of the CBRM Section.

The overall guidance and key messages of the Facilitator's Guide have now been used to build capacity with staff from each of the Provinces and the CBRM Section. Although the global pandemic has restricted travel and gatherings, CI and MFMR remain committed to reinvigorating trainings and support to communities in the field as soon as possible.

**5. Activity:** Continue to Build Capacity of Mentors to Support Communities as they Pursue CMA Establishment

**Outcomes Achieved:** Capacity building and mentoring conducted in this project was primarily focused on new members of the CBRM Section of MFMR, mentorship of PFOs, partner organizations, and community leaders and champions. In large part due to support from CI since 2013 and the tireless efforts of field consultant, Duta Bero, who has been working to support the initiative, Expanding Community-based Resource Management in the Solomon Islands (ERSI), the Government has been persuaded to increase support and allocation of resources and has established the CBRM Section under the Inshore Fisheries Division of MFMR. With this expansion of support, a total of eight staff members now work to support communities in the establishment of CMMAs as well as other awareness, education, and training activities. Furthermore, within several provincial administrations, there has been an effort to increase the provincial level staff and activities to support CBRM. For example, in Malaita Province, CBRM staff have been working closely with NGO partners and the CBRM Section of MFMR to increase the scope of CBRM support to communities.

The approach for mentorship is conducted through co-facilitation and through the collective implementation of CBRM activities. This project supported Duta Bero and the CBRM Section to involve PFOs, partners, and community members, along with CBRM Officers in all activities including CBRM trainings; community consultations for the development of a CFMP; in-office community consultations seeking CBRM advice; community awareness; public awareness; school awareness; collaboration for community baseline surveys and assessments; CBRM Planning Meetings; etc. Opportunities for mentorship were frequent and every activity undertaken by the project was an opportunity for mentoring and growth.

The following table outlines the CBRM outreach activities that were conducted using the co-facilitation approach between CBRM Section staff and PFOs for the purposes of training and mentoring PFOs during the project.

Month	Activity
Dec 2018	PFO co-facilitated CBRM trainings held at Nagotano, New Uvu and Saraikodo communities, Central Province
April 2019	PFO co-facilitated CBRM training held at Tepogima community, Renbel
March 2019	CBRM Scaling Up Workshop. All stakeholders appreciated the knowledge gained as CBRM in the Solomon Islands was unpacked for the first time in a gathering of government officers, PFOs, NGOs and CBOs. According to feedback from the Deputy Director of the Provincial Fisheries Division (MFMR), PFOs requests for assistance from the division have been more substantial after the workshop and he was very thankful.
March 2019	PFO co-facilitated Community Fisheries Management Plan consultation in Tiaro Bay, Guadalcanal Province.
May 2019	PFO co-facilitated CBRM trainings held at Tawatana and Boro'oni communities, Makira Province.
May 2019	PFO co-facilitate CBRM trainings held at Lelegia and Kmaga communities, Isabel Province.
July 2019	PFO co-facilitates CFMP consultation in Tiaro Bay, Guadalcanal Province.
Aug 2019	PFO co-facilitates CBRM training held at Mbili community Marovo Lagoon, Western Province

A key focus of the mentoring and capacity building under this project was to mentor the PFOs in the key messages and newly minted processes of CBRM. The PFOs are located in Provinces, they have significant contact with and access to communities and are best positioned to do outreach. The long-term goal, as is stated in the Standard Operating Procedures (SOPs) for CBRM, is for all community outreach to be conducted, or at least co-facilitated, by the PFOs. Up to now, the CBRM Section of the MFMR has been conducting outreach with communities and developing materials, such as the Facilitator's Guide, in partnership with the PFOs in an effort to build their capacity. All trainings and awareness activities conducted by the CBRM Section with communities are co-facilitated with the PFOs to provide education and mentorship opportunities. Through mentoring the PFOs are also trained on the new requirements laid out in the SOPs for communities to receive legal recognition for their CMMAs, so they can effectively support and guide communities to gain this legal status. Community mentoring takes place through community trainings and consultations. After CBRM trainings and awareness programs in a particular community, community consultation becomes an ongoing process as the CBRM Section and PFOs continue to assist communities to develop a more inclusive Community Fisheries Management Plan (CFMP) which is aligned to the requirements of the Fisheries Management Act 2015. Furthermore, experienced CBRM Officers from MFMR have been seconded to Provincial Fisheries Offices to further support the mentoring and capacity building of the provincial staff. While there is still a need for continued mentoring and trainings for PFOs across the country, this process for mentoring and capacity building has proved to be successful. In provinces like Malaita, PFOs have grown in their capacity and are now largely responsible for all community outreach that takes place.

6. **Activity:** Develop a System with Government of the Solomon Islands to Support Communities that have Requested Assistance to Establish CMMAs and CMMA Networks

**Outcomes Achieved:** This project supported project consultants who were instrumental in the finalization of two specific tools that together constitute a system to support communities that have requested assistance, as well as track the progress of support provided to communities.

1. The Standard Operating Procedures (SOPs) – the SOP for the legal recognition of CMMA areas has been developed to guide the process for prioritizing CBRM support to communities. The SOPs include the best practices and guide MFMR and Provincial Fisheries Officer on the process to develop Community Fisheries Management Plans. Once a community leader or representative submits an Expression of Interest (EOI) to MFMR requesting support for CBRM, that community is prioritized to receive support and is included in the workplans of the CBRM Section and Provincial Fisheries Officers. Then, general awareness and outreach on CBRM takes place within zones in the areas where the communities have officially requested support. This process allows for a streamlined system to prioritize which communities receive specific support as well as

maximizes opportunity to spread CBRM awareness and messaging and encourage communities to learn from each other.

During the first quarter of this project, the SOP guidelines were supplemented by a training held by MFMR in October 2018 that specifically focused on the legal aspects. Then, in November 2018 the final draft SOPs were submitted to the Inshore Fisheries Division Management for official vetting. In the beginning of 2019, they were approved and finalized.

2. CBRM Tracking Tool – the CBRM Tracking Tool was initially created to assist the national CBRM Section in keeping track of the CBRM activities ongoing around the country. The tool includes four levels:
  - Level 1: Awareness
    - Stage 1 – Dissemination of materials
    - Stage 2 – Face-to-face awareness without EOI
    - Stage 3 – Face-to-face awareness with EOI
  - Level 2: Community Fisheries Management Plans
    - Stage 1 – Traditional tabu/management in place
    - Stage 2 – CBRM Training
    - Stage 3 – Simple management plan developed
    - Stage 4 – Alignment with consultation process
    - Stage 5 – Gazetting process
    - Stage 6 – CFMP gazetted
  - Level 3: Monitoring
  - Level 4: Capacity building of community institutions

Further development of the CBRM Tracking Tool was identified as an important piece of Monitoring and Evaluation to be included within the priority programmatic areas of the draft strategy discussed in Activity 7.

7. **Activity:** Develop and Initiate Implementation of a National Capacity Development Strategy with Partner Institutions on How to Greatly Expand the Creation of CMMA Networks in the Solomon Islands

**Outcomes Achieved:** Together with support from this project, MFMR and partner NGO, Worldfish, a four-day workshop to develop a strategy to scale up and improve CBRM took place from March 4 – 8, 2019 in Honiara, Solomon Islands. A total of 40 people attended the workshop representing national ministries including MFMR and the Ministry of Environment, Provincial Fisheries Officers from several provinces, representatives from active community programs such as Tetepare, and national CBRM Section staff. The workshop was facilitated by regional project staff, Whitney Yadao-Evans and Scott Atkinson, and included sharing and learning from experience in CBRM to date; presentations from the national government and Provincial Fisheries Officers; awareness on the recent approval of the SOP and other important tools; as well as design thinking activities to identify and prioritize programmatic areas for capacity building on CBRM. The primary purpose of the

workshop was to develop a draft strategy to scale up and improve CBRM within the Solomon Islands.

This was the first national-level workshop held in the Solomon Islands to specifically focus on CBRM and was considered a resounding success. The gathering not only made significant strides toward the development of a national strategy, but also presented ample opportunity to share and build capacity of many of the participants. In the Solomon Islands, learning from more experienced colleagues has shown to be an incredibly effective approach to building overall team capacity as well as increasing motivation and commitment by various groups.

The National Strategy to Scale Up and Improve CBRM has identified targets, desired outcomes, and activities under six programmatic areas:

- 1) National CBRM Network
- 2) Provincial CBRM Programs
- 3) CBRM Information Distribution System
- 4) National CBRM Capacity Building Training Program
- 5) Monitoring & Evaluation
- 6) Integration of livelihood into CBRM initiatives

In June 2019, a series of write shops were held and facilitated by the Inshore Fisheries Division of MFMR, which included participation from the primary stakeholders based in Honiara. These write shops resulted in an updated draft strategy that included the targets, desired outcomes and activities planned to take place over the next five years. The draft national strategy then was reviewed and further refined through a series of stakeholder and government consultations with the intention of getting feedback and establishing buy-in. MFMR had expressed its desire for this strategy to be finalized by the end of 2019 and for implementation of initial activities to begin in 2020. Unfortunately, the finalization of this strategy was interrupted by the outbreak of the global pandemic.

Despite the interruption of travel and activities from the global pandemic, CI expects this strategy and initiative to be reinvigorated by MFMR and local partners. CBRM is identified as the primary approach for the sustainable management of nearshore marine resources and this national strategy is a key piece of the National Plan of Action for the Solomon Islands under the CTI-CFF. This national strategy is also intended to direct and coordinate support for CBRM from NGOs and other partners working in direct collaboration with MFMR.



CBRM Strategy Workshop, Honiara, Solomon Islands, March 4 – 8, 2019

8. **Activity:** Support the Development of Standard Operating Procedures for Formal Recognition of CMMAs

**Outcomes Achieved:** As discussed more thoroughly under Activity 6, the Standard Operating Procedures (SOPs) supporting the legal recognition of CMMA areas were developed to guide the process for prioritizing CBRM support to communities and supporting communities to complete the necessary steps to gain legal recognition of their CMMAs. The SOPs include the best practices and guide MFMR and PFOs on the process to develop Community Fisheries Management Plans. During the first quarter of this project, the SOP guidelines CBRM were supplemented by a training held by MFMR in October 2018 that specifically focused on the legal aspects. Then, in November 2018 the final draft SOPs

were submitted to the Inshore Fisheries Division Management for official vetting. In the beginning of 2019, they were approved and finalized.

In April 2019, a meeting was held by MFMR with the whole Fisheries Division Management Section with the purpose of building knowledge and awareness of the SOPs more broadly across the government. The SOPs have been included with the submission of this report in Appendix B.

### **Challenges & Lessons Learned**

This project experienced two primary challenges regarding the orchestration of this project: 1) matching the project activity schedule to that of our local partner, MFMR; and 2) adaptively managing the project when our field-based consultants were unavailable or unable to continue their roles. As demonstrated in the support letter for this project, the provisioning of matching funds, and hiring of new staff to further the mission to expand CBRM, this project's local partner in the Solomon Islands, the national government's Ministry of Fisheries and Marine Resources (MFMR), was and remains fully committed to the goals of this project. However, as is the case in many Pacific countries, MFMR has limited staff and capacity to accomplish all of their priorities. Some project activities, such as the finalizing of the National Strategy to Scale Up and Improve CBRM were highly prioritized, and activities were undertaken well ahead of the workplan schedule. Meanwhile, due to conflicting field work, such as the Marine Spatial Planning activities under the National Oceans Policy required that CBRM Officers necessary to complete project activities were otherwise occupied for extended periods of time requiring project staff to adaptively manage the project workplan and schedule to ensure all activities were undertaken and objectives achieved. Despite this challenge, the Solomon Islands over-exceeded its targets for the project within the first year of the project and made significant strides toward advancing CBRM in their country.

The second major challenge that the project faced involved the availability of field-based consultant, Duta Bero. After several years working with CI and seconded to MFMR to advance CBRM and build capacity of government staff. Duta was officially hired by MFMR in September 2019 and became a government officer. From the programmatic perspective, this is a major success demonstrating the extent to which the government has taken ownership of the initiative to expand community-based resource management and has institutionalized the activities supported by NOAA and CI within ongoing government programs. This full integration of staff and capacity to support CBRM into government operations has been a goal of this initiative from the beginning and CI is pleased with this development. While this is a great outcome, it presented an administrative challenge for the project. In the first year of the project, capacity building support was provided through a contract to Duta as an independent consultant. Unfortunately, CI was unable to contract Duta in year two because CI is unable to directly contract a government officer.

To address this challenge, CI worked with MFMR to identify and engage a local organization to join the project that could continue the work on the ground. CI and MFMR engaged with local organizations WorldFish, Solomon Islands Conservation Trust, and WWF in attempts to initiate a sub agreement. Unfortunately, after more than 6 months of trying, CI was unable to progress forward with a sub agreement with any of these organizations. This was mainly because these organizations were reluctant to take on responsibility for the project and activities, considering they were not a part of the project from the beginning and their limited staff resources. After several months of searching for alternative

options to continue the project implementation in the Solomon Islands and considering that the Solomon Islands had already achieved all of its targets in year 1, CI determined that the best way forward was to shift the project focus entirely to PNG for the remainder of the project.

Due to these administrative challenges, CI proceeded with an Action Award Request that proposed to shift the planned allocation of second year funding from efforts in the Solomon Islands to additional aligning activities in Papua New Guinea. During this project period, that request was approved by NOAA as well as a no cost extension for the project through to September 2021. A second no cost extension was requested extending the project to March 2022 due to COVID related delays in PNG.

## Project Activities in Papua New Guinea

### Outcomes Achieved During Project - October 1, 2018 to March 31, 2022

1. **Activity:** Refine and Apply Capacity Needs Assessment Tools for Establishment of CMMAs and CMMA Networks to be Appropriate to the Local Context

**Outcomes Achieved:** As is similarly reported in the Solomon Islands portion of this report, this project supported the regional staff and local PNG partner, Eco Custodian Advocates (ECA) to refine and further develop of a Capacity Needs Assessment Tool to be used by practitioners to evaluate the progress of a specific community, clan, or group toward the implementation of CBRM. The initial Capacity Needs Assessment Tool was developed in a previous project supported by the Department of Foreign Affairs and Trade of the Australian Government. The tool is intended to be usable in various countries and contexts and is being designed with input from a variety of individuals working in different country contexts. Testing the tool in both PNG and the Solomon Islands provided a variety of quality feedback from different social and ecological circumstances and facilitated its refinement.

In this project, ECA tested the Capacity Needs Assessment Tool in the field by applying it to select communities: Anagusa, Ole, Sideia and Gonubalabala. The trialing of the tool provided critical feedback that guided key refinements and improvements to the tool's applicability. In their review of the tool, ECA found that the tool was effective in its guidance, however, the field staff observed that the differences of opinion and perspectives among groups and factions within the communities complicated the application of the tool. They noted that within communities there are champions that see the value of management and work toward the common good, making progress on the scale over time; however, there are also opportunists who push against progress. Even though the tool was designed to be completed by field practitioners, and not necessarily used to guide community dialogue (a nuance that some field staff did not fully understand) the experience of ECA staff in the field is important to consider in the ongoing development of this tool. Moving forward and reflecting on this experience, current efforts to further develop the tool to be more appropriate for local context. In the Indonesia grant, we revised the tool so it could be completed with a local partner but also served as a launch point to have constructive discussions about the community interests and needs. In other cases, it may be more appropriate to revise the needs assessment to serve more as a discussion guide for communities. Despite the limitations, this tool remains a resource and guide for ECA staff in their mentoring and support of communities in establishing new 'gwala' areas.

The experience of refining the Capacity Needs Assessment Tool, as well as open dialogue with communities, revealed an accompanying issue – the lack of capacity to comply with the legal processes by which local communities obtain legal recognition and support for Customary Marine Managed Areas (CuMMAs). Through ECA's previous work to document and promote successful case studies of local communities that have taken management action using customary 'gwala' conservation practices, such as the film *Gwala Rising*, a movement was initiated to revitalize customary management and achieve environmental outcomes through culturally and contextually relevant practices. To support this movement

– which has led to 26 different communities taking management action – ECA shifted their focus to the development of a second tool. Even though ECA and CI witnessed a dramatic increase in communities practicing ‘gwala’ during the life of the project, these Customary Marine Managed Areas (CuMMAs) are not legally recognized due to the lack of capacity of communities to meet the legal ‘paperwork’ requirements to obtain legal recognition.

As a result, ECA turned its attention to the task of developing a process and protocols that local communities can use to obtain legal recognition for their CMMAs using oral testimony. The development of this legal mechanism could be groundbreaking for recognition of customary rights in PNG and lead to the protection of indigenous/customary territories and resources across the country. Due to the lack of English fluency, especially in written form, among Papua New Guineans, any system that requires lengthy documentation is a significant barrier for many communities to establish CMMAs. Furthermore, PNG has more than 800 languages and efforts to capture these unique languages and traditions will produce invaluable cultural knowledge and will add to the rich history of the country for future generations.

Instead of the typical written management plan template that communities are required to complete documenting the CuMMA plan and regulations, ECA spent considerable time developing an audio-visual tool that allows communities implementing customary management to use an audio-visual recording to document and receive legal recognition for CuMMA establishment. The recordings include critical pieces of information such as name, boundaries, clans, person of authority, community acceptance, and rules outlined, and can be produced with only a smart phone and can be prepared in the local language. This removes barriers related to literacy in the English language and allows customary management practices to be captured, understood, and recognized.

The first draft iteration of an audio-visual tool, which guides communities to document the existence of their CuMMAs using recorded oral testimony, was completed and is ready to be tested in the field when the restrictions related to COVID have lessened. The tool will initially be tested in secondary schools, whose students have the familiarity with technology needed to be able to support their communities to use the tool. After tool development and testing, ECA will propose that the government include this tool as a part of the national MPA system currently under development.

The process of developing this new tool is politically sensitive. ECA is redefining what a CuMMA is from a customary perspective rather than a written definition/law perspective. Furthermore, how a CuMMA is recognized by a community and between communities is also important and must be considered so that one process can be recognized from both a customary and legal perspective. Given the sensitive nature of this effort, ECA has also progressed in the production of a ‘Gwala’ outline document that grounds the initiative in sound research on the scale, nature, and applicable legal structures including the role of the Village court in customary management practices. An initial iteration of this effort will be presented to the Bwanabwana LLG Assembly as well as LLG Assemblies in Yeleyamba, Maramantana, and Duau when the restrictions related to COVID are lifted or relaxed. Furthermore, this tool will be particularly applicable in relation to the Traditional Knowledge

Bill 2010, which touches on the issues related to traditional ownership and could open doors for broader recognition of rights of communities. A new policy draft associated with this bill has been shared that broadens the underlying legal mechanisms to allow for more CuMMAs to be recognized. This topic will be taken up by the Attorney General's Office of PNG in 2021.

To date, ECA has presented the gwala outline document to local level governments in Milne Bay leading to formal recognition of gwala customary law. With the support from local level governments and the church, the village courts are empowered to hear cases that arise of non-compliance and effectively codify gwala customary practice is contemporary legal frameworks. Furthermore, ECA worked with drafting lawyer in the outline of a Provincial Environment Bill for discussion that included recognition of customary marine closed areas. An outline summary of relevant sections of PNG legislation that supports '*gwala*' as customary law has been developed and ongoing discussion is occurring with the PNG Constitutional Law Reform Commission in recording of custom and the discussion on customary law. Sharing the review of this with government [Local level and Provincial Government] and community leadership to build their understanding and capacity has been initiated and will be ongoing beyond NOAA grant support.

The full application of this second tool will require additional capacity building and awareness building. The customary right to perform the act of '*gwala*' is that of community elders who speak for, and lead, their respective clans, and decide how resources on their clans' lands/waters are used and managed. However, the ability to use audio-visual technology, as well as the familiarity with local, provincial, and national laws regarding CuMMAs are skills that are more commonly held by younger community members, especially those who have received some level of formal education. Therefore, for many communities to use and apply the new tool and to enable communities across PNG to use it, capacity building and facilitation of inter-generational discussions are needed. Some communities on nearby islands, such as Ole, have already used the audio-visual tool to record the designation of the CuMMA.

## 2. **Activity:** Expand Biological Monitoring to New Islands

**Outcomes Achieved:** The outcomes achieved under this activity were challenged by both increases in poor weather conditions due to climate change that made travel to some islands infeasible for many months of the year and travel restrictions related to the global pandemic. However, despite these challenges, ECA accomplished several positive outcomes. Working closely with partners, ECA staff provided technical assistance in conducting reef fish surveys in five locations along the Tsoilil and Tigak group of islands located in New Ireland Province. During these trips, the ECA staff also shared the outreach videos with partners and local communities to further expand awareness, education, and promotion of the reemergence of traditional management customs. In addition, at the behest of the Provincial Government, ECA staff provided technical guidance and support for a series of underwater surveys being conducted on areas located close to the provincial capital, Alotau. Alotau is a small city of roughly 10,000 people, and these activities are intended to guide the

management of the marine ecosystem in Alotau and surrounding villages to ensure marine resources remain productive and sustainable.

**3. Activity:** Mentor Existing CMMAs and Support Establishment of New CMMAs to Create a CMMMA Network

**Outcomes Achieved:** Early in this project, ECA worked diligently on the creation of a film to support and encourage the establishment of new CMMAs. In 2017, an initial film was made called *Gwala Rising*, with support from CI and the Australian Government. The film told the story of Anagusa Island and their experience protecting their marine resources using traditional practice called *gwala*. This film was well received both within PNG and on the international stage and galvanized a strong reaction from communities, like Ole, who were motivated to establish their own traditional protected areas after seeing the film. Due to the success and impact of *Gwala Rising*, the ECA team produced additional films in the same style to capture perspectives of youth leaders and further support the growing local movement to revitalize traditional management practices.

The films *Vala North* and *Gwala is Life* were released officially on August 9, 2019 on the International Day of the World's Indigenous People at the University of Papua New Guinea in Port Moresby. Staff from ECA were present at the opening and held a discussion session with participants to answer questions about the film and explain the role and purpose of customary marine management practices. ECA facilitated the screening and sharing of these videos, while contributing to the discussions that they generate and offering mentoring to build on the positive reactions of the communities. ECA continues to engage one-on-one with communities to mentor and support them in their customary management and use of science to inform management, but these tools enable ECAs messages to reach many more audiences. As is the case with *Gwala Rising*, the two new videos are being aired on national television channels which reach all parts of PNG.

The production of these films brought new life to the movement to expand traditional community-based management throughout the remote islands of PNG. Tools such as these films are incredibly powerful in reinforcing current CMMAs and supporting the establishment of new CMMAs. This complementary tool aligns with this activity and supports ongoing efforts to mentor existing CMMAs, such as Anagusa, which was supported and mentored in this initial project quarter during the filming process and will help to further inspire new communities to progress in their establishment of CMMAs and the eventual formation of a network.

With these films in hand, ECA worked directly with several communities in Milne Bay and beyond to mentor the communities of Anagusa, Ole, Skelton, Tubetube, Kitai, Tewatera, Sideia, Gonubalabala Wialoki, Bonarua, Sewa Bay, East Fergusson, Madau, Kimuta, Junet, Basilaki and Panamoti. Some communities, such as Anagusa and Ole, had previously declared customary no-take areas. In these communities, ECA continued to develop the knowledge and capacity of community members to establish sustainable monitoring activities to inform community management. For example, ECA's marine biologist outlined the training needs and developed strategies for managing the artisanal commercial fishery alongside the traditional management area '*gwala*' for the community of Anagusa.

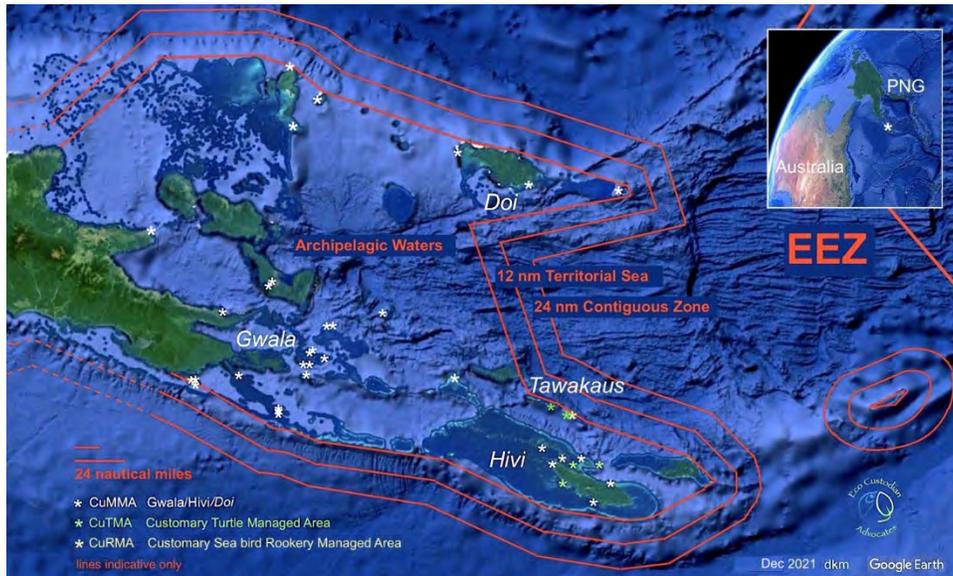
Meanwhile, communities such Sideia and Gonubalabala were mentored by ECA to build initial awareness and capacity to help the communities to better understand and take steps toward management and monitoring activities. As a result of these early mentoring activities, some communities, like Gonubalabala, declared their first customary no-take area and progressed toward establishing a customary management plan. As is the nature of customary ownership of islands and resources in PNG, it is essential that the community elect to take the steps of declaring customary no-take areas on their own, as the landowners and rightsholders. Mentoring in the context of PNG is a delicate dance – ECA strives to educate, inspire and guide but cannot be perceived to push too hard as that may lead to suspicion and foil efforts establish CuMMAs.

Thanks to the production of the film *Gwala Rising*, as well as the more recent films, word of ECA's work spread and ECA began to receive requests from other organizations, communities, and groups from across Milne Bay Province and beyond. ECA was contacted by representatives of local level governments from Kiriwina, Good Enough, Yeleyamba, Maramantana, Suau and Cape Vogel Makamaka requesting mentorship and guidance for promoting the establishment of CuMMAs with communities in their districts. Many of these islands were hit hard by the beche-de-mer exporters and the depletion of that valuable resource had significant negative impacts on local communities. Meanwhile, communities in East Fergusson are concerned about the emphasis on tourism in relation to the discussions about establishing an LMMA with another NGO, and reached out to ECA for advice and support as they consider options. ECA provided presentations to LLG Assemblies, conducted mentoring directly LLG leaders in these areas and conducted site-visits to select communities in collaboration with partners. Some of these activities were funded under a matching grant collaboration with Coral Sea Foundation and activities will take place when the COVID situation allowed for travel to remote communities. They were also contacted by non-profits including Conflict Islands Conservation Initiatives and Papua New Guinea Center for Locally Managed Areas (PNGCLMA) who were interested in learning more about their approach.

Furthermore, ECA utilized traditional trade networks to spread awareness on CuMMAs and the services they provide. For example, ECA participated in the 'opening of the door' ceremony for the Kula exchange in Sewa Bay, Milne Bay in 2021. In that traditional venue, ECA took the opportunity to promote 'gwala' and the use of smart phones to capture audio-visual recordings of customary 'gwala' practices. Kula exchange is a traditional trading system across Milne Bay, through which communities trade commodities as well as culturally important items. Reopening of the Kula exchange, post-COVID, was an excellent way to share information, stories, videos, lessons, and advice about the benefits of the gwala approach to new communities.

In addition, ECA mentored new CuMMAs in neighboring Western Province. ECA traveled to Western Province to meet with the Provincial and District Fisheries officers at the community of Daru. This new initiative gathered local fishers to develop a management plan that outlines how to manage target fish species more sustainably. By using traditional customary protected areas, 'gwala', that focus on locally driven actions, ECA hoped to inspire a more socially supported and respected form of resource management. Using data

and workshop workplans from previous consultations as reference, ECA was able to identify best practices and best approaches that may enable local fishing communities from the selected border villages to participate in developing their own sustainable fishing management plans to conserve and manage key species including dugongs, turtles and other species that are of commercial value and which are depleting/declining rapidly. These activities took place with assistance from the District and Provincial Fisheries officers, the National Fisheries Authority and CEPA as the policy implementers and advisors.



Last, ECA has used Google Earth to visually demonstrate the spread of gwala within in Milne Bay. The spread of customary closures has progressed from 2 in one Local level government area in 2017 to over 35 in 9 Local level government areas by the end of 2021. This level of uptake by different communities has been surprising and encouraging, especially given the inclusions of several different language/cultural groups.

### Films Motivated a Movement to Revitalize Customary Management

[Vala North](#) and [Gwala is Life](#). These two films follow in the footsteps of an initial film called [Gwala Rising](#), which was made with support from CI and the Australian Government. *Gwala is Life* was filmed in some of the same communities as *Gwala Rising*, but focuses on the perspectives, role and the importance of the next generation in motivating and enacting traditional conservation practices. This film is particularly geared for use in schools and communities with children to further encourage the spread of key conservation messages in the younger generations. The film *Gwala North* uses a similar format and style as *Gwala Rising*, which emphasizes storytelling in local language, Lavongai. It emphasizes the passing down of traditional management customs that work in partnership with science, with a spotlight on local communities in New Hanover Island, New Ireland Province. Similar in message and style, this subsequent film depicts different voices and languages of PNG sharing similar messages and reinforcing the power of traditional community-based management. Called 'Vala' as opposed to gwala in the local language, Lavongai, this film celebrates both the differences and similarities in culture and tradition across PNG.



Girl from Anagusa Island cleaning fresh caught tuna – scene from *Gwala Rising*

4. **Activity:** Build Capacity of Mentors to Support Communities as they Pursue CMMA Establishment

**Outcomes Achieved:** During this project, ECA used technical capacity building activities, such as biological monitoring and management planning, as well as networking champions from neighboring islands to engage and mentor new champions, motivated community members who work with ECA to progress CuMMAs within their communities. When ECA conducted field activities they encouraged champions from neighboring islands to participate and share their experience and stories. This practice was effective in influencing new mentees to become champions and motivated new champions to initiate similar activities within their own communities. This approach also provided a platform for champions to encourage and mentor each other, learning from each other's experiences and working together to address shared threats. Essentially, each activity conducted by ECA in the field incorporated a teaching and mentoring element to support community leaders and champions to drive progress within their communities toward establishing customary management of coral reef areas.

New mentees were identified from several communities and their capacity built through in-person guidance and interactions with ECA staff as well as champions from other islands. First, Elama Madiu Peter 'Elama' who was mentored by ECA, rose in political and social status in the region being named President of the Bwanabwana Local-level Government. His longtime partnership with ECA, support for customary management and the introduction of science (captured in the film *Gwala Rising*), were key to his rise in local government. As ECA continues to work to build the capacity of mentors and champions in other islands, Elama's success encourages other community leaders to follow a similar path. ECA supported and encouraged Elama to make several presentations to educational institutions and nearby LLG Assemblies in which he shared the experience of 'gwala' in his home island, Anagusa. With this support, Elama contributed significantly to the expansion of 'gwala' in Milne Bay Province.

After experiencing the impact of Elama's efforts as a champion for the expansion of 'gwala' in the province, ECA made a concerted effort to work with other individuals in similar ways and to effectively support a cohort of 'gwala' champions. ECA believes that champions should understand how to promote 'gwala' in their communities and be motivated to advocate for 'gwala' with other communities. In each community that ECA engages with, community leaders and community members support and advocate for 'gwala' in their island, and a select few may become champions. The cohort of champions supported by ECA during this project includes the President of the Bwanabwana LLG Assembly, Elama Madiu Peter ('Elama'); Marida, matriarch of the island of Wiyaloki; Robin Losilosi from the island of Panamotj; and Perry and Francis Bernard from clans of the Engineer Islands.

The process for engaging and initiating mentor relationships paid off in the community of Ware. ECA, and previously CI, had engaged with Ware for several years. Unfortunately, due to internal conflict between clans in Ware, the community had not formally established management areas. In 2017, CI and ECA partnered to conduct the [first satellite tagging of critically endangered sea turtles in Papua New Guinea](#) on a nesting beach not far from Ware

Island. This activity involved 15 youth from Ware Island. Upon their return to Ware, they advocated strongly for their community to take up management of nearby reefs and nesting areas and to protect turtles. As a result, during this project period the Ware Island community created a permanent no-take area and selected two other areas for temporary closures. This is the result of long-term mentorship and support from ECA as well as the hard work of dedicated champions that were trained and supported by ECA.

Due to a combination of harsh weather and the emergence of the global coronavirus pandemic, which restricted field activities, part way through the project ECA's efforts to build the capacity of mentors were adjusted to focus on tools for promotion of gwala. For example, ECA staff promoted and advertised for the 10th PNG National Human Rights Film Festival. Both Gwala Rising and Vala North were shown in the festival to an audience of +1500 people. In addition, Vala North, which features customary management in New Ireland, was shown on the national channel, NBC TV, and ECA Director, David Mitchell, facilitated sessions at the 3rd PNG Conservation and Biodiversity Seminar in Port Moresby. The seminar was on 'PNG Ways' and showing the film led to a discussion on traditional clan/tribal leadership and governance and gender balance in decision-making. Furthermore, ECA engaged with champions and mentors from various partner communities through phone, WhatsApp, and office visits when travel was restricted.

The films are effective in driving enthusiasm for the movement to revitalize customary practices as well as encouraging and supporting new and current mentors. The films are tools, open to the public, that can be shown on phones or other personal devices, and that mentors can use to advance conversations on customary management in their own communities. Furthermore, the stories shared in these films feature the integration of customary management and scientific tools for monitoring and have shown to inspire community mentors and champions to reach out to ECA for capacity building assistance.

**5. Activity:** Work with Local Level Government and Provincial Government to Identify Capacity Development Needs and Actions for Expansion of CMMAs in Milne Bay

**Outcomes Achieved:** ECA maintains a close relationship with the Provincial Government in Milne Bay and is considered to be a close advisor on marine resource management. Provincial Government officers often take part in field activities when they are able to do so, and tools and approaches developed by ECA have been highly supported at the provincial level. The Provincial Government sought ECA's council and involved ECA in several priority activities including considering the environmental impacts of improving their maritime port, conducting monitoring on commercial species, such as beche-de-mer, and developing provincial level quotas, etc. Furthermore, ECA's work with Local Level Governments (LLGs) took on new scope and purpose during this project. The Bwanabwana LLG requested that ECA conduct scoping and investigate opportunities for formal legal support for gwala through Village Courts. ECA was invited to join the Bwanabwana LLG to show the two videos, Gwala Rising and Gwala is Life, and to facilitate discussion on cultural resource management and monitoring of customary closures as well as review applicable laws relevant to customary management and protected areas. Lulu Osembo, the Provincial Environment Officer, pledged to support ECA by contributing fuel, in-kind and potentially

financial support for these efforts. The overall relationship with the Provincial Administration will be strengthened through a 5-year Memorandum of Agreement which was redrafted for renewal with Milne Bay Administration and hence the Provincial Government. It is currently with the provincial lawyer for consideration before sign-off.

ECA has scaled up efforts to support the passage of a law to codify customary laws concerning resource management into common law. ECA previously supported an attempt to develop a Provincial Environment Law in 2005, but unfortunately that bill was stalled due to internal politics. Since that time, several LLG Environment laws have been proposed and progressed. To support this process, ECA has collated all known Environment related law in PNG and some from other countries and reviewed these in relation to 'gwala' customary law. At present, 'gwala' is considered a customary law, but the question is how to have it recognized or nested by common law. This same question has been asked of 'ra'ui' in New Zealand, Niue and the Cook Islands and of 'sasi' in the Regencies [an administrative division under a Province] of Indonesia. ECA is engaging in discussions with a former supreme court judge and drafter of the PA Bill based in Alotau on the options in relation to moving forward on this. Therefore, ECA is often leading this discussion not just with provincial public sector but also in Environment fora at a national level. These efforts should lead to discussion and the development of a National Marine Sanctuary as allowed within the Protected Area Policy 2014, nested within CEPA (Conservation and Environment Protection Authority). Currently the Protected Area Bill 2017 has not been read in any of the National Parliamentary sittings.

ECA is still following up with PNG CLC (Constitutional Law Review Commission) on 3 documents that it launched 1. CLRC 2021 Status Report to Parliament on the Development of Underlying Law, 2. CLRC 2021 Underlying Law Research and Monitoring Strategy and Action Plan 2021-2021 and 3. CLRC 2021 Underlying Law Training Handbook: Recording of Custom repeatedly through e-mail request.

Beyond these activities at the provincial and local level, ECA engaged intensely with PNG's national level agency, Conservation and Environmental Protection Authority (CEPA), during this project. Foremost, CEPA supported ECA's initiative to investigate the roles and capacity of the LLG in supporting customary approaches in marine conservation and sustainable management. ECA spent considerable time conducting research and writing up the case for the development of a protocol that uses oral testimony to establish official recognition of CMMAAs. A major finding of this research is the neglect of the use of contemporary legal recognition of customary law in PNG. Supporting the legal recognition of customary law will redefine laws, policies, general understanding of cultural imperialism that have been perpetuated since colonization and post-independence. Legal instruments supporting policy can be applied through the LLG and Ward Development Committee (WDC), and Village Courts level of government. The document ECA is developing utilizes the capacity that exists in communities, identifies and fill gaps, and support the advancement of 'gwala' and CMMA legal instruments.

In addition to these research efforts, ECA engaged with CEPA in several ways. CEPA requested for a representative from ECA to attend a regional Coral Triangle Initiative

Meeting of the Threatened Species Working Group in Honiara, Solomon Islands in November 2019. ECA also participated in training of National CEPA officers in the drafting of Protected Area management plans, including mentoring and review of management and conservation efforts in Milne Bay Province and Madang Province; in the drafting of Protected Area management plans; establishment and development of a workplan for the National Marine Sanctuary Maza in Western Province; preparing the national government to orchestrate work to be supported by GEF6; and finalizing the PNG National Plan of Work for Sharks and Rays including regional consultations and working sessions. With ECA's support, and especially the support of ECA's marine biologist, Noel Wangunu, who was the lead author of the plan, the National Plan of Work for Sharks and Rays 2021 – 2024 was officially launched at the Protected Areas forum in June 2021. Unfortunately, Noel Wangunu passed away just a few days after the end of this project. He was a great champion and conservation leader, and he will be sorely missed.



Yvonne Tio Executive Manager Marine, CEPA holding a copy of the NPOA Shark [and Rays], whilst the Minister of Environment, Conservation and Climate Change, Hon. Mori cuts the ribbon whilst the CEPA Managing Director Gunther Joku witnesses the launch. Picture adapted from UNDP-PNG Newsletter June 2021

### Challenges & Lessons Learned

The most prevalent challenges in this project were: 1) uncharacteristically rough weather; 2) administrative challenges related to financial reporting; 3) increases in incidents of violence and piracy in the province; 4) conflicting priorities in partner communities; and 5) the emergence of the COVID-19 pandemic.

Changes in weather, and changes in timing and intensity of rainy and dry seasons has been a challenge in Milne Bay. Over the past couple of years, weather patterns have become increasingly unpredictable and irregular. Also, Milne Bay experienced a number of extreme weather events during the project. The Pacific La Nina started in October, 2020 and continued through mid-2021. Furthermore, Tropical Cyclone Niran hit Milne Bay Province between 27 February – 5 March, 2021, bringing heavy rain and high winds. Several vessels and coastal infrastructure were damaged. The dramatic shifts in weather patterns and ongoing rain throughout the year forced most subsistence farmers to delay planting yams and other staple crops essential for food security in the region. These overall stressors caused many communities to turn to marine resources as their main source of food – making ECA's work even more important. ECA remained flexible in the scheduling of activities and field work and continued to make progress on activities when opportunities presented themselves; however, these climate change related challenges made sticking to schedules and plans challenging in this project.

There were also challenges with administration on the part of our field partner, ECA. ECA, being a small and relatively new local non-profit, had some difficulties in providing appropriate documentation for

some of their expenses on this project. As a result, some of the costs requested by ECA during one of their reporting periods were disallowed and payments delayed. CI took several concerted efforts to support ECA to maintain appropriate financial records, including sending staff to Alotau to spend time with ECA to train them. CI and ECA worked closely to find solutions to these challenges throughout the project.

A significant challenge during this project was the increase in incidents of violence and piracy in Milne Bay. Referred to locally as 'rascals', groups of armed gangs began to have regular conflicts with police and incidents of theft, piracy, and gunfire became regular occurrences. Despite efforts by local police to control the situation, the tensions continue today. These instances caused delays in the timing of project activities and required that ECA staff take extra precautions before conducting field work or traveling to remote communities. This situation had a direct impact on ECA, family members of ECA staff were accosted and held up at gun point traveling between Alotau and remote islands.

The priorities of partner communities conflicted with project activities at times due to the emergence of political and economic situations. Elections at the local level caused delays and disruption to field activities. There is a risk that any field activities conducted during or just before an election can be entangled in local politics. This can cause problems with relationships between ECA and communities, especially if ECA is perceived to be supporting the candidates for office. Therefore, during these periods it was necessary for field activities to be delayed until after the elections were completed and leaders democratically elected. In addition, the season for sea cucumber diving presented some conflicts with field activities. Increased demand for cash in island communities who are experiencing hardship fueled major diving activity, which in some cases is unsafe. Many of the community members who engaged in project activities prioritized sea cucumber diving over project activities.

The situation in PNG related to the COVID pandemic became a major challenge for the project. PNG ended up with more than 40,000 COVID cases and countless deaths. Contact tracing and testing services are minimal and ineffective. Although travel is open from most areas of the country, the risk of spreading the virus to island communities is very real and ECA takes great care to assess this risk when traveling to communities. There remains little or no capacity to treat COVID outside of the capital and a couple of big cities. Rural health centers lack necessary equipment including oxygen and respirators, as well as PPE to protect nursing staff. The vaccine program from AstraZenica has become available in provincial centers but there is considerable aversion to receiving the vaccine because vaccines are uncommon for most of the population. Therefore, there has only been an exceedingly small uptake. ECA staff members even contracted COVID during the project and required isolation and recovery time. ECA staff members experienced multiple family deaths during this period requiring leave time to settle family affairs.

Due to these challenges, some field activities that were planned for this project were unable to take place. This required ECA staff to shift their focus to the development of tools and working with the government to guide the development of policy and regulatory frameworks. This also resulted in a change in the rate of spending under this project and the consequential request for multiple no cost extensions. CI and ECA are proud that, despite the numerous challenges, project outcomes were achieved and the mission to further support the creation of CMMA in Milne Bay and beyond was achieved.

## Regional Project Activities

### Outcomes Achieved During Project - October 1, 2018 to March 31, 2022

1. **Activity:** Sharing Lessons from Solomon Islands and PNG to Help Advance Regional Strategy

**Outcomes Achieved:** With support from another donor, CI leveraged the momentum from this project to complete a draft Regional Strategy for the Expansion of Community-based Resource Management. This Strategy includes many of the lessons and approaches learned from the Solomon Islands and PNG on how to advance CBRM. CI shared this strategy with key officials of the Coral Triangle Initiative and encouraged that CBRM be more fully incorporated into the new version of the CTI Regional Plan of Action (RPOA). Specifically, we recommended that, as possible, the RPOA include major recommendations of the regional strategy which include

1. Invest in Success – Increase support to existing successful efforts to expand the number of communities that are actively implementing marine CBRM.
2. Innovate for CBRM Expansion – Design innovative approaches for delivery of CBRM guidance to communities with as many possible pursuing CBRM action.
3. Build for the Future – Create country strategies and a regional practitioner network to support expansion of CBRM.

CI also shared lessons from PNG and the Solomon Islands primarily with community-based resource management practitioners in Indonesia. The primary items shared included lessons from the Gwala videos and the method of community to community spread of the CMMA approach. This resulted in the Indonesian Locally Managed Marine Area Foundation (ILMMA) starting to create similar videos to be used in Indonesia. ILMMA completed four videos after being inspired by the Gwala model. These are more instructional than the original Gwala Rising video and focus on community members sharing their experiences. Also, CI is now applying several of the lessons learned from this project to pursue ongoing funding support for community-based management in Papua New Guinea and Indonesia. CI has supported both ECA and ILMMA in their applications for funding in a major German Climate Fund project in the Coral Triangle. Furthermore, CI participated in the NOAA Coral Reef Learning Exchange in August and shared lessons from the work in PNG and the Solomon Islands with practitioners from across the world.

CI is now three-quarters through our two-year cooperative agreement with NOAA in Indonesia. This new project is designed to apply many of the lessons learned from this project in PNG and the Solomon Islands to three geographies in eastern Indonesia, partnering with the Indonesia Locally Managed Marine Area Foundation. Under the NOAA cooperative agreement for Indonesia, CI has built on the experience of the PNG and Solomon Islands Project, most directly by revising the Community Capacity Needs Assessment tool that was first developed under the PNG and Solomon Islands project. The CI Indonesia team revised the tool for the Indonesian context, adding background, instructions, and clarification on ratings to the tool. They have also added an additional section in the beginning of the tool entitled, “Community understanding of their resources

and threats” to provide space for reflection on how the community sees and values the natural resources they have

The tool was used in four villages in Sumba (Patiala Bawa, Harona Kalla, Waihura, and Baliloku), eight villages in Morotai (Bido, Buho-buho, Hino, Lifao, Sakita, Yao, Leleo Jaya, and Seseli Jaya), and 5 villages in Biak (Biawer, Wirinsos, Aman, Diano, and Sawai). It is used now as a standard part of the process of working with a local community that decides to pursue Locally Managed Marine Area establishment. Application of the capacity assessment tool provides a baseline understanding of current capacity and capacity building needs. This helps CI and our partners understand what training and mentoring is needed. The tool also provides an effective way to understand and track community progress on Locally Management Marine Areas.

We have received positive feedback about the tool and its utility in understanding the capacity of the community. It helps CI and our partners understand what training and mentoring is needed. The tool also provides an effective way to understand and track community progress on Locally Management Marine Areas. CI plans to use the tool again in the same communities and with the same partners to assess any changes over the course of the project to see if there is any measurable (albeit qualitative) difference in capacity needs between the beginning of the Indonesia grant in early 2021 and the end in mid-2022.

## 2. **Activity:** NOAA Involvement in Regional Strategy Development and Roll Out

**Outcomes Achieved:** This activity was additional to the main activities funded by NOAA and did not receive NOAA funding. As reported on previously, the Regional Strategy for expansion of CBRM was completed with the support of the Australian Government. Building on the recommendations in the Regional Strategy, CI supported PNG and Indonesia to secure additional funding in order to continue to expand community-based marine management. More recently, CI, through the Blue Nature Alliance has elected to invest in development of a LMMA network in the Western Indian Ocean (WIO). Many of the lessons and recommendations of the Coral Triangle Initiative Regional Strategy for Expansion of Community-based Marine Management will be applied in development of the network in the WIO region.

### **Challenges & Lessons Learned**

The primary challenge for the regional effort is developing and maintaining a low-cost way to continue to advance collective efforts to pursue the regional strategy for expanding coral reef CBRM. We are pleased that new funding from the German Climate Fund may become available in 2022 and may support some elements of promoting regional expansion of community-based management. We will continue our efforts to support individual countries to expand community-based management and as funding opportunities allow will seek ongoing support to continue to promote these efforts across the coral triangle region and beyond.

A major lesson is that: as designed, the regional efforts to support CBRM expansion depend on a consistent funding source. This has been difficult to secure and maintain. As a result, we recommend that individual organizations and country programs intentionally integrate a regional lesson sharing

element into their ongoing programs. Informal networks between CBRM organizations across the region have already formed over the years. These could be strengthened without needing an ongoing funding source, if practitioners make a concerted effort to share information about their progress and lessons learned with others. In this way, CBRM practitioners across the coral triangle and in other regions of the world, such as WIO, can still learn from one another, even when funds to operate a regional coordination/exchange mechanism are not available.

In response to the lack of funding to maintain a coordinated regional learning effort, we have used an organic virtual peer-to-peer method of sharing lessons. This does not require significant funding and still allows for learning and potential adoption of approaches and lessons from one country to others. It does require that practitioners take the time to share their results and that others make time to receive and consider lessons learned. This has happened organically with our encouragement as practitioners in the regional value learning and are always trying to improve their project approaches. Also, given that COVID restrictions would not have allowed in-person exchanges during this project period, the virtual sharing approach has been the only way to exchange key lessons regionally.

Tools and approaches from this project have been shared through this virtual means and successfully adopted by partners. This includes the approach of using videos and streamlined instructional brochures to inspire communities to pursue coral reef management and the application of a community capacity needs assessment and planning tool. The video approach and capacity development tool were enthusiastically adopted and adapted by CI staff and our partners in Indonesia. The approach of using streamlined instructional brochures on LMMA development was adapted and applied in Fiji. A key lesson is for projects such as this to include low-cost peer to peer mechanisms for sharing approaches and tools with other community-based conservation practitioners. If a tool or approach is effective and easy to use, there is a very good probability that others will find it useful and can apply it in their work to expand and strengthen community-based coral reef management.

## **Appendix A:**

Facilitator's Guide training presentation created by the CBRM Section of the Ministry of Fisheries and Marine Resources (MFMR) of the Solomon Islands Government.

Ministry of Fisheries & Marine Resources  
P. O. Box G2  
Honiara  
Solomon Islands



# **Topic 1: Introduction to Community-Based Resource Management**





- ▶ **What** is CBRM?
- ▶ **Why** are communities important for CBRM?
- ▶ **Values and benefits** of CBRM
- ▶ CBRM **process**: **(1)** by the community  
**(2)** by the MFMR
- ▶ **Case Study**:  
Qoi Qoi community in West Guadalcanal
- ▶ **Activity**:  
What is the objective of your CBRM?

# What is CBRM?



Fish, shell, turtle or coral

**C**ommunity-

People

**B**ased

**R**esource

**M**anagement

Looking after

- ▶ CBRM is part of our tradition (e.g. “tabu area”)
- ▶ Communities (resource owners and users) manage natural resources (e.g. forestry resources, marine resources)
- ▶ The success of CBRM depends on the commitment of community members
- ▶ Government provide technical assistance

# Why are communities important for CBRM?



- ▶ Customary ownership  
(Clans or tribes own more than 85% coastal zone)
- ▶ Community members can benefit from marine as a community, a family and as individuals.
- ▶ Our children also benefit in the future from the resources they have now.



# Values and benefit of CBRM



- ▶ Sustainable food security and income resource
- ▶ Healthy quality of life from healthy food sources
- ▶ Opportunities for income from tourism
- ▶ Cultural practices and values



**Benefits are not only for today  
but also for the future!**

# CBRM Process by communities



- ▶ Communities can carry out CBRM with/without support from outside.
- ▶ The government (Ministry of Fisheries and Marine Resources) can support Community-Based Marine Resource Management initiatives by communities.



**Communities do not have to wait for outside support to start CBRM!**

# CBRM Process by communities



**Step 1:**  
Community has **desire** for marine resource management



**Step 2:**  
Community agrees on **key goals**, the desired results



**Step 3:**  
Community develops a **management plan**

**Step 4:**  
Community establishes a **small group** to work on management plan



**Step 5:**  
**Management Plan is well-known** to all resource owners and neighboring communities

**Step 6:**  
**Carry out** the plan and apply the actions

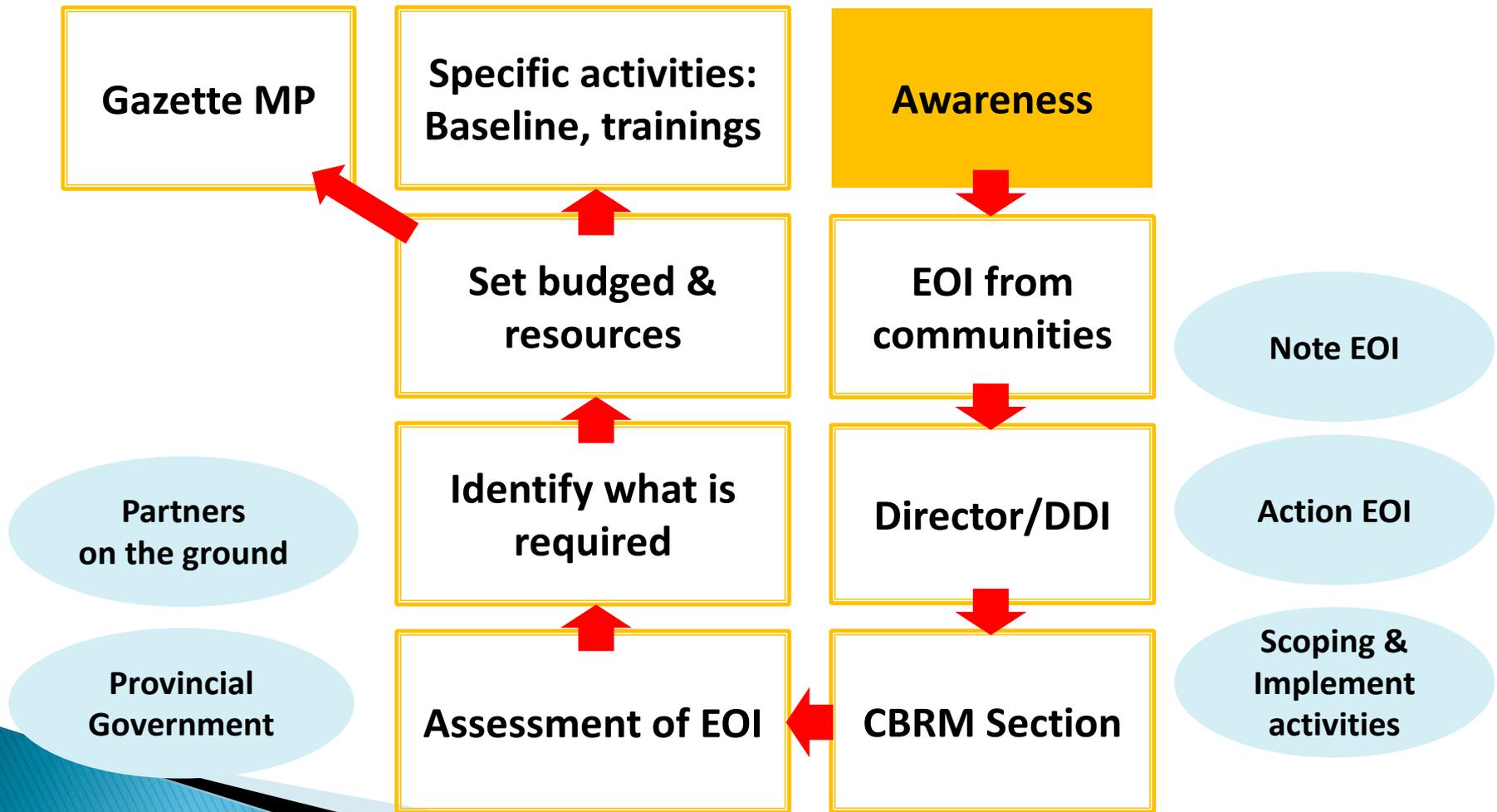


**Step 7:**  
**Check** to see the management measures and actions are carried out



**Step 8:**  
**Check** to see if management plan is working and the goals are achieved

# CBRM Process by government to support communities



# Case study: Qoi Qoi community



- A community in Tangarare area, West Guadalcanal
- Qoi Qoi Chief submitted an EOI to MFMR through their Member of Parliament, Hon. Moses Garu in 2015.
- EOI was misplaced and sighted by MFMR in 2017
- MFMR intervened in 2017

**Lesson learnt –  
Communities do not have to wait for the  
government to start management actions.**

# Management Message of Topic 1



Management of community resources is not the work of the government alone.

We must all work together.



# Activity 1: What is a goal of your CBRM?

Activity 1 (40min.):

What do you want to achieve with carrying out CBRM?

Please discuss

**“What you want to achieve through  
marine and fisheries resource management”**

1. Divide participants into 3 groups (Men, women and youths)
2. Each group illustrate their expectations in pictures/drawings and present these at the end of the activity.
3. Those expectations can be seen as your overall goals or the big picture your community wants out of carrying out marine and fisheries resource management.

# Activity 2: How can you achieve the goal?



Activity 2 (30min.):

How can you achieve those goals?

Please discuss

**“How you can achieve those  
Expectations or the big picture?”**

1. Divide participants into 3 groups (Men, women and youths)
2. Each group discuss the steps they will take to reach their expectations (steps to take to achieve the big picture)

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## **Topic 2: importance of habitats and ecosystems**





- ▶ **Importance of key habitats**  
(mangroves, coral reefs, seagrass beds, estuaries)
  
- ▶ **Status of marine life in Solomon Islands**
  - Marine flora (mangroves, seagrasses and corals)
  - Pelagic and reef fish
  - Marine reptile and marine turtles
  - Marine mammals
  
- ▶ **Case study:**  
OKRONUS in Langa Langa Lagoon
  
- ▶ **Activity:** Mapping

# What are habitats and ecosystems?



- ▶ **Habitats:** natural homes of marine life
- ▶ **Ecosystems:** marine environment
- ▶ Habitats are parts of the marine environment around us.
- ▶ A healthy marine environment has
  - Healthy habitats.
  - Diversity (Many different types of fish)
  - Clean (unpolluted) sea

# Importance of key habitats



**Mangroves**



**Coral Reefs**



**Seagrass beds**



**Estuaries**

# Importance of Mangroves



**What if we lost our Mangroves?**



**WITHOUT MANGROVES SOME FISH AND SHELLFISH WOULD BE WITHOUT SHELTER**

Mangroves provide sheltered nursery areas in which the juveniles of many marine species live and grow before moving elsewhere as adults.

**WITHOUT MANGROVES SOME FISH AND SHELLFISH WOULD BE WITHOUT FOOD**

Nutrients dissolved in water running off the land are taken up and used by mangroves. Mangrove leaves fall and rot away to form detritus — particles of material, that provide food for many animals. These smaller animals provide food for many larger fish.

**WITHOUT MANGROVES OUR COASTS WOULD HAVE LESS PROTECTION**

The exposed roots of mangroves trap particles and sediments which gradually build up and protect coasts from wave action and erosion as well as from storms and cyclones which are predicted to become intense with global warming.

**WITHOUT MANGROVES OUR CORAL REEFS WOULD BE AT RISK**

Mangroves are effective at trapping sticky clumps of sediments mixed with nutrients (called floes) that can smother small corals.

**What are MANGROVES?**



About eighty different trees that live at the edge of the sea are collectively known as mangroves.

Many mangroves have evolved exposed (or aerial) roots that absorb oxygen as well as support the tree. The orange mangrove has knee roots that stick up above the silt, the red mangrove has long prop roots that grow down from the trunk, and the grey mangrove has cable roots which send up small pegs or pneumatophores.



A series of information sheets has been produced by SPIC (www.spic.net) and IMAH (www.imahnetwork.org), which includes a specific sheet on mangroves. This information sheet lists a few of the actions we can take to protect and manage mangroves.

For further information, or to obtain copies of this poster and the SPIC/IMAH information kit for fishing communities, contact:



## For marine life:

- Natural home of fish, crab, prawns or shells
- Nursery area for many fish
- Hiding place
- Filtering pollutions and protect reefs
- Providing nutrients

## For people:

- Sources of food and income (fish, crabs, prawns, mangrove fruits/seeds)
- Fire wood, building material
- Coastal protection from cyclones, high winds and storm surges

# Importance of Coral Reefs



## For marine life:

- Natural home of many marine life (fish, turtles, invertebrates, mammals)
- Place for spawning, nursery, hiding and feeding
- Providing nutrients
- Contributing to quality and clarity of sea water

## For people:

- Sources of food and income (marine animals and coral itself)
- Recreational area
- Lime production
- Attraction for tourism

# Importance of seagrass beds



What if we lost  
**our Seagrass?**



**WITHOUT SEAGRASS SOME FISH AND SHELLFISH WOULD BE WITHOUT SHELTER**

Beds of seagrass provide sheltered nursery areas in which the juveniles of many marine species live and grow before moving elsewhere as adults.

**WITHOUT SEAGRASS SOME ANIMALS WOULD BE WITHOUT FOOD**

Green turtles, dugongs, some fish and sea urchins eat seagrasses. Seagrass leaves eventually rot away to form detritus — particles of material that provide food to many other marine species.

**WITHOUT SEAGRASS OUR COASTS WOULD HAVE LESS PROTECTION**

Because they trap sediments, seagrasses gradually extend shorelines and protect coasts from wave action and erosion.

**WITHOUT SEAGRASS OUR CORAL REEFS WOULD BE AT RISK**

Beds of seagrass trap sediments that could otherwise smother coral reefs.

**What are SEAGRASSES?**



Seagrasses have leaves attached to short upright stems and creeping horizontal stems or rhizomes. The leaves are long and grass-like in most species but are like broad paddles in the species shown at the left of the illustration.

Seagrasses grow in shallow water, commonly just below low tide on reef flats and sandy lagoons and between tides on muddy banks. Healthy seagrasses can form vast beds resembling winter wheat fields or meadows.

A series of information sheets has been produced by SPC ([www.spc.int](http://www.spc.int)) and [www.terramanua.org](http://www.terramanua.org), which includes a specific sheet on seagrasses. This information sheet lists a few of the actions we can take to protect and manage seagrasses.

For further information, or to obtain copies of this poster and the SPC/IMM information sheet for fishing communities, contact:



## For marine life:

- Natural home of many fish and invertebrates (rabbit fish, sea cucumber)
- Source of food for some species (dugongs, green turtles, rabbit fish)
- Nursery area and hiding place for juveniles
- Maintaining water quality
- Stabilizing the sea bottom with roots

## For people:

- Sources of food and income (fish, ark clams, crabs, sea cucumber)
- Coastal protection from erosion

# Importance of Estuaries (mamana wata)



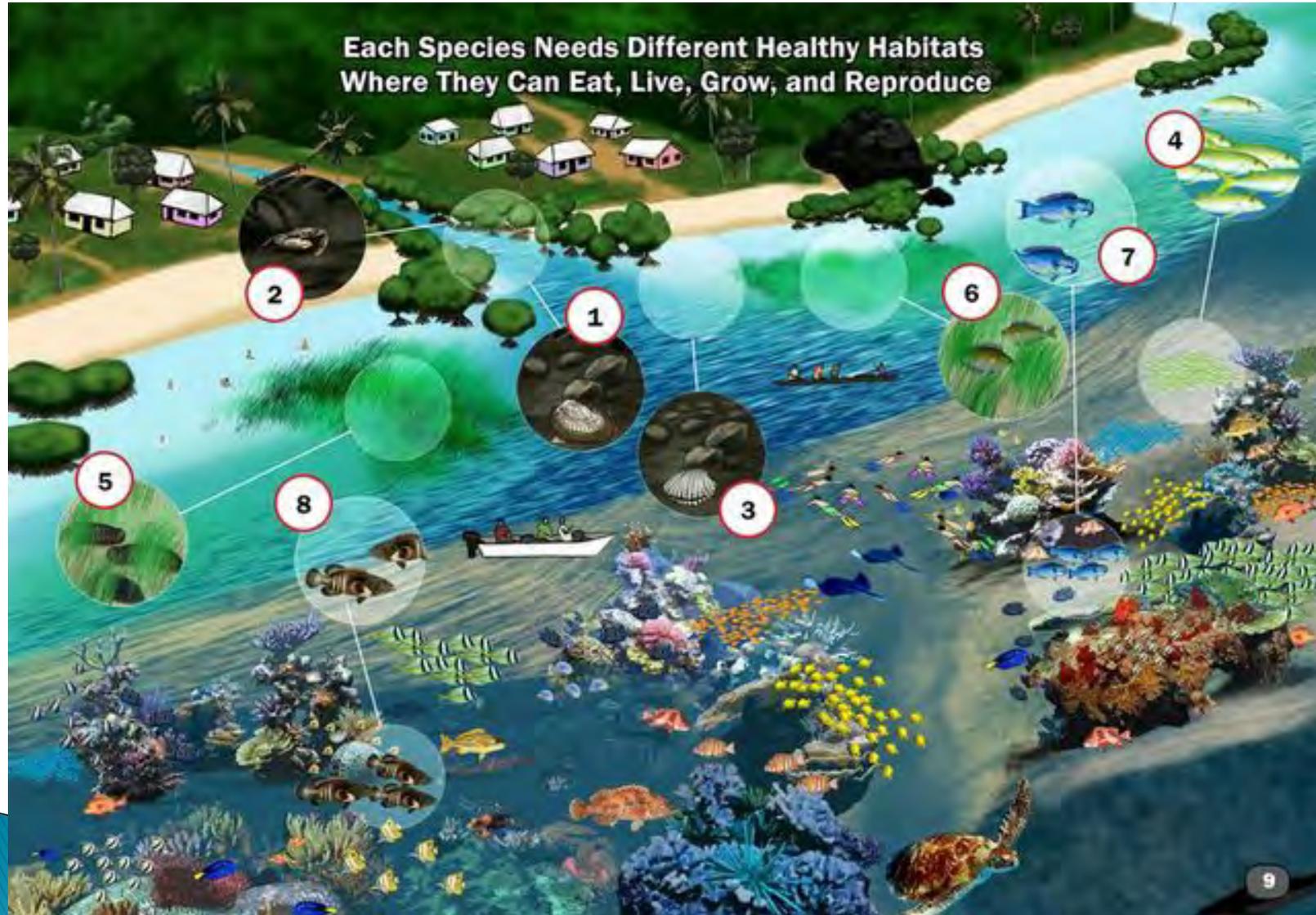
## For marine life:

- Permanent homes for plants and animals
- Provide nutrients
- Breeding grounds and shelter for fish
- Providing habitats (mangroves, sandy bottoms)
- Filtering sediments and pollution

## For people:

- Traditional life style (food source, transportation route)
- Supporting local economies (Bait fish/katukatu)

# Importance of habitats



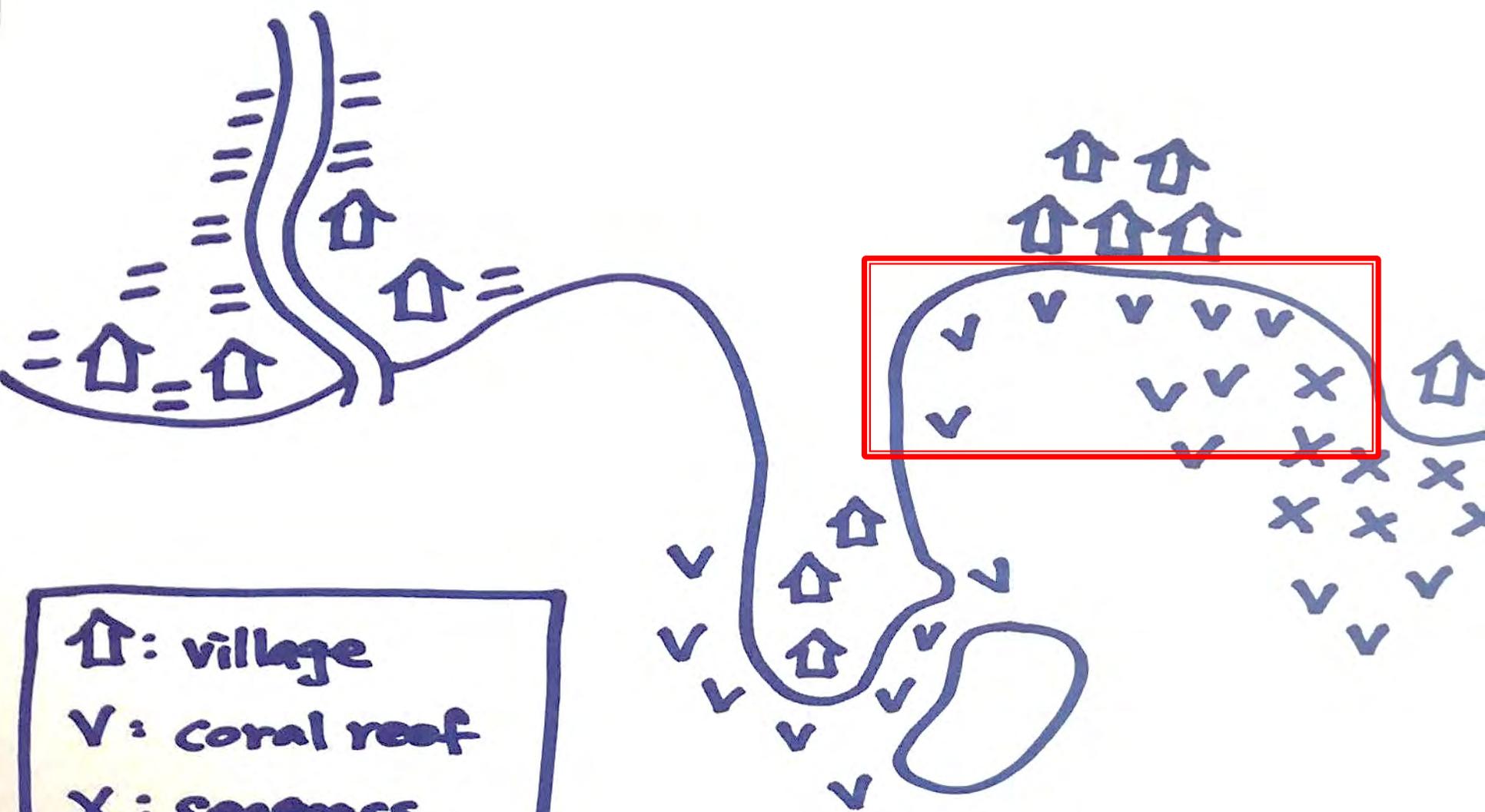


# Activity 1: Mapping your habitats

**Approx. time: 60 minutes**

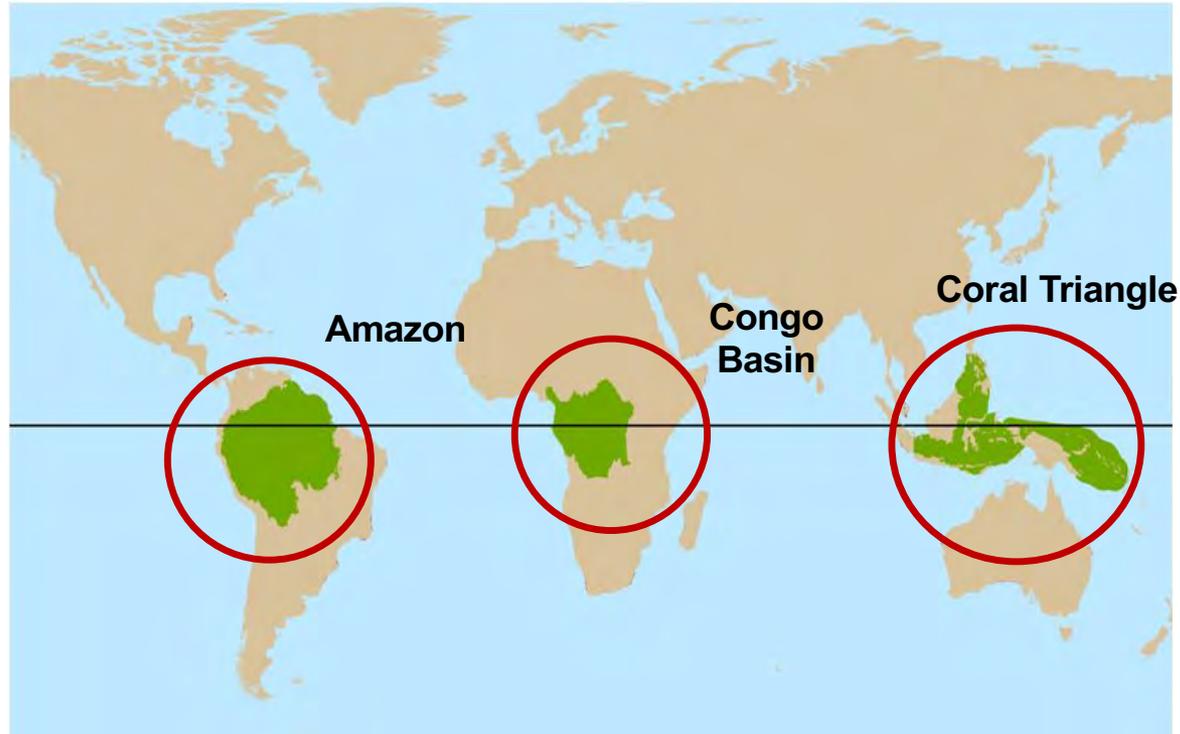
1. Draw a map of your community with habitats  
(mangroves, coral reefs, seagrass beds, estuaries)
2. Draw a map of your coastal area
3. Include area to be managed





↑: village  
V: coral reef  
X: seagrass  
=: mangrove

# Status of marine life in solomon island



- Solomon Islands is very rich in marine biodiversity.
- Part of the Coral Triangle - most diverse ecological complex on earth.



# Marine flora

- mangroves, seagrasses and corals

- ▶ Mangrove: 31 species  
(45% of the world's mangrove species)
- ▶ Seagrass: 10 species
- ▶ Coral: 485 species  
(the highest diversity in the world)

# Pelagic and reef fish, marine reptile and marine turtles.



- ▶ Pelagic fish: 19 species  
skipjack, island bonito, yellow fin, albacore and big eye tuna are the most important pelagic species (important revenue for the country)



- ▶ Fish: 1019 species  
Highest diversity – Njari island near Gizo in Western Province with 279 fish species.
- ▶ Crocodile: 1 species
- ▶ Marine turtle: 5 species

# Marine mammals



- ▶ Dolphins: 9 species
- ▶ Dugongs: 1 species
- ▶ Whales: 8 species



# CASE STUDY : OKRONUS LANGA LANGA LAGOON, MALAITA



- ▶ Community depends heavily on mangroves for food, fire wood, building materials, selling mangroves for firewood for income etc.
- ▶ Community leads re-planting of mangroves



# Management Message of Topic 2



- ▶ Both marine life and people depend on healthy marine habitats.
- ▶ Our marine environment is a free gift from God. We must look after it.



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## **TOPIC 3: Life cycle of important fish and marine animals**

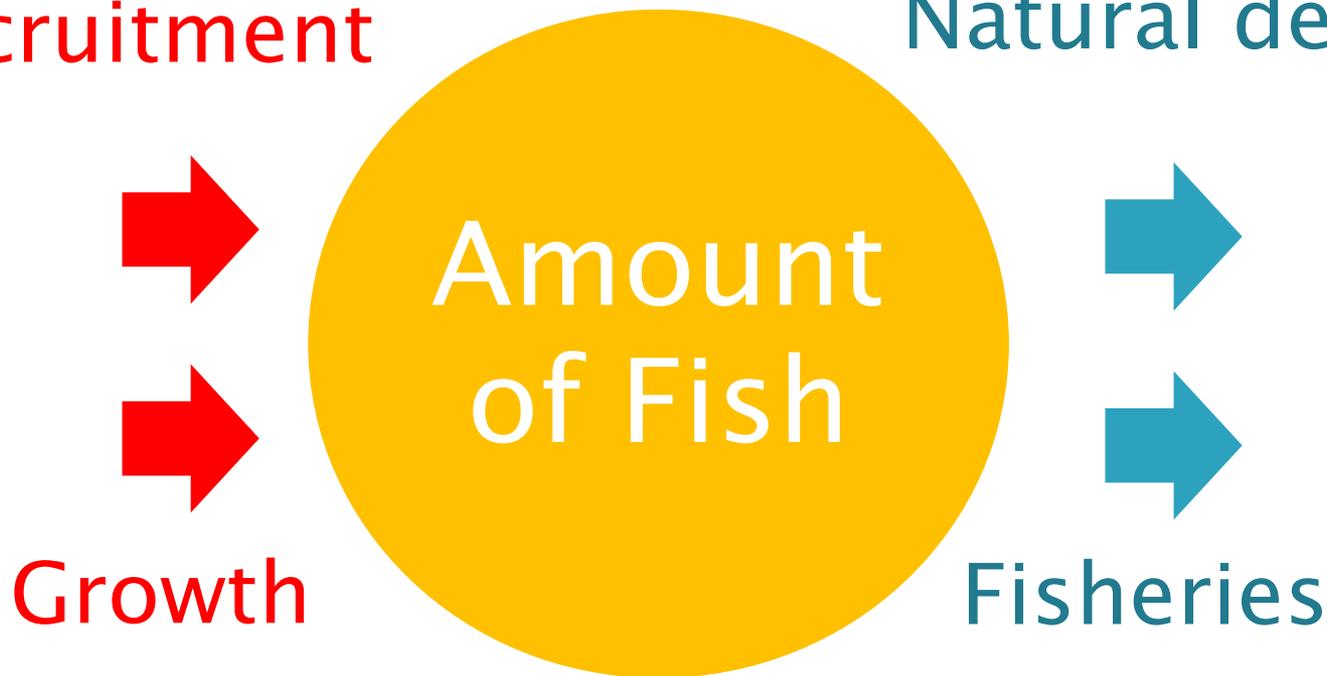


# Successful reproduction



Recruitment

Natural death



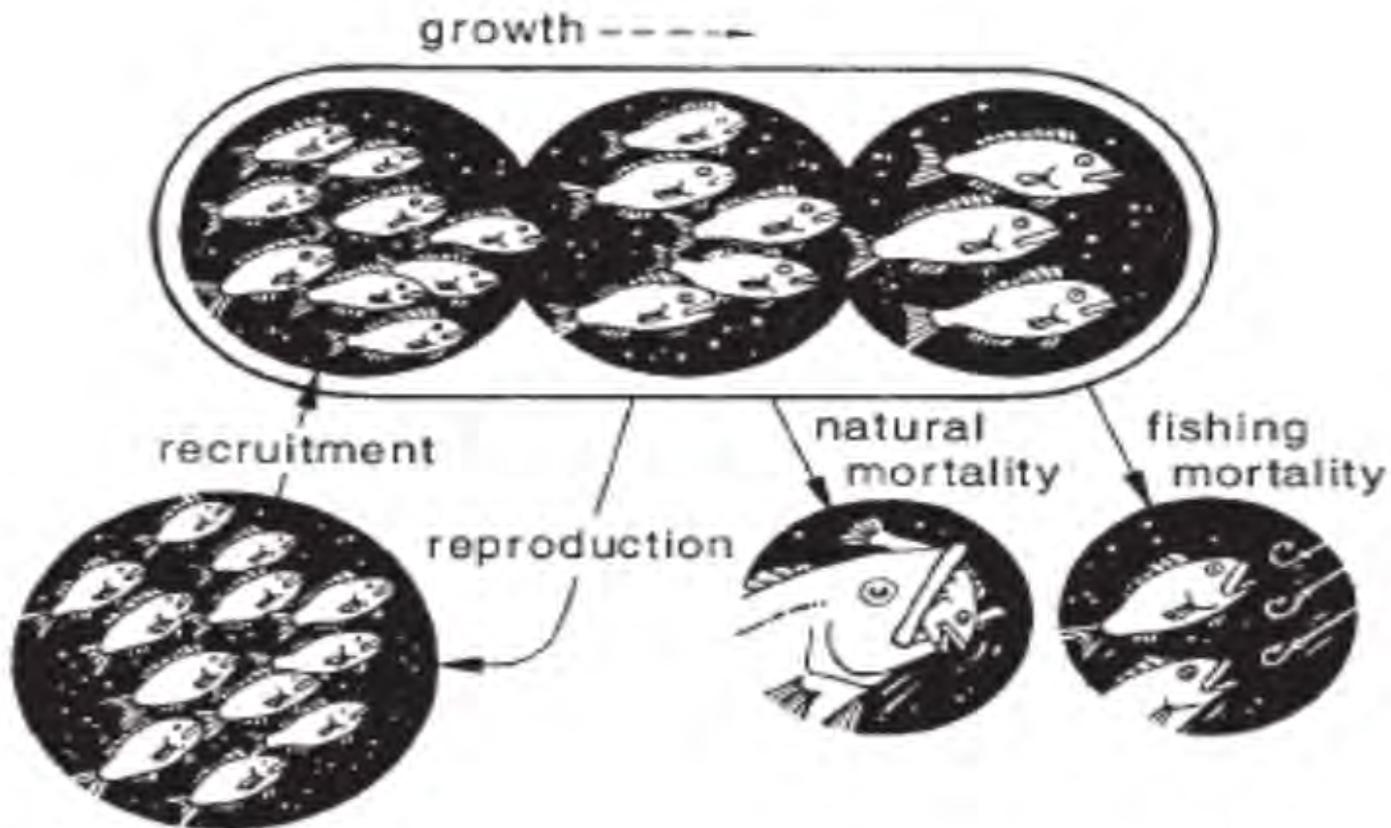
growth & recruitment should be greater than fishing mortality & natural mortality.

# Stock size will be increase with..



**Recruitment:** Number of young fish enter population each year

**Growth:** Individual growth (weight and length)

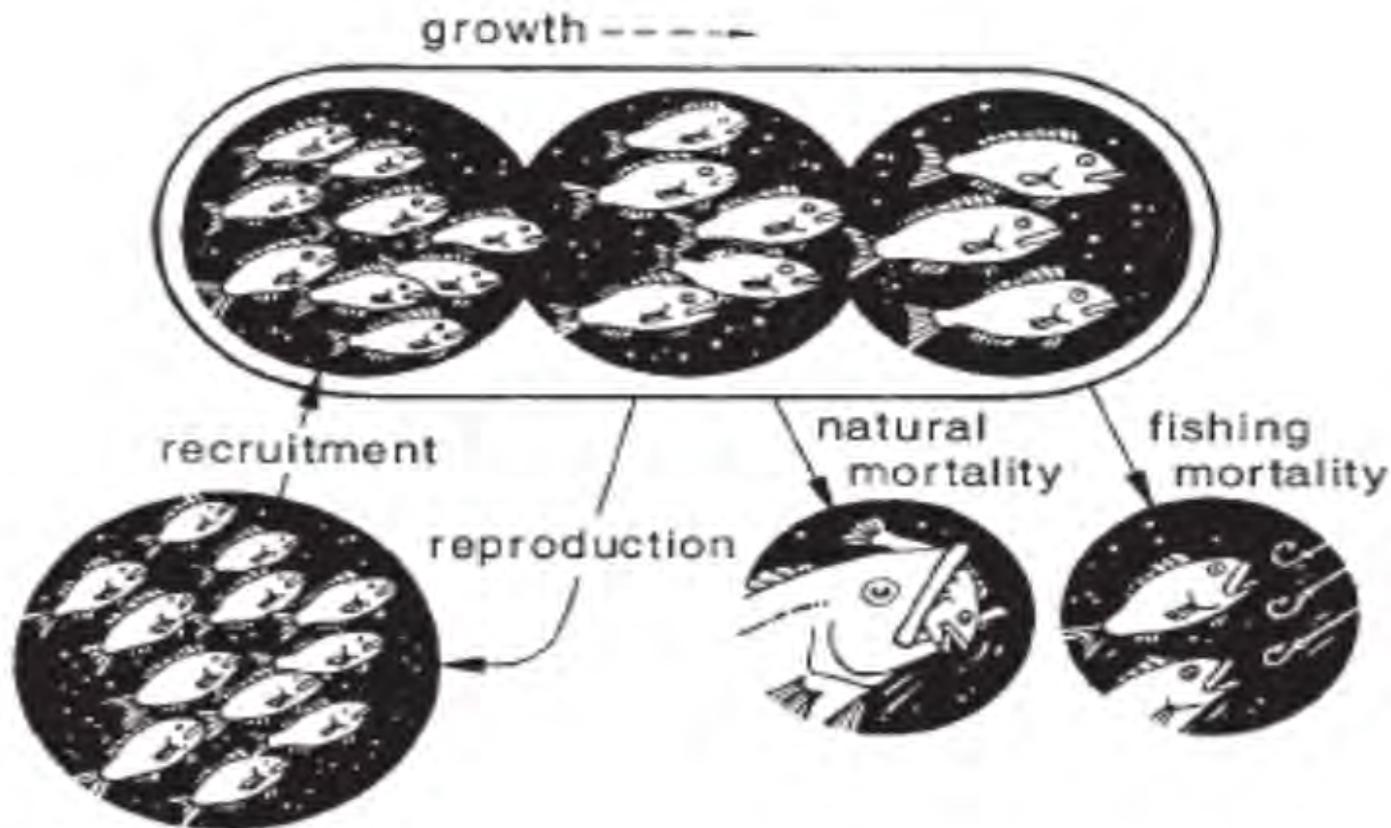


# Stock size will be decrease with..

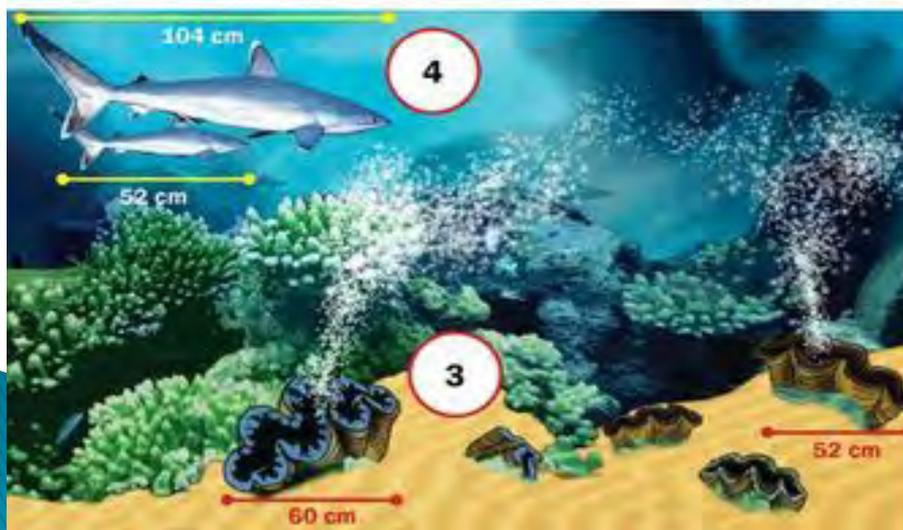


Natural mortality – rate of population die naturally

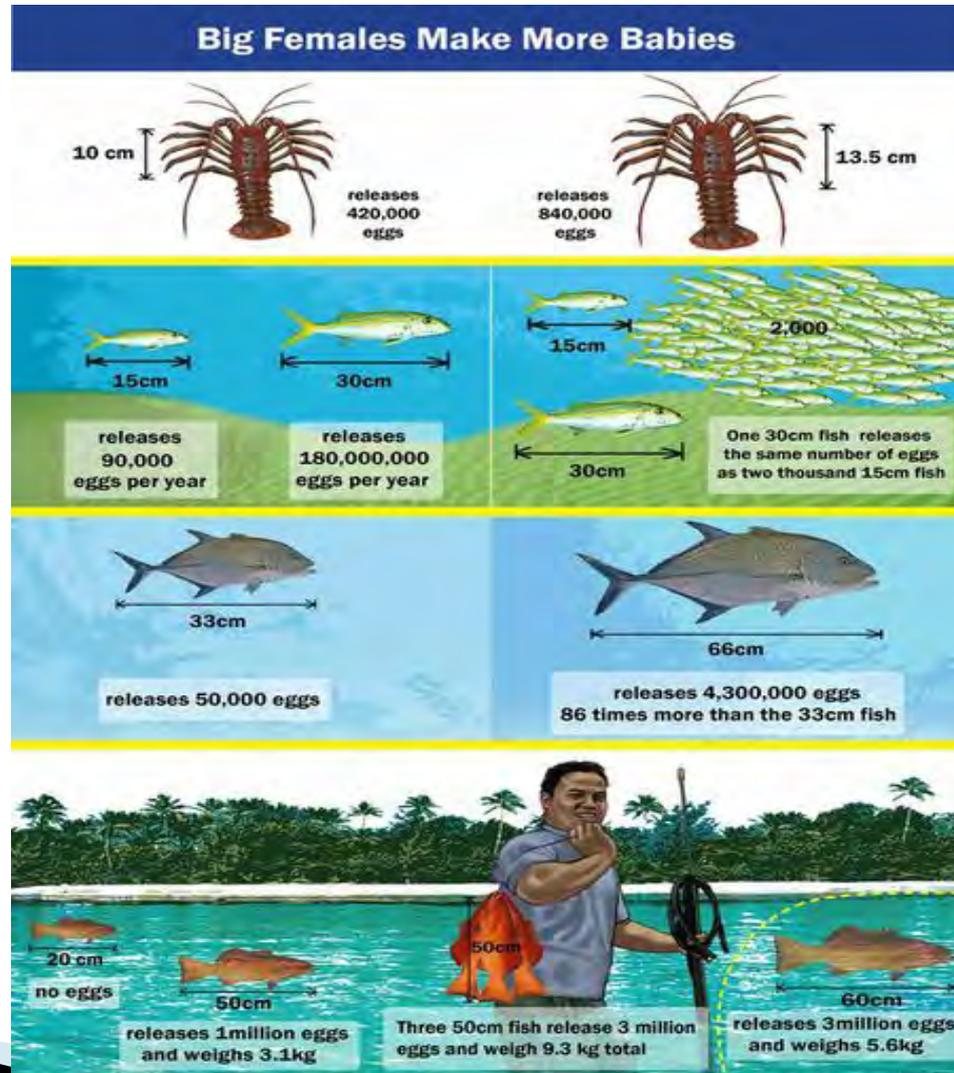
Fishing mortality – rate of populations die due to fishing



# Successful reproduction depends on Location, Numbers, Body size and Timing



# Bigger fish can produce more eggs

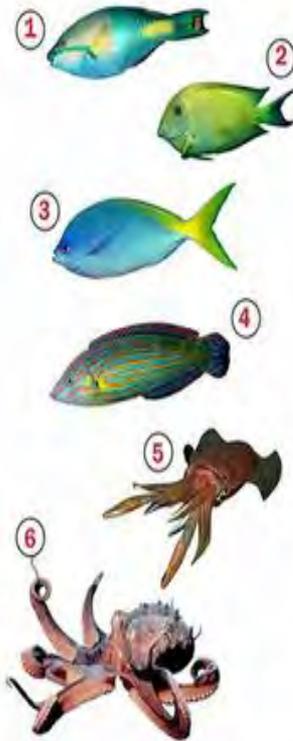


# Fast growing species and slow growing species



Some Species Are More Vulnerable, And Recover More Slowly Than Others

Less Vulnerable  
Grow, Reproduce, and Recover Faster



More Vulnerable  
Grow, Reproduce, and Recover Slower



# Endangered Species



Some of these species are locally endangered (e.g. marine turtles, dugongs, giant parrotfish (topa), Maori Wrasse, giant clams, green snails and coconut crabs)

# Management Message of Topic3



- ▶ Successful reproduction depends on location, numbers, body size and timing...management must consider these.



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## TOPIC 4: Threats to marine resources and challenges to CBRM



# Introduction



- ▶ Some threats which cause negative impacts to marine resources (e.g.) Overfishing, logging, distractive fishing
- ▶ We need to understand threats to make management actions realistic and minimize impacts on community livelihoods.

# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.1. Target species issues



### Key Message1:

Even though we depend on our coastal fisheries for food and income, our harvesting practices can directly threaten these resources.

# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.1. Target species issues



**Key Message2:**  
Targeting a particular species will cause imbalance to the food web.

# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.1. Target species issues



**Key Message 3:**  
Avoiding fishing on Spawning aggregation  
(taem Fish Kam fo bonbon Pikinnin)

# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.1. Target species issues



### Key Message 4:

Harvesting threaten species can further reduce their population and leads to local extinction.

# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.2. Damaging gear and methods

### Dynamite fishing destroys reefs



#### Key Message 5:

Avoid using fishing gears that will cause a lot of destruction to fisheries including habitats, marine animals & plants.

# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.2. Damaging gear and methods

- ▶ Intensive gleaning and fish drives. Eg; Gleaning for shells can cause physical damage to coral reefs.
- ▶ Breaking corals to catch sheltering species. Eg- Breaking corals to harvest clam shells causes collateral damage to corals.

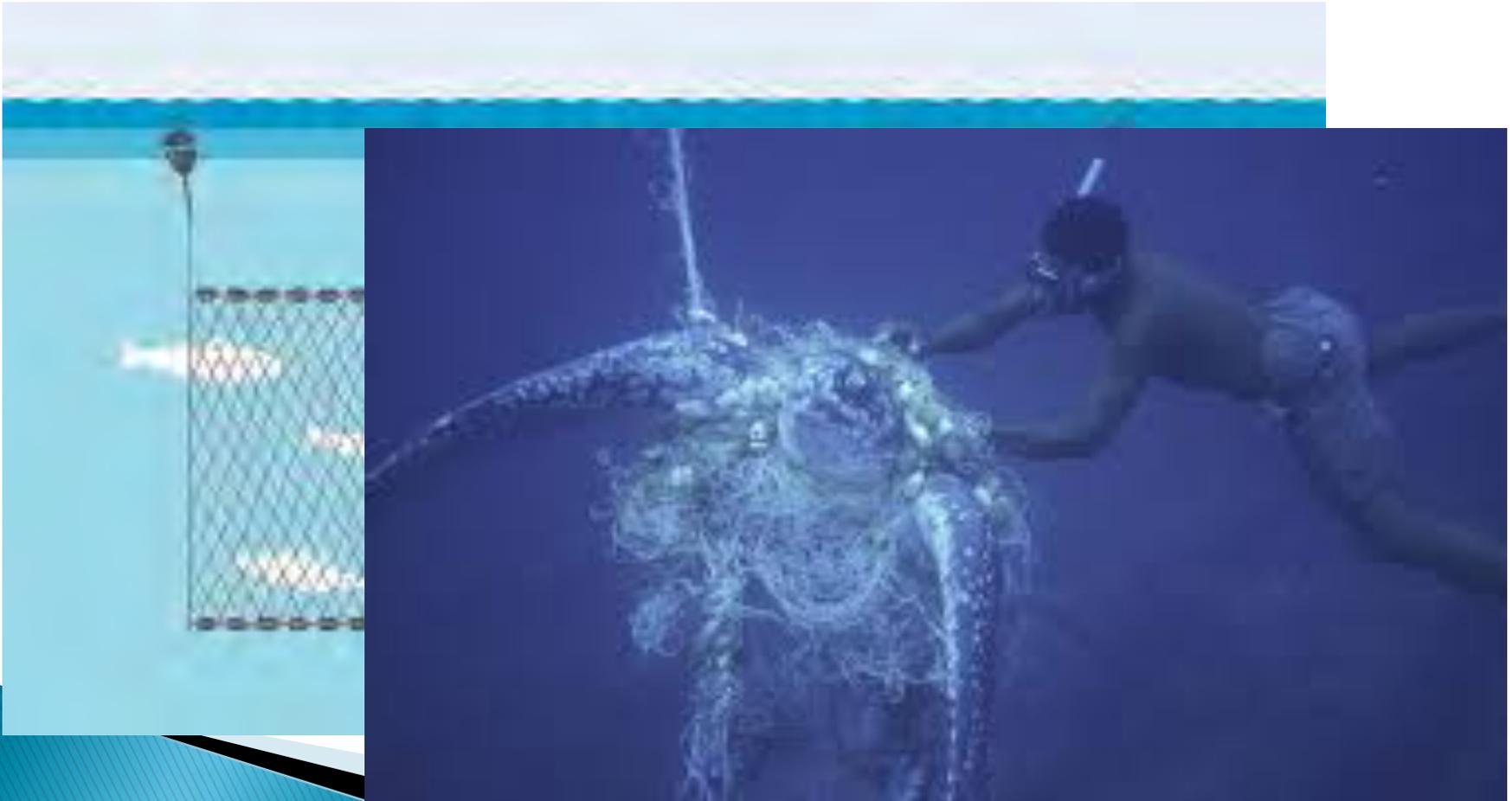


# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.3. Overly efficient gear

- ▶ Gill nets.



# 4.1. Impacts on marine environment and fish population from fishing



## 4.1.3. Overly efficient gear

- ▶ Scuba gear.
- ▶ Underwater lights, night spear fishing.

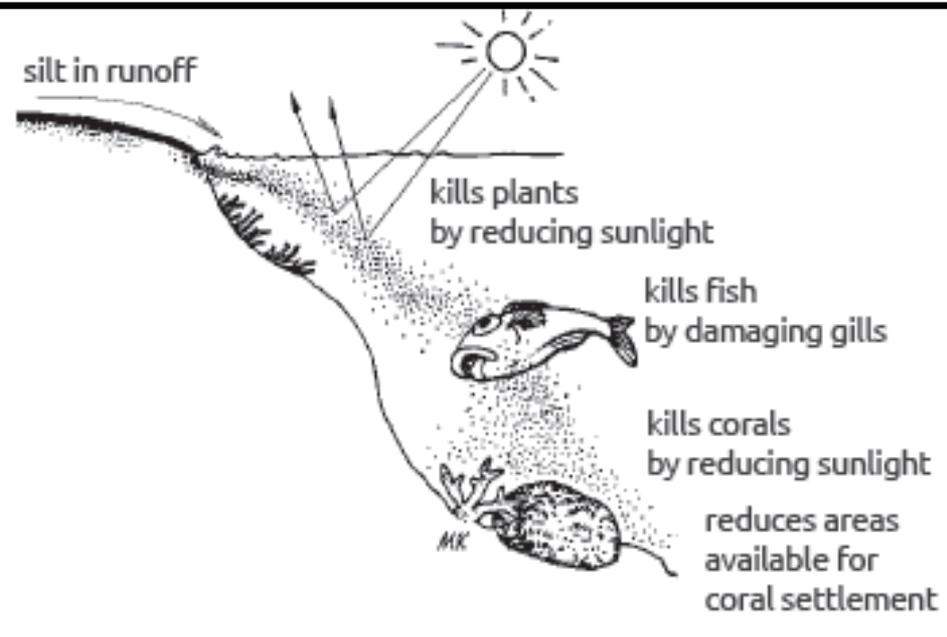
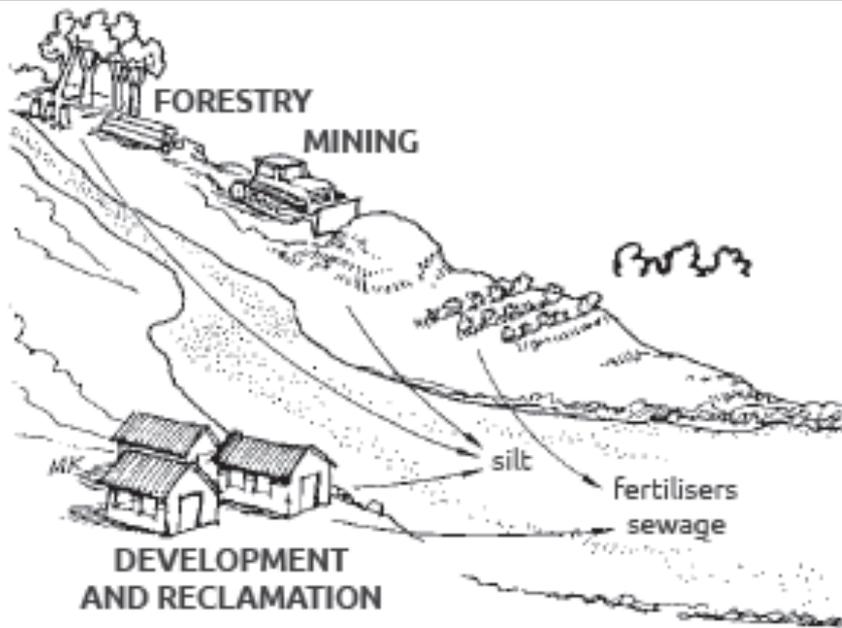


# 4.2. External impacts – issues related to other activities.



## 4.2.1. Coastal Pollution

- ▶ Nutrients and sediments– causes dirty waters
- ▶ Waste disposal in rivers, streams and the sea



### Key Message 6:

Most of our activities on land will always have impact on our marine resources.

# 4.2. External impacts – issues related to other activities.



## 4.2.2. Outbreaks of Crown of Thorns



# 4.2. External impacts – issues related to other activities.



## 4.2.3. Cultural threats



## 4.2. External impacts – issues related to other activities.



### 4.2.4. Lack of commitment to resource management by resource owners

- ▶ No respect for management rules by community members resulting in poaching in tabu areas.
- ▶ Inactive Management Committee. E.g. committee in place but not working
- ▶ Lack of community cooperation.
- ▶ Lack of enforcement e.g. because involvement of relatives.
- ▶ Lack of commitment by primary resource owners.

## 4.3. External impacts – issues related to natural Threats



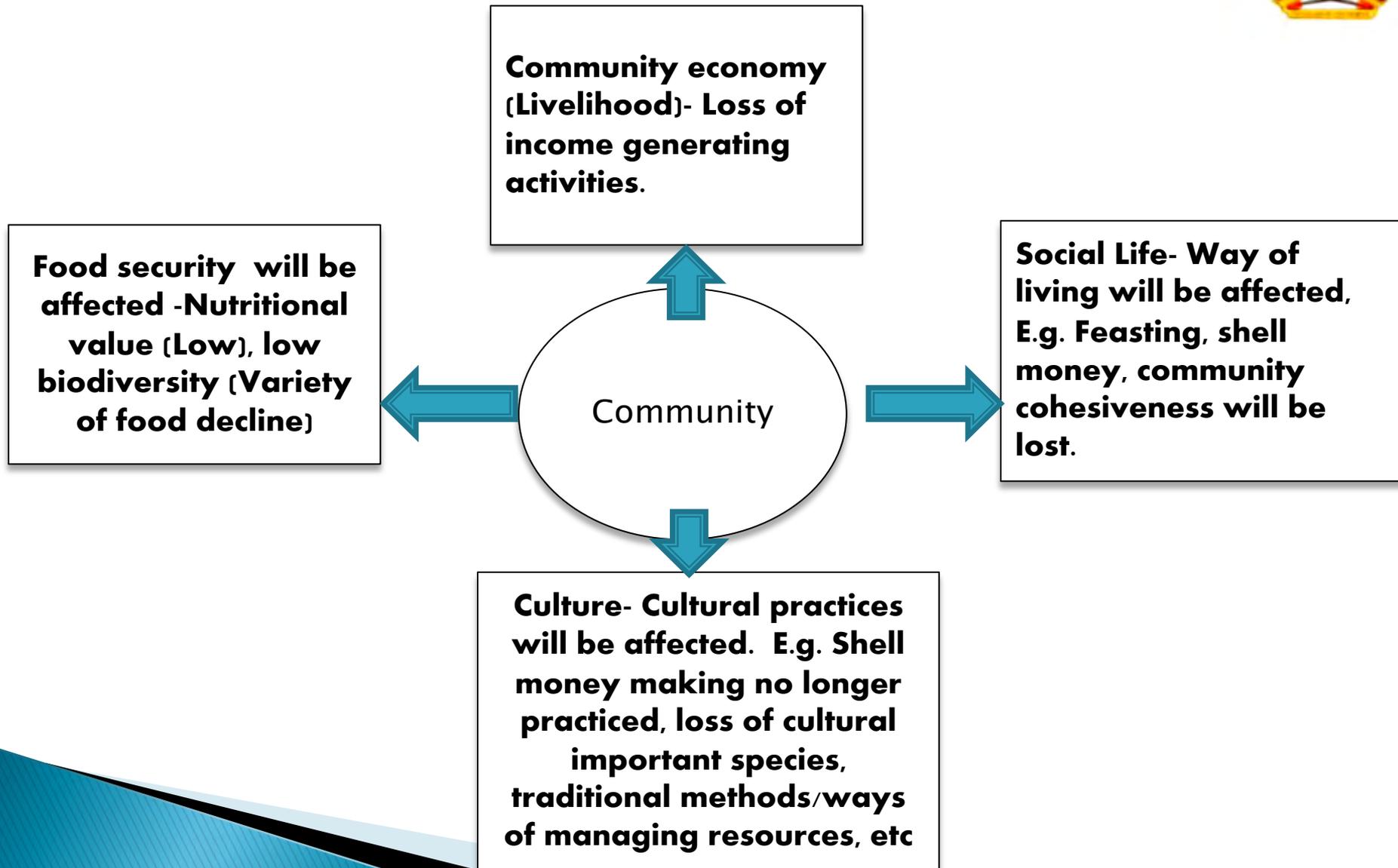
- ▶ Higher sea levels can cause more frequent flooding, coastal erosion, saltwater inundation and intrusion.
- ▶ Higher sea temperatures can cause coral bleaching



### Key Message7:

Natural disasters can also have impact to our fisheries including habitats and marine animal and plants.

# 4.4. Impacts of threats to communities





## **Management message:**

**Ensure destructive activities that have negative impacts on our coastal, marine and fisheries resources are minimized or banned altogether.**

**Resource management is about managing people and their actions and attitudes in resource use.**



## Activity 4.

1. Divide into your groups
2. For each important marine species and habitats you have identified in your groups discuss their threats and issues.

Fish and Marine Animal	Threats and Issues	Habitats	Threats and Issues



Ministry of Fisheries & Marine Resources  
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Honiara  
Solomon Islands

## TOPIC 5: MANAGEMENT MEASURE





## As We know;

- We depend on Marine Resources for our livelihood
- There are threats to the marine resources (Eg; fish, plants, etc)
- Some of these threats are human made and some are natural
- To continue benefiting from marine resources, we need to consider about some management options/ solutions and actions

# IMPORTANCE OF MANAGEMENT



- ▶ Minimize the impacts of human activities on the marine ecosystem
- ▶ Improve community benefits (Eg; food security, income, etc)

# MANAGEMENT MEASURES INPLACED IN SI



## 1. Fisheries Laws

- ▶ MFMR as a responsible government body develops laws to guide us
- ▶ Fisheries laws are:
  - ❑ not intended to punish communities for harvesting of resources.
  - ❑ there to control overharvesting
  - ❑ in placed to guide communities in managing the use of their resource

# MANAGEMENT MEASURES INPLACED IN SI



## 1. Fisheries Laws



### FISHERIES MANAGEMENT ACT 2015

(NO. 2 OF 2015)

*PASSED* by the National Parliament this twenty-third day of April 2015.  
*(This printed impression has been carefully compared by me with the Bill passed by Parliament and found by me to be a true copy of the Bill)*

*Clezy Rora*  
*Clerk to National Parliament*

*ASSENTED* to in Her Majesty's name and on Her Majesty's behalf this eighth day of May 2015.

*Sir Frank Utu Ofagioro Kabui*  
*Governor-General*

*Date of Commencement: see section 1*

**AN ACT** To make provisions for the conservation, management, development and sustainable use of fisheries and marine resources of Solomon Islands, to monitor and control fishing vessels within and beyond the fisheries waters, to repeal the Fisheries Act 1998 and to make consequential amendments to the Provincial Government Act 1997 and the Town and Country Planning Act (Cap. 154).

**ENACTED** by the National Parliament of Solomon Islands.

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### *SUPPLEMENT* to the Solomon Islands Gazette

Monday 27<sup>th</sup> August, 2018

S.I. No. 50

[Legal Notice No. 61]

### FISHERIES MANAGEMENT (PROHIBITED ACTIVITIES) REGULATIONS 2018

#### Table of provisions

1	Citation	2
2	Commencement	2
3	Definitions	2
4	Application	3
5	Prohibited Activities	3



### MALAITA PROVINCIAL GAZETTED FISHERIES ORDINANCE 2015



# MANAGEMENT MEASURES IN PLACED IN SI



- ▶ MMAs is one way communities can do to maintain the long-term abundance & health of resources

## Different MMAs in SI

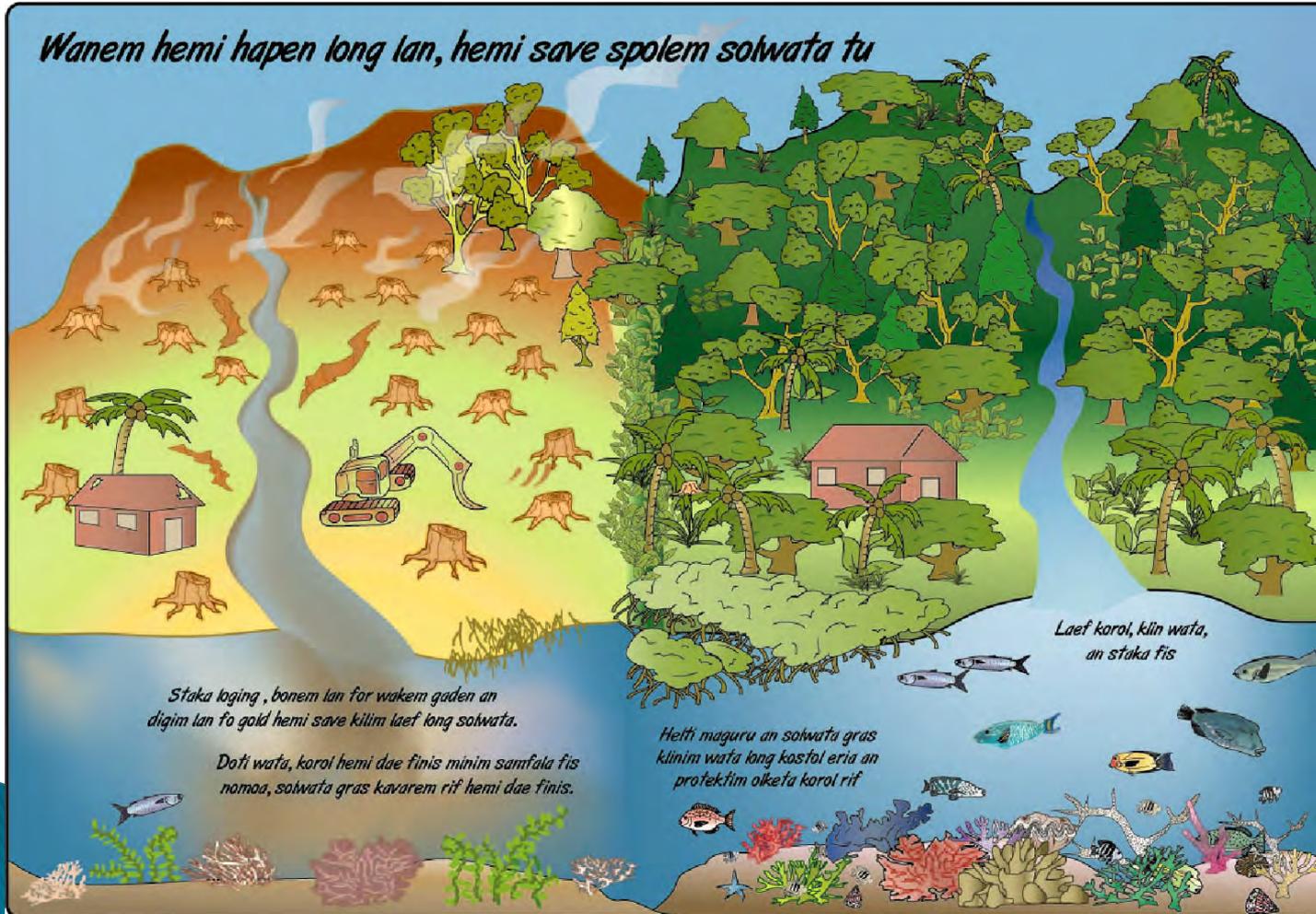
- ▶ Managed Marine Protected Area. Eg; Arnavon Islands. Usually permanent no-take
- ▶ Locally Marine Managed Areas (LMMA's)- co-managed MMAs in SI
- ▶ Taboo Area- Traditionally and commonly practiced in SI and communities do not need assistance to begin



# MANAGEMENT MEASURES IN PLACED IN SI



## 3. Ridges to Reef Approach (R2R)





## 4. Other Management Options

- ▶ Gear restrictions. eg, banning nets
- ▶ Size limits. eg, harvesting trochus within legal size ( 8cm – 12cm)
- ▶ No fishing on/during spawning aggregations. eg, ban fishing during certain times of the month in certain areas during coral trouts aggregation.
- ▶ No night diving.

# MANAGEMENT MEASURES IN PLACED IN SI



## 5. Waste Management

- ▶ **RECYCLE** – e.g selling empty can drinks to buying outlets
- ▶ **REUSE** – e.g using bottles for pot plants (creative)
- ▶ **REDUCE** – e.g reduce waste by segregation (organic waste for composting)

# MANAGEMENT MEASURES INPLACED IN SI



## 6. Environmental Impact Assessment (EIA)

- ▶ Ministry of Environment, Climate Change and Disaster Management (MECDM)
- ▶ Important for any proposed developments in customary boundaries or adjacent boundaries *e.g;* *Logging operations*
- ▶ Community members must attend such hearings as Timber Rights hearings
- ▶ Community's role:
  - Monitoring of activities
  - Negotiate for maximum benefits

# KEY MESSAGE



- ▶ *Management is important for community well-being, food security, improved livelihoods, etc.*
- ▶ *Management measures should address key problems.*
- ▶ *Not all management measures will need assistance from outside assistance.*
- ▶ *Some Management Measures, Communities can carry out themselves.*

# GROUP ACTIVITY



## PROBLEM- SOLUTION TREE

Divide participants into groups and discuss/identify

- ▶ **Key problems** – e.g Lack of fish in the lagoon.
- ▶ **Effects** – e.g not enough seafood.
- ▶ **Causes** – e.g use of destructive fishing methods.
- ▶ **Solutions** –e.g less use of destructive fishing methods.
- ▶ **Actions** – e.g ban use of explosives.

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## Topic 6: Community Fisheries Management Plan requirements under the Fisheries Management Act 2015.





# Introduction

- ▶ In order for CFMP to have teeth to bite it has to be Gazetted.
- ▶ Gazetting a CFMP is an option communities depending on governance.
- ▶ This Framework spells out important requirements of a CFMP which communities can use to develop their management plans.

# Requirements under 2<sup>nd</sup> Schedule

1. Consultation.

2. Objective.

3. Description  
of Fisheries.

4. Consider  
other relevant  
Fisheries  
Management  
Plans.

8. Enforcement  
powers and  
authorities.

7. Monitoring,  
reporting,  
assessments  
and revision.

6. Indicators.

5. Management  
Measures.

9. Technical  
assistance.

10. community  
members and  
other  
stakeholders  
Commitments.

11. Community  
MPA & MMA  
Establishment .

12. Consistency  
with other  
Ordinances and  
others FMPs.

16. Publications  
and copies of  
FMP's

15. Indicators

14. Duration  
and Review.

13. Consent.



# Requirements under 2<sup>nd</sup> Schedule

## 1. Consultation.

- ▶ Community consultation is two-fold.
- ▶ consultation with the community by the Director of MFMR and the Provincial Executive.
- ▶ current training and any other future community consultation by the MFMR and PFO's represents the Director of MFMR and the Provincial Executive.
- ▶ community has to carry out its own part of the consultation (eg; community meetings within and neighbouring communities).
- ▶ Important to have a management committee in place with office bearers such as a secretary.
- ▶ Role of secretary is to document every consultations. These documentations are part of the submission of the CFMP for gazetting

# Requirements under 2<sup>nd</sup> Schedule



## 2. Objectives

- ▶ A CFMP must have clear objectives which are measurable and achievable on time
- ▶ key problems identified in a Problem–Solution tree can be turned into objectives

# Requirements under 2<sup>nd</sup> Schedule



## 3. Description of the fishery

- ▶ **Boundaries of any relevant area.** Boundary/Boundaries of the managed area must be clearly demarcated.
- ▶ **Fisheries within the fishery management area.** Important target species & their habitats are to be identified.
- ▶ **Status of the fishery resource.** Before a managed area is closed, it is important to know the status of the target species. Any assessment in the future will be compared to the current status.
- ▶ **A risk assessment of immediate or potential threats to the fishery resource,** including relevant adverse environmental, biological, social, cultural or economic effects. Current and potential risks need to be discussed and included in the CFMP for the target fishery.
- ▶ **Fisheries habitats and ecosystems.** Habitats and ecosystems used by important species are to be identified and will need managed.
- ▶ **Any customary rights.** Resource owners need to confirm their customary rights by written consent. Eg; formal agreements of managed area
- ▶ **The regional and international context.** Some species are of regional and international interest such as turtles, dugongs etc. Even for MMAs, the Solomon Islands has international commitments which have to be taken note of in CFMPs.

# Requirements under 2<sup>nd</sup> Schedule



## 4. Take into account other relevant Fisheries Management Plans.

Provincial Fisheries Ordinances, Species Based Fisheries Management Plans (eg; Sea Cucumber Management Plan and other management plans under the Protected Areas Act 2010 (eg; Arnavon's Marine Park Management Plan)

- ▶ Any CFMP should be consistent with existing Fisheries Management Plans.

# Requirements under 2<sup>nd</sup> Schedule



## 5. Management Measures.

- ▶ Specify in the CFMP the measures which the community agreed on and their associated fines, penalties and sanctions
- ▶ Eg; management measure – no night diving. Fines – 1<sup>st</sup> offence– warning, 2<sup>nd</sup> offence– \$200 fine, 3<sup>rd</sup> offence– \$200 and a shell money or pig, 4<sup>th</sup> offence–report to police etc.

# Requirements under 2<sup>nd</sup> Schedule



## 6. Indicators.

- ▶ CFMP has to specify indicators that can be monitored to show whether the Plan is successful or not.
- ▶ Indicators can be biological, Social or economical.
- ▶ Eg; biological indicator – 10 minutes dive and 20 trochus sighted. Social indicator – Number of poaching incidents decrease. Economic indicator – number of catch for sale increases.

# Requirements under 2<sup>nd</sup> Schedule



## 7. Monitoring, reporting, assessments and revision.

- ▶ The CFMP should indicate how often a monitoring be done.
- ▶ Eg; monthly or every 2 months or every 3 months etc. It should also specify reporting and to whom. Eg– reporting to communities once a month, reporting to MFMR once a year etc. and who is responsible for reporting.
- ▶ Assessments and revisions are important. Eg; assessments after harvests or before harvests. Assessment of the CFMP yearly etc. or every two years etc.
- ▶ Revision of the CFMP should be clear. How long is the plan going to be implemented before revision? For example, the CFMP is effective from 16<sup>th</sup> June 2018 to 16<sup>th</sup> June 2023 (a 5 year plan).

# Requirements under 2<sup>nd</sup> Schedule



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# Requirements under 2<sup>nd</sup> Schedule



## 8. Enforcement powers and authorities.

- ▶ In Section 18 of the FMA 2015, enforcement powers have to be stated clearly in the CFMP.
- ▶ management measures have to be enforced by someone. Is it the rangers for the 1<sup>st</sup> offence? When will the Provincial Police come in (3<sup>rd</sup> offence?).

# Requirements under 2<sup>nd</sup> Schedul



## 9. Technical assistance.

- ▶ This part is to do with the process of developing a CFMP.
- ▶ Technical assistance can be provided for by the Director of MFMR or the Provincial Executive as is happening now.
- ▶ Director or the Provincial Executive can also provide technical assistance to communities through other competent bodies such as NGOs etc.

# Requirements under 2<sup>nd</sup> Schedule



10. Commitment by the relevant community, customary owners of fisheries resources and fishing rights and other stakeholders.
- ▶ This part is related to #3 (any customary rights) and also agreements by other customary owners who reside in other communities. Other communities who have fishing rights to the managed area have to be consulted and their agreement noted.

# Requirements under 2<sup>nd</sup> Schedule



- ▶ **#11. Establishment of community Marine Protected Areas and Marine Managed Areas.**
- ▶ Under the FMA 2015, MMAs have management measures but harvesting can take place. MPAs are for species which are consistent with international law. For example, species under Convention on International Trade of Endangered Species (CITES). Some such species are turtles, giant clams etc

# Requirements under 2<sup>nd</sup> Schedule



12. Consistent with applicable Provincial Ordinances, by-laws and Fisheries Management Plans applicable to Provincial Waters. This part is related to #4.
13. Consent. This part is related to #3 (customary rights)
14. Duration and review. This part is related to #7 (assessments and revision)
15. Indicators. This part is related to #6 (indicators)
16. Publications and copies of Fisheries Management Plans. If and when a community decides that they want their CFMP to be gazetted, the process for gazetting a CFMP will be taken into consideration.  
Upon gazetting of the CFMP (publishing in the gazette), the CFMP will become a public document. Where to get copies of the Plan will be clarified by the Director of MFMR so that community members and others who will be affected by the Plan can access it.



# Cost and Benefit Sharing

- ▶ The sustainability of MMAs is a challenge to current community marine resource management.
- ▶ Most of the managed areas are communal resources which belong to an entire tribe or clan. As such, MMA need to indicate how the management will benefit community members and if costs arise, how the costs will be met.

# Associated Costs



- ▶ Enforcement costs – if the provincial police is involved, costs will be involved in travelling, court cases etc.
- ▶ Monitoring costs – when rangers keep our resources for us, are they doing it voluntarily or will there be food available and torches to work with, fuel to monitor managed areas etc.
- ▶ Management committee and ranger meetings – some costs will be involved too. Is the management committee paid or voluntary?
- ▶ Stakeholder consultation costs – travel costs for awareness and meetings with other communities will also arise.

# Case Studies



## Case study 1: Susuru Marine Managed Area, Arakao community, East Are'are

1. A partner community of MFMR.
2. MFMR did a training similar to this training in 2016.
3. Susuru Marine Managed Area is not close to the community. Therefore there is a need to build a station for the MMA for rangers.
4. Customary rights owners of Susuru Marine Managed Area agreed to build a station. The MMA Management Committee agreed to contribute for materials which need to be paid.
6. Building materials were paid. Community members supported the construction voluntarily.
7. A station was built without any funding support by MFMR or any funding project.

# *Management message:*



- ▶ *Community Fisheries Management Plans should have clear management measures and actions that the community agrees on.*
- ▶ *Community members as resource owners and users must be heard in the development of management plans.*
- ▶ *Community members must be informed of the results of management activities and must actively take part in the whole process of managing their resources.*

# Group Activity 6: Developing a CFMP



1. Use the Second Schedule of the FMA 2015 to guide the activity.
2. Refer to the previous activities and the Problem–Solution tree as each component of the Schedule are covered.
3. Take note of components which cannot be agreed upon by the participants now and put them as Action Plans which the community members can do at their own time.
4. Give time for questions and answers and general comments from participants as the activity is being carried out.



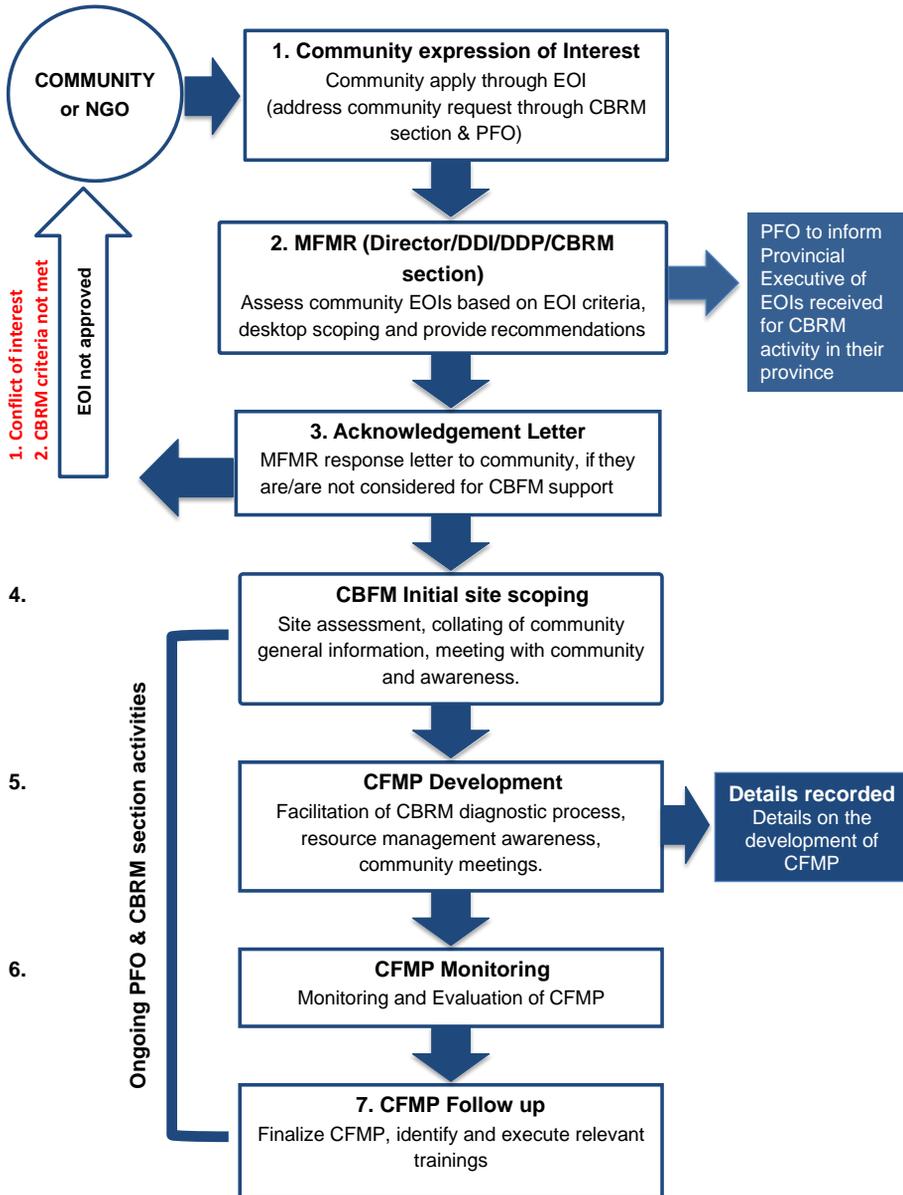
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## **Appendix B:**

The Standard Operating Procedures (SOPs) were created by the CBRM Section of the Ministry of Fisheries and Marine Resources (MFMR) of the Solomon Islands Government and finalized in the first reporting period of this project. This diagram details the process by which a community may develop a Community Fisheries Management Plan (CFMP) and gain legal recognition and support from the Government for their community marine protected area.

## DEVELOPMENT OF A COMMUNITY FISHERIES MANAGEMENT PLAN (CFMP)



Time frame: approved EOIs should be received by CBRM section by first Quarter of year calendar (Jan-Mar)

## GAZETTING OF A COMMUNITY FISHERIES MANAGEMENT PLAN (CFMP)

