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Community-based marine resource management in Solomon Islands: A facilitators guide



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Community-based marine resource management in Solomon Islands: A facilitators guide

Based on lessons from implementation of CBRM with rural coastal communities in Solomon Islands (2005 - 2013)

Contributors

The contents of this guide draw on the experiences of WorldFish, FSPI, MFMR, MECDM and on documents prepared by SILMMA members.

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Ministry of Fisheries
and Marine Resources,
Solomon Islands Government



Ministry of Environment, Climate
Change, Disaster Management and
Meteorology, Solomon Islands Government

Foreword

This guide was developed to document the process and activities that WorldFish staff have used and adapted as facilitators working with communities interested in marine resource management in Solomon Islands. It draws on the experiences from work conducted with FSPI and MFMR through ACIAR funded projects, with communities that had a primary interest in the management of coral reef fisheries. Since 2011 the process has been trialed and adapted further with communities interested in mangrove ecosystem management (through the MESCAL project). This guide is based on lessons about the process of a community developing, writing and implementing a management plan. This guide does not cover lessons about the outcomes of that management. While some guidance is provided on assessing and monitoring outcomes and adapting management, a more detailed account based on outcomes and lessons from community experiences of adaptive management will be published in a separate document in 2014.

The processes of facilitation described here were guided by the "LMMA guide to community based adaptive management". However, these processes have since evolved after being tested and grounded in Solomon Islands communities. The processes presented in this guide have been adapted based on reflections and feedback from communities who worked with the WorldFish team. These communities include Kia (Isabel); Jorio and Dovele (Vella Lavella); Toumoa and Karaka (Shortland Islands); Funa'afou, Foueda and Niuleni, (Lau lagoon, Malaita); Eliote (Small Malaita) and Koilovala (Ngella). The experiences of these communities have also been shared, discussed and consolidated with partner organizations to the ACIAR funded projects; particularly FSPI and MFMR.

This document is intended to be a teaching guide for facilitators; therefore it sets out and follows a logical step-wise process that a facilitator (an individual or organization) can follow. The guide outlines the tools and activities that we have found most useful at each step in the process. We envisage that once facilitators are experienced in working on CBRM with communities, they will adapt the process to suit their own needs and the needs of

communities. It is intended that this guide be used alongside other information resources, management manuals and other sources of guidance - and we highlight many in the text. This guide is not intended to be a comprehensive manual on coastal resource and fisheries management.

Ideally coastal communities could implement CBRM on their own, but when support is requested (from government or NGOs), this guide provides a useful and tested process for developing and implementing a marine resource management plan with communities. Although focused on community-based marine resource management (CBRM), we advocate that wherever possible CBRM should be embedded in wider community development processes.

Module 1 introduces the concept of CBRM as well as the National and Provincial legislation and policies that guide CBRM in Solomon Islands. This module also describes the building blocks of implementing CBRM and introduces the different levels of engagement that might be required depending on resources available or community needs. **Module 2** provides some basic information about how to be a good facilitator at the community level and describes the role of the facilitator for each step in the process. It outlines some principles for partners and facilitators of CBRM in Solomon Islands. **Modules 3 and 4** cover processes that can be used within the community to inform, develop and implement CBRM. **Module 5** provides some guidance to plan the level of engagement (e.g. number of visits) with a community that depends on community needs, remoteness and budget. The **tool box** at the end of this guide, provides detailed information about tools and resources that we have found useful when working with communities on CBRM - these are the tools and resources are needed to achieve the steps laid out in modules 3 and 4.

Facilitators may choose to use all or some of the guide, depending on their specific situation. Other guides developed for the Pacific region, such as the LMMA guide to community based adaptive management, are available for reference - see the tool box.

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Module 1: Introduction and overview of CBRM

After this module you will know:

- the importance of coastal resources in Solomon Islands
- what community-based resource management (CBRM) means in Solomon Islands
- why the Solomon Islands Government is encouraging the implementation of CBRM
- common terminology used in marine resource management
- government policies and organizations involved in facilitating the implementation of CBRM
- who SILMMA is and what their role is in CBRM
- the building blocks for developing a management plan with a community



1.1 Introduction and overview

- Context and terminology
 - The importance of coastal marine resources
 - Why a community based approach
 - Marine resource management terminology

The importance of coastal marine resources in Solomon Islands

Solomon Islands has more than 5,750 km² of coral reefs, extensive seagrass beds and mangrove forests that are essential for the productivity of fisheries. Most rural people live on small islands and atolls, or the coastal margins of otherwise mostly mountainous and uninhabitable islands. Fish and other marine products are an essential source of income, food, and wellbeing for a large part of the population, with the per capita consumption of fish in Solomon Islands among the highest in the Pacific region. The harvest of fish and other marine resources such as trochus, bêche-de-mer and corals is an important source of income for rural communities. Additionally, the offshore tuna fishery is important for revenue and employment at the national level.

Whether people will continue to have access to sufficient and productive marine resources in the future depends on the way that resources are used and managed now. In common with many parts of the world, increasing population, growing and new commercial markets and unsustainable fishing practices (e.g. destructive fishing, or harvests of undersized fish) are concerns to the sustainability of fisheries in Solomon Islands.



Preparing deepwater snapper

Community-based resource management (CBRM) is one mechanism for communities to help safe-guard the future of their resources. While CBRM approaches can be used to manage marine or terrestrial resources; this guide focuses on marine resource or fisheries management.

When referring to fisheries we refer not only to a particular species or stock of interest, but also to the broader biological and ecological processes associated with that stock and the related socio-economic processes (i.e. the fishers and other people involved and influenced by the fishery).

Some of the BIG issues for marine resource management

Increasing population

A high population growth rate means increasing demands for marine resources. Increasing populations can lead to overfishing, the use of destructive fishing methods and the degradation of coastal marine resources.



Climate change

Under future climate change scenarios, Solomon Islands is going to face rising sea levels, increasing air and water temperatures and changed rainfall patterns and seasons. It is anticipated that these changes will put further pressure on marine resources, for example by increasing bleaching events and death of corals.



Developing markets

New or growing export and local markets provide a very important foundation for economic growth and development. But coupled with population growth and the high reliance on resources for subsistence, an important challenge facing Solomon Islands is to find a balance between meeting the subsistence food needs of local people and maximizing economic benefits through export and sales of marine products.



The Challenge

To maintain healthy coastal fisheries and secure and enhance their benefits

Why a community-based approach?

Customary marine tenure is recognized by the Solomon Islands National Constitution. More than 90% of inshore coastal areas, islands and islets are under customary marine tenure. Under customary tenure systems particular groups of people (e.g. family units, clans or tribes) have primary rights to access and use marine resources. These rights are in principle, exclusionary, transferable, and enforceable. In Solomon Islands, community-based approaches build on these customary tenure and use rights as the foundations of efforts to manage resources. By basing CBRM on the structures and systems that are already in place for governing within a community (e.g. customary tenure, chiefly system, other leadership arrangements etc.) management is more likely to be respected, complied with and fit that community's particular situation.

In addition, there is currently a lack of financial and human resources at the government level to address marine resource management issues and enforce legislation in rural and remote community settings. The Solomon Islands Government is taking steps to address these capacity shortcomings, however it is recognized that the geographic expanse of Solomon Islands will always present a big challenge to centralized management (i.e. management by the national government).

In order to *maintain healthy coastal fisheries and secure and enhance their benefits* community-based approaches to management are preferred by the Solomon Islands Government.

Benefits of a community-based approach:

- low ongoing costs
- can be undertaken with little prior data
- draws strongly on traditional knowledge and so gives greater ownership and decision making powers to resource owners
- recognizes that Solomon Islanders are the owners and the custodians of their resources
- empowers community structures and institutions
- can potentially be undertaken by communities themselves with little or no outside support

CBRM describes the management that communities carry out. In some cases this may be done by the community themselves without external assistance. However for other communities, working together with government authorities and / or NGOs can help to make the process of management easier and more effective. This manual is designed to help guide those people and organizations who facilitate or support communities to implement CBRM.

Making CBRM accessible to all interested coastal communities in Solomon Islands

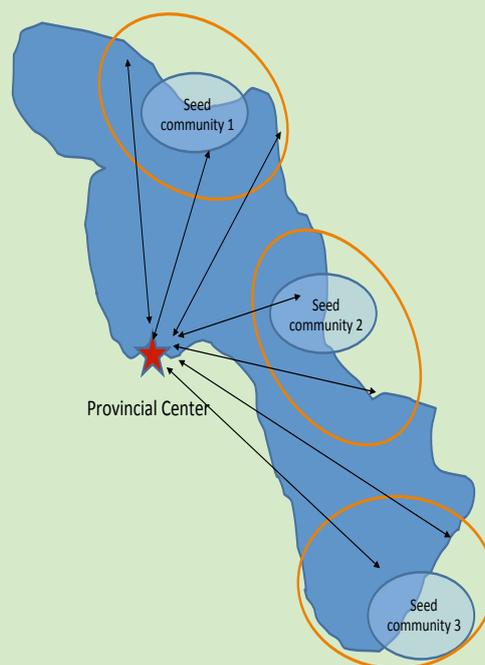
A community with strong leadership may simply seek some information to assist them to develop their own resource management. For other communities, working together with government authorities and/ or NGOs to manage marine resources or address resource issues can make the process easier and more effective. Supporting communities and provincial governments to implement CBRM is a focus for the Solomon Islands Government through the Solomon Islands National Plan of Action for the Coral Triangle Initiative.

The diagram on the right shows how CBRM could be implemented in a Solomon Islands province (for more information see Govan et al., 2011). In this example, three 'core' or 'seed' sites (communities or clusters of communities with management) are identified. The horizontally shaded area around the seed site represents potential areas of influence on neighboring communities and opportunities for passive (i.e. without a government or NGO partner) expansion of management practices through sharing of experiences and dissemination of information.

The advantage of this model is that it builds on, and enhances, a process that has already been observed to occur in some clusters of communities. That is, a community involved in marine resource management becomes an advocate or champion for CBRM and can spread this enthusiasm and some advice to other communities in the cluster. The assumption of this model is, however, that the seed community will not only understand, accept and become enthusiastic about CBRM, but that they will share this enthusiasm and knowledge with their neighboring communities - but this may not always happen. Selecting seed communities should therefore consider willingness and readiness of the community for implementing CBRM and for sharing CBRM experiences. All of these considerations have the potential to enhance or inhibit the success of CBRM and the process of spread.

In general it is anticipated that a seed community is likely to undertake CBRM with a facilitator from an external organization. By working together they are likely to be successful in developing and implementing a management plan. The community is able to share lessons with other communities in the region that are interested in management.

Other non-seed communities may receive a 'lite' touch (described in more detail in module 5) which could take various forms, but will probably involve improving community access to information and trained facilitators making some visits to communities i.e. when the opportunity arises in conjunction with other activities.



Terminology

There are many terms that can be found in different guides, manuals and books about marine resource management in the Pacific Region. At a Coral Triangle Support Program meeting of stakeholders in Gizo in 2010 (Alexander *et al.*, 2011) the group requested the following terms to be defined. It is useful for you to be familiar with them.

Management

In this guide we refer to natural resource management simply as management. Therefore, in this case management refers to stewardship or to control the way in which people interact with the natural environment with a broad goal of improving or sustaining the quality of life in the present and into the future. The specific goals of management and the controls on the way resources can be used can be many and varied. For example, if a community's goal is to have sustainable fisheries for community use for subsistence then limits or a ban may be placed on what people can harvest for sale or export. If a goal is to have a sustainable commercial fishery for trochus and bêche-de-mer then controls may be placed on the size of the trochus or bêche-de-mer that can be harvested, and where and when they can be harvested.

Conservation

To conserve (keep) or protect natural assets, for example a species, a habitat, or an ecosystem service (e.g. mangroves provide an ecosystem service by reducing the effects of sediment running off the land on to coral reefs).

Community-Based Management or Co-management

Community Based Management is a general term for any management that is driven by, or occurring at, the community level. When communities work together with government authorities and / or NGOs to manage resources - this can also be referred to as co-management. In Solomon Islands the term 'Community Based Resource Management' (see below) is used most often and describes both communities that are managing their resources on their own (perhaps with more traditional management) as well as those working with a NGO or government partner.

"Community is used here in the broadest sense of a functional social unit; at different times and in different cultures, the most relevant social unit in connection with local marine resource management may be a group of villages, a single village, a clan, a family, or a chief or other influential individual in the community" (Johannes 2002).

Community-Based Resource Management (CBRM)

Management of natural resources (e.g. forests, forest products, fish, coral reefs) that is driven by, or occurring at, the community level. This incorporates specific management rules, but also the governance systems that impact on the ways in which management occurs. Management rules relate to how people can and can't use or take resources (e.g. a size limit or a species ban) or how people use the environment in which these resources exist (e.g. no cutting of wood in a mangrove forest). CBRM is a general term used in Solomon Islands to describe a range of community based approaches (including LMMA, EAFM and CBFM focused approaches).

Community-Based Fisheries Management (CBFM)

A form of CBRM that is primarily focused on managing marine resources that are harvested for subsistence or commercial purposes (e.g. fish, trochus, coral reefs, seaweed).

Community-Based Adaptive Management (CBAM)

A term for CBRM where management rules and governance arrangements are regularly reviewed, and modified if necessary, based on observations or monitoring indicators.

CBRM +

A type of community-based adaptive management that incorporates food security, ecosystem approaches to resource management, vulnerability and adaptation planning and protection of key species and habitats. CBRM+ is a term coined for the Solomon Islands National Plan of Action for the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security.

Ecosystem Approach to Fisheries Management (EAFM)

An approach to fisheries management that not only manages the target species, but also any impacts on the broader ecosystem (e.g. other non-target species, habitats), as well as the social and economic outcomes arising from the fishing activity.

Governance

Governance is the act of governing and the way in which power is exercised. A governance system therefore includes the processes, people and powers that influence how things are done. In Solomon Islands this includes the national and provincial government and the laws and policies they implement, formal leadership roles such as village leaders and tribal chiefs, customary laws and local village rules and bodies used to enforce those rules (e.g. chiefs, village committees, church).



Collecting mud shells in the mangroves

Integrated Coastal Management (ICM) / Ridge to reef

An approach to management that recognizes and takes into account the connection between land and sea, and aims to manage land and sea zones, and the ways in which they are connected (e.g. measures that reduce or avoid runoff from deforested land being carried to the sea and damaging reefs).

Marine Protected Area (MPA)

A term used widely to refer to an area that has been set-aside as 'no-take' (i.e. 'no-take' refers to a ban on fishing or harvesting). MPAs are usually established for the purpose of conserving animals, plants, or the entire ecosystem. In many situations MPAs are considered to be permanently closed areas where nothing can be removed from them. In Solomon Islands the term MPA is commonly used to refer to an area closure, however only in a very few instances does it actually refer to a permanent no-take area.

Tambu (tabu) area

Tambus, or closed marine areas, have been traditionally practiced in Solomon Islands for the purposes of re-stocking of trochus and mangrove shells, or to mark the death of an important member of the community. Traditional tambus are still used in the present day and are also commonly adapted by communities for fisheries management. Tambu may also refer to kastom sacred sites where traditional rituals are performed and these may be marine or terrestrial sites.

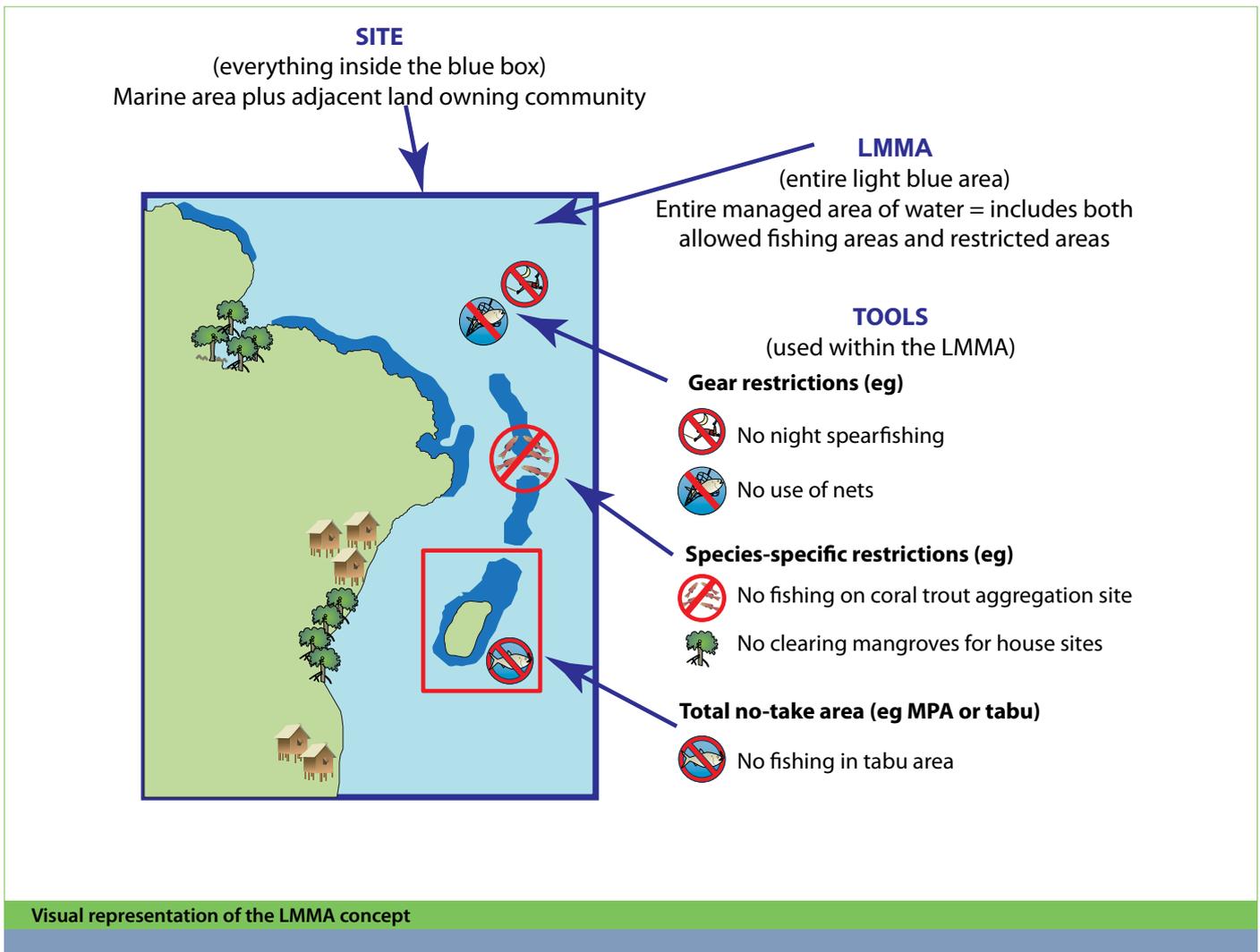
Locally Managed Marine Area (LMMA)

An LMMA is an area of sea that is designated by a local community for management of marine resources. A managed area will have a boundary, rules that operate within that area (perhaps including a tambu area; see diagram below) and

an associated system of governance. Optimally an LMMA or managed area should correspond with the customary owned area. An LMMA has the advantage of being able to accommodate the different needs of a community for access to their resources while also carrying out management. LMMA is the most common form of marine resource management used by communities in Solomon Islands.



Tambu marker in a CBRM area



1.2 Introduction and overview

- Government policies and legislation
- Coral Triangle Initiative
- NGOs in Solomon Islands
- Solomon Islands Locally Marine Managed Area network
- Building blocks of the implementation process

Government policies and legislation

The national government's Ministry of Fisheries and Marine Resources (MFMR) and Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) are the lead agencies responsible for co-ordinating the implementation of CBRM in Solomon Islands. The importance of CBRM for managing inshore marine resources on a national level has been acknowledged as a priority for the Solomon Islands government via its inclusion in several relevant national strategies and policy documents in recent years.

Organizations and individuals working with communities to implement CBRM should understand what existing policy is available to support and guide community actions. CBRM partners and facilitators should consult these ministries to ensure that their activities align with current national strategies and plans.

A summary of relevant policy in 2013 is given here. Consult the relevant ministries to ensure you have the latest information.

Ministry of Fisheries and Marine Resources

The MFMR Corporate Plan (2011 - 2013) identifies six priority areas for their activities.

- Improve market access for our rural fishers
- Grow livelihoods through sustainable aquaculture development
- Improve health of our fisheries and marine resources
- Grow our economy through sustainable fisheries investments
- Effective enforcement of our fisheries laws
- Increase skills and knowledge of partners in fisheries development

The Ministry's Inshore Fisheries Strategy (IFS) acknowledges that "coastal communities are the best managers of their fisheries and marine resources". The IFS defines community-based resource management as one of the five pillars of sustainable and secure inshore fisheries and aquatic resources.

Pillar 2 Community-Based Resource Management: The strategy recognizes that community-based initiatives will be the driving force of sustainable economic development in the inshore marine resource sector. Key activities in this pillar include developing and refining community based management plans and promoting livelihood diversification/ supplementation strategies to reduce dependence on capture fisheries.

Fisheries Act 1998 (currently under revision)

The objective of the Fisheries Act 1998 is to provide a legal framework for the conservation, management and development of Solomon Islands fisheries to ensure their long-term sustainable use for the benefit of the people of Solomon Islands.

Section 14 of the revised Fisheries Bill (draft 2013) makes the provision for formulation and registration of Community Fisheries Management Plans. This will give community developed management plans legal recognition and offers the opportunity to pursue illegal fishing offenders in a court of law.

Under this provision fisheries management plans may be submitted to MFMR for approval and registration as long as certain conditions are satisfied. It is likely that these conditions will include that community fisheries management plans shall:

1. provide a description of fishery including:
 - i. the boundaries of any relevant area (the "fishery management area");
 - ii. the fisheries within the fishery management area;
 - iii. the status of the fishery resource(s);
 - iv. where appropriate a risk assessment of immediate or potential threats to the fishery resource(s), including relevant adverse environmental, social, cultural or economic effects;
 - v. the fisheries habitats;
 - vi. any customary rights; and
 - vii. any regional and international context;
2. specify the objectives to be achieved and their appropriate indicators in the management of the fishery resource(s) or area;
3. specify management measures and, as appropriate, fines, penalties and sanctions for contravention of the management measures, including establishing marine protected areas and marine managed areas;
4. in respect of Community Fisheries Management Plans, specify licensing and enforcement powers and authorities as appropriate;
5. identify indicators to assess the effectiveness of the management measures included in the Plan;
6. identify requirements for monitoring, reporting, assessment and revision;
7. provide for duration and the periodic review of the Plan; and
8. provide for any other matter relating to the sustainable use of the fishery, management of the fishery resource(s) or area.

Provincial Government

Provincial government activities are governed by the Provincial Government Act. The Act provides for Provinces to make ordinances in relation to natural resources use and management, under schedule 3 (5) Agriculture and Fishing. "Protection, improvement and maintenance of fresh-water and reef fisheries".

All provinces are working towards having ordinances to provide environmentally and culturally specific laws for the province in the sectors of fisheries, conservation and natural resource management (among others). If a relevant ordinance exists in a province, it may provide a legal framework for CBRM activities. The ordinance may also have provisions relating to external agencies operating in these sectors within the province.

Examples of relevant Provincial Ordinances include:

- The Western Province Fisheries Ordinance 2011
- The Western Province Marine Conservation Ordinance (under development 2011)
- The Western Province Resource Management Ordinance 1994
- The Guadalcanal Wildlife Management Area Ordinance 1990
- The Isabel Province Wildlife Sanctuary (Amendment) Ordinance 1991
- The Temotu Environment Protection Ordinance 1989
- The Makira Preservation of Culture and Wildlife Ordinance
- The Choiseul Province Resource Management Ordinance 1997
- The Choiseul Province Preservation of Culture Ordinance 1997
- The Choiseul Province Fisheries and Marine Environment Ordinance 2011
- The Central Province Fisheries Ordinance (draft 2011)
- The Malaita Province Fisheries Ordinance (draft 2013)

Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM)

The responsibilities of MECDM are principally provided for under the Environment Act 1998 and the Wildlife Protection and Management Act 1998. The newly established Protected Areas Act 2010 added to these responsibilities. MECDM is mandated to promote and ensure safe, sustainable and resilient Solomon Islands communities (MECDM Corporate Plan 2011-14).

Environment Act 1998

The Environment Act 1998 makes provisions for the protection and conservation of the environment, the establishment of the environment and conservation division and the environment advisory committee. The Act covers environmental impact assessments including a code of practice for any new development. It specifies the need for the Director's approval before any development will take place.

Wildlife Protection and Management Act 1998

Wildlife Protection Act 1998 provides for the protection, conservation and management of wildlife in Solomon Islands by regulating the export and import of certain animals and plants,

to comply with the obligations imposed upon Solomon Islands under the convention on international trade in endangered species or wild flora and fauna.

Protected Areas Act 2010

The Protected Areas Act 2010 provides for the declaration and management of protected areas or areas where special measures need to be taken to conserve biological diversity and the regulation of biological prospecting research and for related matters.

Part 3 of the Protected Areas Act provides for the application to the Director of the Environment and Conservation Division by the owner of any area, including a community or any non-governmental organization managing a conservation area to declare, register and manage this area as a protected area.

A management plan must be prepared before the Director of MECDM can consider the application to declare an area a protected area. The management plan is developed by the management committee. The objective of the management plan must be the conservation and management of the biodiversity of the protected area in line with the objects of the Act and the category of protected area.

The Regulations require that when the management committee prepares the plan they must consult with relevant chiefs, traditional leaders, customary owners, local communities, NGOs, government agencies, development organizations, donor agencies and the Director of MECDM.

A management plan must cover the following (unless irrelevant or inapplicable):

- zoning of a protected area and a description of the activities that may be carried out in different areas
- activities that are prohibited in the Protected Area or zones of the Protected Area
- identification of species or habitat that need special controls
- management objectives
- application of relevant traditional management practices
- implementation and enforcement program
- public awareness programs
- research and monitoring
- staff and staff training
- proposed penalties to proposed rules



A community installs their mangrove management area sign board

Regional policies

Regional policies related to CBRM have also been endorsed by Solomon Islands' leaders. The policies provide guiding principles for strategic action to address the problems and challenges encountered by Pacific Islands' countries and territories in managing their coastal fisheries.

CBRM or CBFM as envisaged under the Apia Policy acknowledges that fishing communities will be involved in management and that the promotion of traditional systems that allocate fishing rights to a limited number of users may represent the only chance for subsistence fisheries to be exploited on a sustainable basis. The Apia policy recognises that if communities are encouraged to set their own 'conservation' rules they are more likely to be respected and that under community ownership, management measures are enforced by the communities themselves.

The Vision: Healthy marine ecosystems and sustainable coastal fisheries that provide seafood security and continuing livelihoods for current and future generations of Pacific people. The Goal: To ensure the optimal and sustainable use of coastal fisheries and their ecosystems by Pacific Island communities'

Six guiding principles:

1. Improving our understanding of important fisheries species and of the ecosystems on which they depend.
2. Sustainably managing coastal fisheries, reducing their adverse impacts on coastal ecosystems, and optimizing production to meet local nutritional needs and contribute to economic development.
3. Creating community partnerships to support the customary and traditional management of nearby ecosystems and fish stocks.
4. Creating stakeholder collaborations to manage ecosystems and reduce the negative environmental impacts of non-fisheries activities, including those that result in high loads of silt and nutrients in coastal waters.
5. Promoting the participation of women and youth in all fisheries-related activities.
6. Enhancing regional exchange and sharing of information on common areas of interest relating to the management of ecosystems and fisheries.



Preparing mangrove mud shells

Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security

The Coral Triangle Initiative on Coral reefs, Fisheries and Food security (CTI - CFF) is an inter-governmental agreement established in 2009 to address the degradation of marine and coastal environments in the region. Each of the six member countries (Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste) have a National Plan of Action (NPOA) to guide the activities of all stakeholders.

The Solomon Islands CTI National Co-ordinating Committee (NCC) is the committee responsible to:

- identify national priorities, coordinate action and funding around priorities
- monitor, evaluate and report in progress to achieve targets of the Solomon Islands National Plan of Action NPoA
- support and coordinate joint activities of NCC members and coordinate with external parties

The NCC is co-chaired by MECDM and MFMR. Members are drawn from both government and NGOs.

At the time of writing members included:

- Ministry for Environment, Climate Change, Disaster Management and Meteorology (MECDM)
- Ministry of Fisheries and Marine Resources (MFMR) (including SILMMA)

- Ministry of Finance and Treasury (Finance)
- Attorney Generals Chambers (AGC)
- Ministry of Foreign Affairs & External Trade (MFEAT)
- Office of the Prime Minister & Cabinet (PMO)
- Ministry of Development, Planning and Aid Coordination (MDPAC)
- Ministry of Provincial Government and Institutional Strengthening (MPGIS)
- WorldFish
- WWF
- The Nature Conservancy (TNC)
- The Foundation of the Peoples of the South Pacific International (FSPI)
- Solomon Islands National University (SINU)
- University of the South Pacific (USP)

Solomon Islands CTI National Plan of Action (NPoA)

The Solomon Islands CTI NPoA (NCC, 2009) describes “a core of community-based management as a national strategy to improve food security, adaptive capacity (climate change and other pressures), conservation of target or threatened species and habitats appropriate to the context of Solomon Islands”.

The following description is extracted from the NPoA: “An improved Community Based Resource Management (CBRM+) approach will be the building block of the NPoA through which at least half the coastal population or coastal areas will have improved food security and resource management by 2015.”

The Coral Triangle

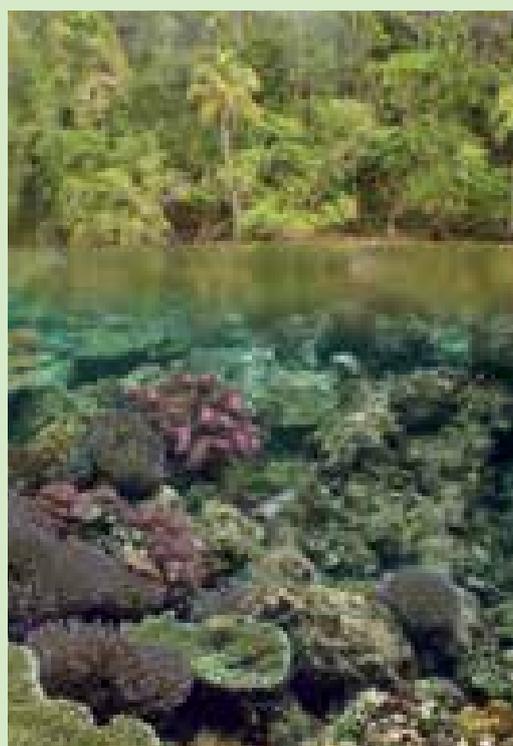
Solomon Islands is located within the Coral Triangle - a region that includes Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor Leste. The Coral Triangle is an area of global significance and is the epicenter for marine biodiversity, supporting the highest coral, reef fish, mangrove and seagrass species diversity in the world. This biodiversity is not only important for maintaining the function of global ecosystems, but it provides food security to an estimated 100 million people living in coastal areas within the region.

Coral triangle facts:

- epicenter of global marine biodiversity
- over 75% (600+) coral species
- almost 40% (3000+) species of reef fish
- 6 out of 7 marine turtle species
- over 53% of the world's coral reefs
- largest extent of mangrove forests in the world



CTI Implementation region, map by WWF



Solomon Island reefscape

Non-government organizations

There are a number of non-government organizations currently working on understanding and improving natural resource management in Solomon Islands.

International NGOs based in Solomon Islands and working on CBRM are WWF-Solomon Islands and TNC who work primarily on marine and terrestrial conservation projects and WorldFish who undertake research in development to sustainably manage fisheries and coastal marine resources for food security and livelihood outcomes.

A regional NGO, the Foundation of the Peoples of the South Pacific International (FSP), fosters sustainable development in Pacific communities, including facilitating the sustainable use of terrestrial and marine resources.

The Secretariat of South Pacific Communities (SPC) and the Secretariat of the Pacific Regional Environment Program (SPREP) are regional organizations that provide information and advice to governments to encourage sustainable development and to support livelihoods including through the management of marine and terrestrial resources.

Live and Learn Environmental Education is a non-government, not for profit organization which aims to promote greater understanding of environmental and human sustainability through education and communication.

NGOs formed within Solomon Islands, usually for the management of a specific land or sea area, include Tetepare Descendants Association (TDA), Roviana Conservation Foundation (RFC), Arnavon Community Marine Conservation Area (ACMCA) and Kolombangara Island Biodiversity Conservation Association (KIBCA).

Solomon Island Locally Managed Marine Area (SILMMA) network and Ngella, Russell Islands and Savo (GERUSA) marine resources network are two organizations that consist of collections of communities, local and international NGOs and government departments working to improve the success of their conservation and fisheries management efforts through sharing and networking.

Several universities are involved in CBRM, or research to inform



Researchers assisting local communities

CBRM, in Solomon Islands. Most of these are active in the country only for the duration of a project, however three universities with an on-going presence in the country are the University of Queensland (active in marine and terrestrial resource management mostly in Marovo Lagoon, Western Province), the University of California at Santa Barbara (Roviana Lagoon, Western Province) and James Cook University (in Malaita and Western Provinces).

Other local NGOs include the Natural Resource Development Foundation (NRDF) and Kastom Gaden Association (KGA) who promote sustainable forestry and small-scale village agriculture respectively across multiple provinces through the provision of information and training.

The American Museum of Natural History (AMNH) also undertake research and provides information and guidance to terrestrial resource management initiatives, including at the community level, primarily in Western and Choiseul provinces.

There are also an increasing number of communities that have registered, or are in the process of registering, as Community-Based Organizations (CBOs). The advantage of registration is that CBOs are then eligible to apply for small grant funding opportunities that are sometimes offered by donors that can support their management activities.

Solomon Islands Locally Managed Marine Area (SILMMA) Network

The SILMMA network is a group of projects and practitioners including NGOs, government and communities who have joined together and are working to improve the success of their conservation and fisheries management efforts through sharing and networking.

SILMMA's Vision

"To be a well resourced network for information sharing to ensure well-informed decision making by members on sustainable resource management and conservation on biological diversity"

SILMMA's mission is to help communities manage and conserve marine resources to maximize benefits and ensure food security by sourcing funds, facilitating, coordinating and providing information, building capacity and empowering partners through traditional and scientific approaches.

The SILMMA network was established in Solomon Islands in 2003, during a locally managed marine area (LMMA) networking and training needs workshop in Honiara. Since that time SILMMA has gone through a building and learning phase until it now finds itself as the longest serving network of marine resource management and conservation management groups in the country.

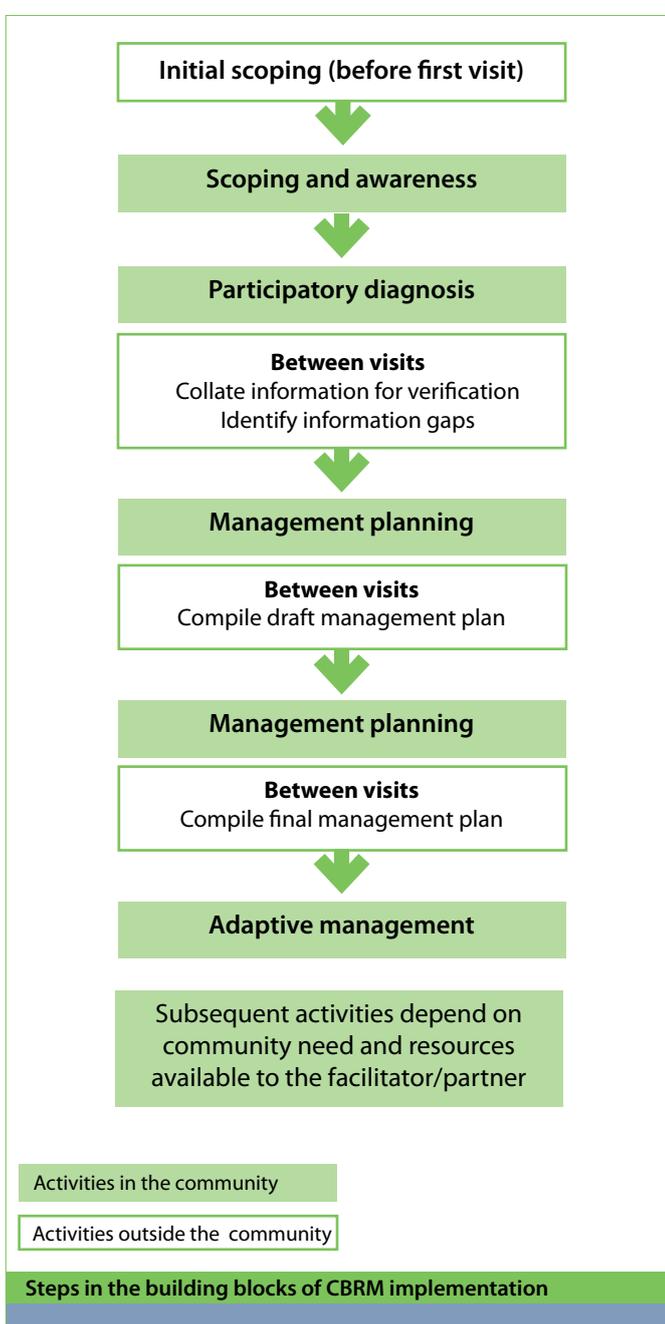
SILMMA is housed within MFMR aligned with the inshore fisheries division but remains an independent organization. SILMMA is co-ordinated by a secretariat of staff from MFMR and advised by a volunteer SILMMA Advisory Council.

Building blocks of a CBRM implementation process

The purpose of having a facilitator involved in CBRM is to support communities to play a role as stewards of their resources. In general this will mean communities will manage how people interact with the natural environment with the broad goal of improving or sustaining the quality of life in the present and into the future. To help a community work towards this broad goal, and to understand the community's specific goals, we describe a process with four main building blocks:

1. scoping
2. participatory diagnosis
3. management planning
4. adaptive management

In each of these stages of the process your role as a facilitator or a partner to the community is to support and guide a community to achieve their goals - a facilitator or partner does not decide or control how resources are used or rules are enforced.



Traditional fishing in Peava Village

The diagram to the left outlines all the steps within the building blocks that are described in detail in this guide. The way that these steps in the management process are achieved, and the number of visits that you might make to the community, will depend on how much time and commitment you as a facilitator are able to provide. In Module 5 some suggestions are given to help you plan and stage your visits and activities.

1. Scoping

This step is about informing yourself and your team before starting work with the community. You will need to talk with people from that community - scoping usually includes an initial introductory visit. Also, if it is available you will need to find and gather other relevant information from a range of sources (for example NGO and government reports). You should examine all the information you can find to build your understanding of things like the status of resources, nature of fisheries, leadership arrangements, social issues, and history of projects or other interventions in that community. Compile all information available and share with your team before going to the community.

Some of the areas to consider are:

- what are the problems, concerns and threats relating to marine resources? This may be described or summarized in the letter of request to you from the community. You can also ask questions and discuss this with people from the community and with relevant people who are familiar with that community
- has there been any previous work on related topics (e.g. natural resources, development activities) by NGO's or government in this community? Are there any reports available that have background information or experiences that will be valuable to guide your work?
- is there a genuine resource management need that has motivated the community request?

2. Participatory diagnosis

The word “participatory” means a process of doing things where a range of individuals have an opportunity to participate. The dictionary definition of “diagnosis” is to identify the nature and cause of something. In fisheries management diagnosis is a process that enables stakeholders to recognize the choices that are available to them to address issues, concern or hopes.

Here we use “participatory diagnosis” to describe the process where you as a facilitator, or a member of a facilitation team, work in the community and in partnership with community members to understand the characteristics of their fishery, and their concerns and hopes about that fishery. It is about partners and communities getting to know each other better and having a common understanding, so they can work more effectively together to develop a management plan that targets an agreed goal of management. Some aspects to cover are:

- who are the community leaders and decision makers, who are the resource owners?
- what species or areas are particularly important for the community’s fishing activities and what are the community’s concerns or hopes about their fisheries?
- what is the community’s management goal?

3. Management planning

Once the resource-related concerns and the overall goal of management are determined then steps to achieve the goal can be discussed by a management committee (discussed in module 4) and the wider community. You can assist as needed (depending on the requests from the community) by facilitating these discussions, by providing information to guide decisions and assisting in the writing and printing of a management plan.

Some steps to be covered during management planning include:

- community decides whether a specific management committee, or another existing group will take responsibility for leading discussions and implementing a management plan
- the committee discusses (with facilitation and advice from the partner/facilitator) the different ways to manage (e.g. the rules or controls that are placed on resource use) that would help them achieve their goals
- the committee discusses with the community what are the ways (e.g. rules, controls or other strategies) they are going to use to achieve their goals
- the committee chooses indicators and agrees on a monitoring approach

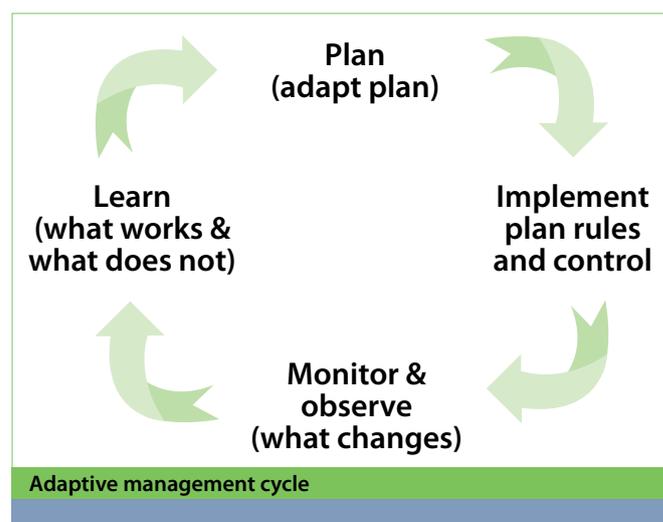
- the committee (and facilitator if needed) write a management plan that describes the agreed to rules and controls, enforcement and penalties
- the community implements the plan

4. Adaptive management

Adaptive management simply means ‘learning by doing’. For CBRM the process of doing adaptive management means:

- assessing whether the plan is effectively moving the community towards its management goal
- monitoring the outcomes of the actions, rules and governance arrangements that are described in the management plan
- if necessary, changing or adapting any parts of plan depending on assessments

In many instances, unless an organization has a long term engagement with the community, communities will largely be left to monitor and adapt on their own. As time goes on it is anticipated that Provincial governments will be able to provide more advice on monitoring and adaptive management. You can assist the community by working with them to identify suitable indicators of management outcomes, provide them with advice about how indicators can be measured and assessed, and to develop a community timetable and process to re-assess management and adjust management arrangements.





Module 2: Facilitation and communication

After this module you will know:

- what it means to be a facilitator
- principles for partners and facilitators of CBRM In Solomon Islands
- skills to assist you to manage a crowd of people with different personalities, opinions and levels of education
- some facilitation and communication tools that can be used during community visits
- some language tips minimize the likelihood of creating confusion



2.1 Facilitation and communication

- Facilitators role
 - Communication tools
 - Facilitator awareness
- Principles for partners and facilitators of CBRM in Solomon Islands
- Effective communication
 - Communication tips
 - Answering difficult questions



Women's focus group discussion

The facilitators role

As a facilitator of CBRM you are undertaking to facilitate a process which may be long term, and will involve a number of steps. At different times you can expect to be a facilitator of formal meetings, a facilitator of casual village discussions and a facilitator of participatory activities. Your overall goal is to assist the community to implement a management plan. This module gives general tips on facilitation for all of these circumstances so that you have some tools and ideas that you can draw on when you find yourself in this role.

A facilitator is someone who helps a group of people arrive at an understanding of their common objectives and assists them to plan to achieve their objectives. A facilitator should take a neutral position in discussion, and should not let their own opinions influence decisions. A facilitator should maintain overall direction of a meeting or workshop (i.e. like steering a ship) and encourage participation, listening and dialogue that will build connections and meaning.

Communication tools

There are a number of mechanisms that you will use to communicate with the community or with parts of the community, these may include:

- community or committee meetings
- focus group discussions
- key informant discussions or interviews
- informal discussions
- posters and handouts
- awareness presentations and DVDs

The tool box at the end of the guide outlines activities and resources that we have found useful for working on CBRM with Solomon Islands communities. Each activity has a summary of how to use it, the equipment and time required. Throughout this guide we refer to these activities using this symbol.



Tool Box

Whenever you see this symbol you can refer to the tool box for more information. If you are using this as a teaching guide these symbols indicate a good time for a group training exercise using that specific activity.

Facilitators awareness

For a facilitator of CBRM there are a number of things that you need to have a general understanding or knowledge of, and information that you need to keep up to date with. These include having some technical knowledge that relates to the topic being discussed (e.g. fisheries, marine resources, mangroves etc.) and to have information resources at hand to be able to answer questions. A facilitator of CBRM should keep up-to-date with national/ government initiatives regarding marine resources. This is especially important in order to be able to answer commonly asked questions from community members who are always interested to hear latest developments. Even if you are not a government officer you should be able to answer some questions relating to government initiatives as best as you can. Awareness also includes having an understanding of the cultural context that you are operating in; examples include following appropriate dress codes for the facilitator and his/her team while in the village.

It is not expected that you should know everything, however some commonly asked questions include:

- the status of the national ban on harvesting and exporting bêche-de-mer
- fisheries regulations regarding size limits of species such as mud crabs, crayfish, coconut crab
- seaweed farming
- coral farming
- clam farming/life-cycle
- trochus farming/life-cycle
- replanting of mangroves

Ways to stay up-to-date

- be aware of where to find technical information (see the tool box)
- read the latest information products that have been produced by Solomon Islands and regional organizations
- ask questions
- attend meetings
- SILMMA
- newspaper
- listen to the radio
- watch TV

Principles for partners and facilitators of CBRM in Solomon Islands

These principles are based on lessons that have been learned from engagement and implementation of CBRM over more than twenty years in Solomon Islands. They are based on a subset of guiding principles for CBRM which were originally prepared by SILMMA in 2007 (reproduced by Boso et al., 2010), and were updated and expanded in a workshop in 2010 (Alexander et al., 2011). They apply to any organization or group of individuals working with communities to implement CBRM and as a facilitator you need to be aware of them.

To ensure a community become empowered to manage resources, partners and facilitators should ensure that:

- communities are clear on the intended goals, responsibilities and likely consequences of management and that information is shared appropriately and regularly;

This relies on substantial two-way dialogue (e.g. through meetings, conversations etc) between the partner and the community (the entire community, or certain representatives). The agreed to goals, responsibilities and likely outcomes may be covered in a written agreement between community and partner – ensure that any related updates are available to both the community and partner.

- broad and inclusive participation of all stakeholders is facilitated at the community level (women, youth, churches, resource owners, etc) - the bottom up approach;

It is important that people that can influence management, or will be influenced by management are given the opportunity to contribute ideas and participate in decision making. A common danger in CBRM is that certain leaders or resource owners dominate decisions (leading to low levels of community buy-in and involvement) – it requires special effort by the partner and facilitator to ensure maximum involvement of community members in planning and implementation.

- the expectations of the community are not unreasonably raised;

In the early stages of CBRM, the partner should make clear in meetings and conversations what the broad objectives of CBRM are, and what the approach of the partner will be – and specifically what resources, technology and payments will be or will not be part of that CBRM process. These arrangements can be clarified in a written agreement between community and partner. These discussions should also include what the realistic outcomes of successfully implemented CBRM will be (i.e. recovery or replenishment of resources or habitats can be slow and often result in minor to moderate improvements to resource abundance and health).

- resources such as information, skills, publications and reports are shared as much as possible with the community;

The aim of the CBRM approach is to empower communities to make informed management decisions and to implement management. Therefore, where information can be provided to assist in the planning of CBRM, or where data have been collected that relate to outcomes of CBRM and adapting management, these should be reported back to the community in an appropriate form (for some ideas on ways to communicate effectively see the communication section in this manual). A facilitator or partner should promote community independence in the management process and avoid building reliance or dependency on partners - it is therefore essential to build community ownership of the planning process and as much as possible build community capacity (by building knowledge and skills) to make management decisions and implement management.

Management approach should ensure that:

- people, their aspirations and livelihoods are a central focus
- external and broader issues, risks and long term implications including sustainability are considered
- capacity building at all levels plays a central role
- mechanisms for monitoring and evaluation are defined
- special consideration of land and marine tenure as well traditional and customary values is made
- management process is flexible and adaptive – experiences and lessons learned should inform and improve management on a continual basis
- management / action plan should be documented and contain minimum agreed information (see module 4)
- due regard and support for the present and future legal framework is made

To respect and build CBRM as a national strategy for nearshore fisheries management, CBRM facilitators should ensure that:

- there is consultation and appropriate involvement of provincial government, appropriate national ministries
- existing networks (e.g. SILMMA) are utilized where they exist

Networking is a good mechanism for achieving resource sharing and assisting MFMR and MECDM to liaise with different stakeholders.

Effective communication

Effective communication is essential to successfully transfer knowledge and information between yourself and the community. Your ability to communicate about CBRM with the community will depend on your ability to synthesize key information and present it in a way that is meaningful and easily understood. Prior to any trip to the community you should be able to answer the following questions:

1. Why are we going?
2. What will we do for the community?
3. When will we visit the community again?
4. What is the best way to keep in contact?
5. Who is the focal contact person in the community?

You need to ensure you and your team are prepared before the community visit and have a plan for the time that you are there with well-developed aims and objectives that suit both your and the community's needs.

One of the first activities you will do is to hold a meeting with some or all members of the community. Who you meet with will probably be determined by your contact person but you can suggest wider community representation, so that as many people as possible can clearly hear and understand the purpose of your visit.



Tool Box: Facilitating a meeting or workshop

Communication Tips

Careful use of words

Being a facilitator means being aware of what you are telling people and ensuring that they clearly understand what you are talking about. There are a lot of technical words and acronyms that are used by government and NGO's, yet many of these words will never have been heard at the community level - and so these should be avoided.

Words and acronyms to avoid

Particular words have strong associations for communities through past exposure. For example in Solomon Islands the word 'project' tends to mean things and money, you might like to instead use words like partnership or initiative. Other words to be aware of that you may prefer to explain in other ways include:

- CBRM
- marine resources
- committee
- species

Many words that you will become familiar with in this guide you do not need to use in the community. Practice other ways of conveying ideas like:

- *diagnosis* (e.g. you could use phrases like 'now we are at the stage of talking together about what species or areas are particularly important for your fishing activities and what your concerns are about these')
- *indicators* (e.g. ask the group- how are you going to know if the management plan is working? What might you expect to see or experience? They will describe some indicators without that word needing to be used, although you may find that many are familiar with this word from

other contexts once you start this discussion)

- *adaptive management* (e.g. instead of saying 'adaptive management' talk about establishing a cycle of checking over time (say annually) to see if management is having the desired results; reviewing whether the management rules need to be changed in any way; and making changes if they do)

If you do need to use technical words or acronyms, and cannot think of an easier way to say them, be very careful that everyone clearly understands the meaning of them. Don't forget that if people weren't there when you were explaining what this word meant, and they come along to the meeting later, then they will not understand what you are talking about.

Explain things in Pijin and local languages

It is best, if possible, to explain new concepts or processes in the language that people are most proficient in - however often we need to use Pijin as a common language. Sometimes when you explain concepts in Pijin you will find people have not always fully understood your meaning. When you are asked for clarifications, try to address their question in a slightly different way. Make sure the whole group has heard the question and your response, because if one person has not understood it is likely that others also have not understood. If there is a team member that knows the local language, ask them to re-explain using language to ensure everyone understands.

Dealing with requests for "extra assistance" e.g. alternative livelihoods

Often in the early stages of engaging with a community, alternative livelihood strategies will be requested by community members. It may be that you are in a position to offer to help broker opportunities for alternative livelihoods. In that case partners and the community leaders must consider if it is to the community's advantage to be involved in a particular supplementary or alternative livelihood, and if the community has the necessary capacity to manage such initiatives. Partners working with communities to implement alternative livelihoods should carry out feasibility assessments of proposed supplementary livelihoods, including environmental suitability, and the social and economic viability. Results should then be communicated back to the community so that they understand the implications of such assessments. It is important that implementers tread carefully until feasibility assessments are complete as communities can have unrealistic expectations when the possibility of generation of cash benefits is involved.

As part of the lessons learned in CBRM in Solomon Islands Boso et al., (2010) highlighted that "A call for supplementary livelihoods to generate cash is a common request from communities who are managing their marine and coastal areas. There is no easy one size fits all solution to supplementary livelihood requests and a preferred approach, in the initial stages of CBRM at least, is to ensure that management options agreed by the community do not result in undue hardship for the subsistence component of the community livelihood and therefore do not require 'alternatives' for obtaining food."

If you are not in a position to broker opportunities for alternative livelihoods then it is important not to raise the expectations of the community. You should expect that there will always be someone that asks what alternative livelihoods they will be given if they look after their marine resources.

Some possible ways to deal with this in discussions include:

- acknowledge the need for cash; but be clear that CBRM is primarily about finding ways to securing resources so

communities have food security and can secure livelihood options for the future

- communities should consider their subsistence food needs when making rules and not feel that they need to make them so restrictive that only by finding new livelihoods will they be able to avoid hardship as a result of management
- for marine livelihoods there is usually not a quick fix answer, particularly if the community is remote, as transport costs can outweigh possible benefits of many options.

If the community is organized and able to register as a community based organization (CBO), this might help a community find their own means of supporting their alternative livelihoods ideas. Inform them of options that they may be eligible to apply for e.g. Provincial grants, MPs, community grants from donors. However it is important to emphasise that this is not a guarantee of funds as there is a lot of competition.

Be prepared to answer every question

You will not know every answer to every question asked by the community. Do not avoid the question, and do not give the impression that you know everything, because you probably don't (and that's ok!). This is a good opportunity to reinforce the partnership approach.

In some instances it will be appropriate to:

- put the question back to the community to draw on their local and traditional knowledge
- Look to your other team members
- Adapt the information that you do know to answer the question
- Admit that you don't know but will find out and will deliver the information on your next visit - make sure that you follow up on this!

Listen carefully

Be aware that some people in the community will often say what they think that you want to hear, not what the reality is. The more time you spend in a community, and the more informal conversations you have, the easier it is to understand what the actual circumstances really are.

Do not take things personally, do not take sides

Do not become involved in community politics or take comments or questions from the community personally - always act in a professional manner. It is unlikely that everything will go according to plan – patience and perseverance are required.



Fishing method training



Module 3: Scoping and participatory diagnosis

After this module you will know:

- what is scoping and the purpose of scoping
- what is participatory diagnosis and the purpose of the diagnosis phase
- how you can work together with the community to generate information for them to use in their management plan
- methods and tools to help build an understanding between you and the community
- what to do with diagnosis information
- how to guide the setting of management plan goals



3.1 Scoping

- Scoping
 - What information is important
 - How and where to source information
 - The first community meeting
 - What to do with the information that you have gathered

This module describes the scoping and diagnosis phases, which have been separated to help you with staging and planning your activities. In reality there will be some crossover between scoping and the diagnosis phase. Some information that you need from the diagnosis phase you will already know from scoping and some information that would be nice to have during scoping you will not be able to obtain until the participatory diagnosis phase.

Scoping

The purpose of the 'scoping' stage is to gather as much existing information as possible about the community before you start working with them. For some communities there may be existing printed information (project reports etc.) that you can access, but for others there will be none. Mostly this phase will involve talking to key people who have experience in that region, or are from the community. You should examine all the information you can find to build your understanding of things like the status of resources, nature of fisheries, leadership arrangements, social issues, and history of projects or other interventions in that community. The scoping phase usually involves an initial visit to the community. For some this will be the time when you source some more of this information from talking to people there and drawing on local knowledge. With this improved understanding you can better tailor your engagement to this particular community's situation - this maximizes the chance of successful CBRM.

What information is important?

- Was the request for assistance motivated on genuine resource management needs?
- What are the problems, concerns and threats relating to marine resources?
- Has there been any previous work by NGO's or government?
- What organization are currently working on the ground in that area
- Have other activities in the community been successful? What were the attributes that made these activities successful?
- What are the current and future events in the community that may impact on your work? (plan around these as required)
- What are the strengths of the community?
- Are there any conflicts or factions within the community?
- What is the size of community? What are the religions in the community? (and other basic community parameters)
- What languages are spoken in the community? (this can help with the preparation of targeted awareness materials)



A non selective "magnet" net being demonstrated

How and where to source information

- the original letter of request received from the community
- asking colleagues in other organizations working on resource management
- ask around amongst people from the community. This may include people from the community who live in Honiara or other urban centers near you
- any reports that may be available through the government or NGOs that have previously worked in the community or in the vicinity of that community

The information that you find should be compiled and made available to your team before going to the community. As a caution, you should recognize that not all information that you receive through the scoping process may be correct, this information needs to be verified with the community during the diagnosis phase.



Tool Box: General awareness DVDs

During the scoping phase community awareness can be an important mechanism to get people thinking about what management means to them. However, it is a good idea not to try and influence peoples thinking on specific topics before you understand each other better, and understand where their information needs lie. General DVDs on resource management in Solomon Islands (e.g. Jorio and Lau DVDs) are useful resources to use at this phase.

3.2 Participatory diagnosis

- Identifying stakeholders
- Understanding governance
- Identifying the roles of women and men
- Fisheries related information
- Identifying issues and building on strengths
- Setting goals for management
- Community feedback and verification

Participatory diagnosis

The participatory diagnosis involves facilitating discussions amongst community members, to understand the characteristics of their marine resources and fishery, and their concerns about resources or the fishery. In this phase you will spend time filling in some of the gaps that may have become apparent during scoping. One of the most important outcomes of participatory diagnosis is for the community to discuss and agree on the main issues and problems related to their fisheries and marine resources and therefore what it is they want to manage. This provides the basic foundations for developing management goals. Participatory diagnosis should:

- identify stakeholders (e.g. people who use marine resources, people or groups of people that own marine areas that are fished or will be managed, village leaders, other people who will be affected by management actions etc)
- understand governance structures that may need to be taken into account for successful management
- develop a common understanding about the marine resources and fisheries (including habitats and associated ecosystems) that the community is concerned about or is interested in managing
- identify issues to be acknowledged and strengths that can be built upon to help the community implement CBRM

There are a number of activities or tools available and that are widely published that could be used in the diagnosis phase. You can research these in a range of places and some are detailed in the LMMA Guide to CBAM (Govan et al., 2008). For more information, see Training Resources at www.fsfi.org.fj under the Community and Coasts Programme.



Tool Box: Activities

Example activities that we have found to be effective when working with a community during the participatory diagnosis phase can be found in the tool box.

It is important that the community is aware of why you are going through this process with them and that any information shared will not be used for any other purpose than to guide their CBRM. These discussions will highlight to you any additional information that you should seek and share with the community to support them to make informed and sensible management decisions.

The information shared during the diagnosis stage can also be included in the background information for the community's management plan.

The diagnosis phase sets the stage for management. You are ensuring people who are affected and can effect CBRM are involved, there is a common understanding about the fishery or species of interest and you can start to help the community think about management interventions.

Identifying stakeholders

Identifying the people who will implement management and will be affected by management (i.e. "stakeholders") is important. In Solomon Islands it is particularly important to identify and involve resource owners, even if they live outside of that community. For instance, we've found that although resource owners live outside of the community they can be very influential in slowing (if not consulted) or facilitating (if consulted and advised) the management progress. However, make sure that it is the people who have requested your assistance that advise you, and agree on, who these key stakeholders are.



Tool Box: Focus group discussions

Focus group discussions with village leaders and discussions with key informants.

Understanding Governance structures

It is important to have discussions about the governance structures and systems in place in the community so that you as a facilitator are aware of who owns the resources, who are the decision makers, how decisions are made, and how rules are enforced. This means that you can more effectively and appropriately guide management arrangements and develop a management plan that is compatible with, and does not contradict, systems the community is used to working with.

In Solomon Islands it is particularly important to understand the role and influences of:

- boundaries of the customary tenure areas that the community can consider for management
- traditional values and customary law
- traditional leaders
- elected community leaders
- religious values and the church
- existing interest or information groups and networks
- state law (i.e. are national regulations enforced by locally elected people, or by visiting police or is the community isolated from any regular enforcement activities)
- existing conflicts and conflict resolution mechanisms



Tool Box: Focus group discussions

Focus group discussions targeting village leaders, specific activities could include drawing tribal, village and governance structures

Understanding fisheries

It is also important that discussions with the community draw out information about their fisheries and develop a joint understanding (between members of the community, and between yourself and the community) of which types of fish and shellfish are important to them, how these are caught, what they are important for and how they are used.

You may also be able to introduce some information, alongside that provided by the community, about seasonal variations in fishing, abundance and behavior of targeted fish and important life cycle stages and characteristics that should be considered when making management rules. By discussing all this in a structured way this information can be used to guide decisions about how to best manage these resources.

Some important areas to understand about fisheries include:

- fishing areas (e.g. which areas are important fishing grounds, and how to these vary between gleaners, spear-fishers, line-fishers, men vs women etc)
- key habitats (e.g. which areas are important nursery grounds)
- key targeted fish, shellfish and other marine resources
- fishing gears (e.g. nets, diving gear, lines) and techniques used (e.g. gleaning, strike-lining, trolling)
- seasonality and life cycles of target species (e.g. when and where to fish aggregate for spawning, how long do certain fish and shellfish take to grow and reproduce)
- perceptions of how stocks have changed over time (e.g. have the numbers of certain fish increased or decreased)
- threats to specific fisheries
- importance of different species for food and for marketing
- access to markets to sell particular fish or shellfish
- alternative sources of food and/or income that could be strengthened to support fisheries management efforts



Tool Box: Matrix mapping
Focusing on fisheries information, habitat or resource mapping

Implementing management by building on community strengths and considering community issues

It is important for the community to recognize that there may be underlying issues in the community that can influence their management activities. Once issues are identified the community may feel that some special efforts or additional activities are required to address particular issues before management can be fully implemented. The community will also identify strengths (that they may not have otherwise considered) that can be built upon as part of the resource management process. For example, community groups, such as youth groups and women's groups or community work days etc. can all be utilized to contribute to an aspect of management. Facilitating a process that helps the community to identify and understand these strengths and weaknesses is an important part of the diagnosis phase.



Tool Box: SWOT analysis

| | |
|---|---|
| STRENGTHS (community characteristics that can make resource management work) | WEAKNESSES (characteristics that will challenge the community when doing resource management) |
| OPPORTUNITIES (things in existence externally that your community might build upon) | THREATS (external things that might hinder management in the community) |



Harvesting corals for building materials

Identifying roles of women and men

Fisheries and fisheries management have different benefits and costs for different groups of people - including differences between men and women. It is important to understand the different roles of men and women in fisheries, and in food production and livelihoods in general, so that the costs and benefits of fisheries and fisheries management are shared for the overall well-being of families.

Participation of both men and women in developing a community management plan can improve sharing of benefits, ensure better compliance with rules and promote harmony and sustainability. A facilitator can start, or be a part of, conversations that discuss these different roles. In the first instance this can be done by ensuring that there is time and space for both men's and women's voices to be heard.

Why do we need to consider both men and women (take a gendered perspective) when facilitating CBRM?

- women account for half of the population
- women think different and do things differently to men
- women and men do different things during the day
- men and women often work different hours
- women have varied tasks, often doing more than one task at a time
- work for the family is mostly done by women
- men's work is usually outside of the home
- women work longer and sleep less hours
- more men are involved in decision making



As a facilitator be aware of assumptions that may not be correct

- all fishers are men
- all heads of households are men
- because fishing is a male dominated sector, if there are problems in the fishery we may begin with a negative perception of the role of men in fisheries
- when asking about 'fishing' some activities that are mostly done by women (gleaning activities for example, may not be captured). Choose your words carefully to ensure that you also find out about things like gleaning for certain shells, collecting mangroves and seaweed

Both men and women are involved in productive and reproductive roles but usually to different degrees. All of these take time and can influence the role that different members of a community will be able to play in management.

Productive work – involves the production of goods and services for consumption and trade. This is work which generates income or food.

Reproductive work – involves care and maintenance of the household and its members including bearing and caring for children, food preparation, water and fuel collection, shopping, housekeeping and family health care. Although crucial for survival it is sometimes not considered as 'real work.' In villages it is mostly time-consuming and hard manual labor.

Community work - involves the collective organization of social events and services e.g. ceremonies, celebration, community development projects, participation in church and other organizations, local political activities. It is often overlooked in the economic analysis of the community. It is voluntary but is important for the spiritual and cultural development of communities and is a vehicle for community organization and self-determination.

To further understand the different roles of men and women, there are some key questions that you can ask in a focus group discussion:

- Who does what (men, women, girls and boys)?
- How do men and women go about their daily activities?
- Who has access to which fishing grounds?
- Who has access to what equipment or assets?
- Who makes decisions about what?
- Who benefits from what?
- Who fishes, or collects, what species?
- How can you maximize benefits from management for both men and women?

EXAMPLE: Understanding that an important role for women in the community is to educate young children in the household can remind you to discuss the development of targeted information for delivery to women to help them educate their children about their communities management plan.



Village leaders discuss governance and tribal structure

Goals of marine resource management

The identification of a main management goal (and more specific management goals) is the key to the whole management process. What does the community want to see happen as a result of management? All management planning activities discussed in Module 4 are aimed at working towards meeting or maintaining this goal.

Identifying goals of management

This can be done as a group activity. If there are a large number of people involved then they may choose to start discussions in smaller groups that are then shared with the broader group.

We have found that people either choose to do this as:

- separate men's and women's and youth groups or
- amongst the resource management committee

In our experience committees usually prefer to not have the facilitator involved in the process of deciding what the management goals are, except to give guidance before the group breaks away for discussion. In some cases there is a role to play at the end of group discussions, in facilitating the process of consolidating multiple ideas into one main management goal (and if desired; more specific management goals).

Examples of guidance can include suggesting that groups think about the following questions:

- What do you want to see happen as a result of management?
- Imagine your marine resources in 5-10 years time. What do you want to see?

- Revisit/think about problems identified in the diagnosis phase

Do not rush the community - give them time by themselves to discuss and decide on their management goals. Depending on the situation this can be a good place to end a community visit leaving this as an activity that the community can complete between visits. In that case it may be useful to identify a community or committee member with higher education (e.g. a school teacher) that can help facilitate this process, especially to consolidate two or more similar goals into one overarching goal.

The community needs to come up with their marine resource management goals entirely on their own as this is central to 'ownership'.

Community feedback and verification

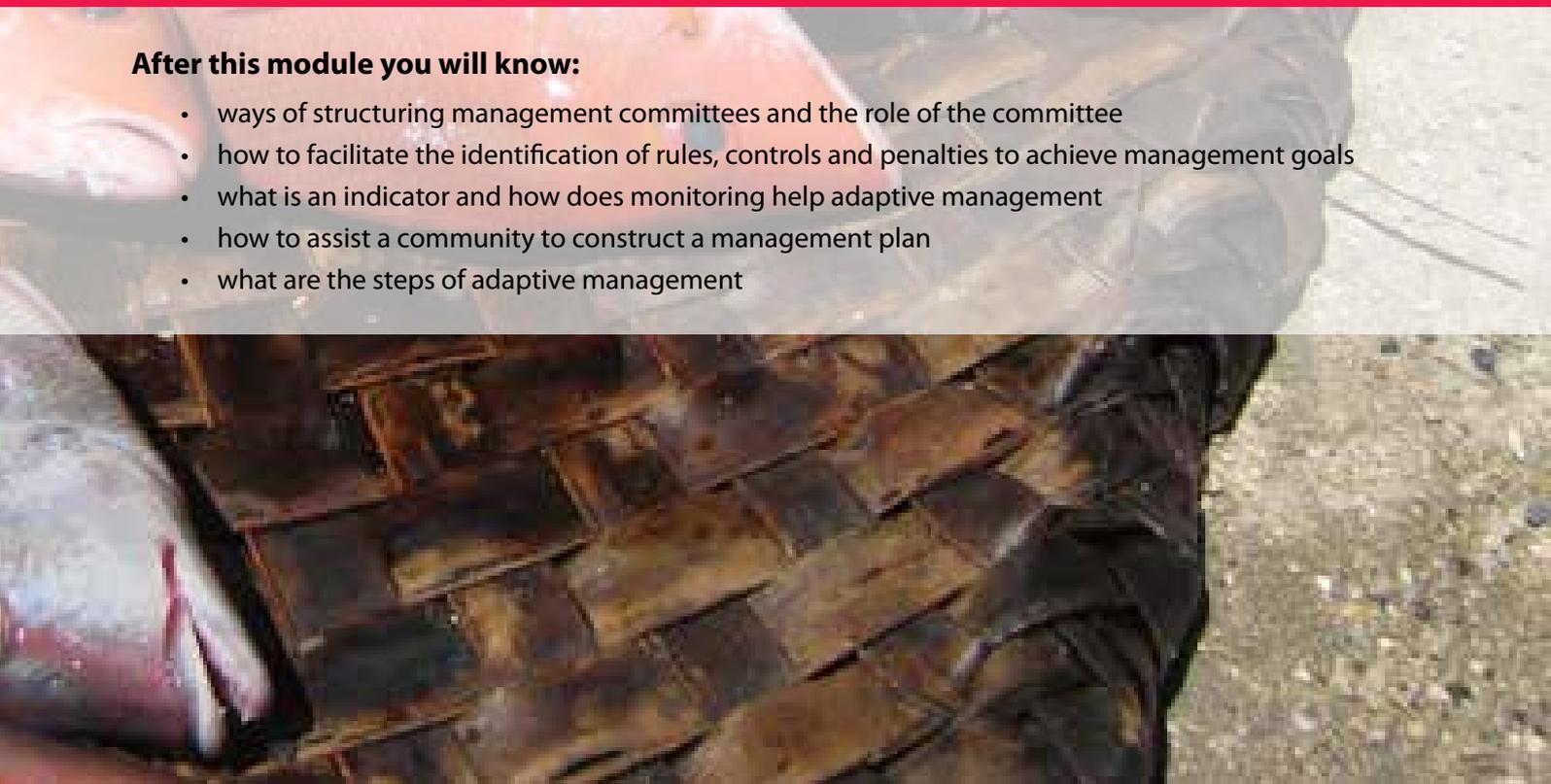
At the end of the diagnosis activities, summarize the information as soon as you can in preparation for presenting it back on the next visit. Ensure the community leaders know that you will show the information back to them on the next visit to give them a chance to validate it. Before you leave make sure the information that was generated in the discussion is recorded. Information can be recorded on large sheets of paper as lists, maps or diagrams (for example). It can be useful to take photos of those summaries so that you can leave the community with any original materials that were worked upon during group discussions and activities.



Module 4: Management planning

After this module you will know:

- ways of structuring management committees and the role of the committee
- how to facilitate the identification of rules, controls and penalties to achieve management goals
- what is an indicator and how does monitoring help adaptive management
- how to assist a community to construct a management plan
- what are the steps of adaptive management



4.1 Management planning

- Community management committee
- Management rules and controls
 - Examples of management rules
 - National Fisheries regulations
 - Gear restrictions
 - Catch/size limit
 - Closed areas (Tambu)
- Penalties and enforcement

Management planning

By the time this phase is reached the community should have already worked through a process of thinking and talking about the status of their resources, some of the important characteristics of the fisheries or resources that they want to manage, aspects of governance like identifying the resource owners, and finally have defined one or more management goals. Then they are ready to put together the elements of their management plan. To guide management plan formation, all the information gathered in prior stages (described in module 3) should be at hand in an easily accessible form (e.g. short reports may have been written or summaries may have been put together on large pieces of paper). The first step in this module is the formation of a management committee; in most cases the community will have already identified an existing committee or will have been thinking about forming a new one before you get to this stage.

Management committee

A marine resource management committee is a defined group of people that guide and lead their community to make management decisions and implement management. The specific roles and responsibilities of the committee will be defined by the community or the committee itself, but in general the;

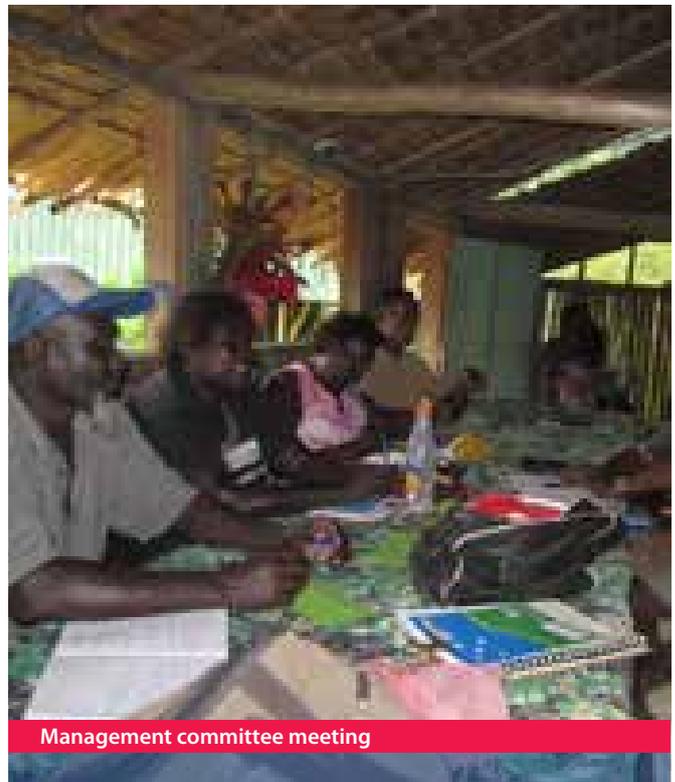
Committee's role is to guide and lead marine resource management activities in the managed area

Committee's responsibility is to attend and contribute to committee meetings, to advocate and lead by example in marine resource management activities.

Structure of a management committee

There may be existing committees in the community that are willing and able to take on the role of marine resource management. Alternatively, the community may decide that there is a need to form a committee dedicated to developing and implementing natural resource management activities as well as communicating them to the rest of the community.

The number of people in a committee and where they are drawn from depends on the size of the area being considered for management, who the resource owners are and what other decision makers or representatives need to be included. For example, if the area for management encompasses two or more tribes or villages, stakeholders may want to create separate committees or one that encompasses all these groups - whatever works best to capture and represent the different leadership and



Management committee meeting

governance structures of the groups involved in management. In general however, we have found that a committee is most effective if it has responsibility to its own community rather than to many communities.

Elements of an effective management committee structure

We have found that a committee is more effective if members include:

- resource owners
- community leaders
- people that hold a position of respect within the community
- people that spend the majority of their time in the community (not Honiara)
- effective communicators
- people who are willing to feed information back to the community
- people who listen to what the community has to say
- both males and females
- youth representatives

If the committee does not contain all resource owners in the management area then a key role of the committee will be to organize resource owners to come together to discuss management options and decisions.

Care should be taken to ensure that the committee does not undermine the existing structures of the community (traditional or otherwise).

As facilitators of CBRM we can provide advice and share our experiences with the community, but the decision on who will guide and lead the marine resource management activities is up to the community and its leaders.

Management rules and controls

General considerations

Management rules and controls are the foundations of a plan to reach management goals. There are a number of options for rules and controls that can be included in a management plan and these depend on the characteristics of the fishery as well as the characteristics of the community. The community will have a good understanding of these from the diagnosis phase.

Traditional and cultural controls on marine resource-use have been used by Solomon Islands people for centuries, although these customary systems are no longer in place in some villages and many communities are requesting information on how to reinstate them. It can be useful to use and modify customary rules, alongside new ones, in contemporary efforts to manage marine resources.

There is no simple recipe for the best rules to use to achieve the communities' management goal; however the goal itself, the information gained from the diagnosis and up-to-date regionally relevant scientific information will all help.

Some things to consider in guiding a communities decision about setting rules include the local social setting, economy, and the biology and ecology of the fished species and habitats, for example:

- **subsistence harvest:** local people need to be able to harvest enough food to support healthy diets - the community is likely to want to keep some areas accessible for food gathering. Are certain groups of people affected (disadvantaged or advantaged) by some rules more than other people?
- **tenure:** Do the resource owners agree to the rules being proposed? Are certain groups of people (e.g. clans or tribes) affected by area closures (for example) more than other people?
- **artisanal harvest:** harvesting and selling resources is usually an important source of cash and so the community will need to consider at what level this activity will be allowed and where
- **commercial harvest:** Is the community going to allow outsiders to harvest and sell resources from their managed area?
- **tourism:** Is there an expectation that management can be related to increased tourism, if so, how?
- **spawning success:** Some fish come together on certain reefs to spawn and reproduce, these are important areas to have rules about fishing and looking after habitat.
- **habitat:** Consider how habitat protection can be included in the plan. Seagrass, mangrove and reef habitats are important to part of the life cycle of many target species and provide other important ecosystem services. It is valuable to consider all these habitats within the management plan
- **life-cycles:** some animals spend different parts of their life in different areas, this needs to be considered in management i.e. think about how the rules made for only one habitat, or one life stage of a fish, will help to achieve the management goals
- **age and sex structure of populations:** Certain species of fish change sex as they get older or bigger. Fishing that heavily targets just large or just small fish of a species that does this, might target all the males or all the females - making it difficult for reproduction to occur in that population. This needs to be considered for rules that are



Diving for mud crabs

trying to affect the size of fish selected (e.g. size limits, mesh size limits)

Tool Box: Further Information



If you want more information about biology and ecology of certain types of marine resources, the following provide a good start:

- SPC information sheets on key species: Based on feedback from Solomon Islands amongst other countries and cover all the main species fished as well as providing guidance on management options for each.
- FishBase: A good technical resource for advanced users to find out more details on different fish species and their life cycles.
- SeaLifeBase: A good technical resource for advanced users to find out more details on different invertebrate species and their life cycles.

Use information that was gathered during diagnosis and that you as a facilitator can bring to the discussion, including:

- traditional knowledge – can traditional knowledge help to inform and guide management of certain practices, areas or types of fish etc.
- local knowledge and experience – what sort of rules do local fishers want to include
- national experience – the experiences of other communities doing management in Solomon Islands
- scientific knowledge – research and experiences from the Pacific region
- national rules and regulations (see box for fisheries regs)

Management rules may apply only to certain areas and should be made to:

- be realistic for the community to be able to follow and enforce
- be effective for the particular species and habitats that the community identified as important during the diagnosis phase

National fisheries regulations

The government sets a series of rules based on scientific advice to reduce overfishing. These fisheries rules are those which are included within the Fisheries Act and apply to all people across the Solomon Islands. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Bill is gazetted. Readers of this manual should check with MFMR for any updates.

Fines



Crayfish (genus Panulirus)

- No collecting, selling or buying crayfish less than 8 cm carapace length
- No collecting, selling or buying female crayfish carrying eggs

Crayfish

\$100 fine or 3 months imprisonment (or both)



Trochus

- No collecting, selling or buying trochus less than 8 cm diameter and more than 12 cm diameter

Trochus

\$100 fine or 3 months imprisonment (or both)



Leatherback turtle (Dermochelys coriacea)

- No fishing for any leatherback turtle
- No collection, or selling leatherback turtle eggs

Leatherback turtle

\$100 fine or 3 months imprisonment (or both)



Coconut crab

- No collecting or selling coconut crab less than 9 cm carapace length
- No collecting, selling or buying female coconut crab carrying eggs

Coconut crab

\$1000 or 4 months imprisonment



Giant clam (genera Tridacna and Hippopus)

- No selling, buying or exporting giant clam meat or shell

Giant clam

\$100 fine or 3 months imprisonment (or both)



Pearl oyster (genus Pinctada)

- No harvest, selling or export pearl oyster

Pearl oyster

\$100 fine or 3 months imprisonment (or both)



Green snail (Turbo marmoratus)

- No harvest, selling or export of green snail

Green snail

\$100 fine or 3 months imprisonment (or both)



Sandfish (Holothuria scabra)

- No harvest, selling or export of sandfish

Sandfish

\$100 fine or 3 months imprisonment (or both)



Crocodile

- No export of crocodile or crocodile products (including skin)

Crocodile

\$100 fine or 3 months imprisonment (or both)



Destructive fishing

- No use of explosives or poisons for killing, stunning or catching fish

Destructive fishing

More than > \$1000



Coral and coral sand

- No collecting dead or live coral or coral sand from designated areas

Coral and sand

\$100 fine or 3 months imprisonment (or both)

The community may want to include other rules related to the way that they think and behave in their environment. This includes thinking about what people do on the land as well as the sea, for example:

- considering the impacts of deforestation (e.g. harvesting mangroves and other forested areas) and runoff
- considering the impact of developments (e.g. jetties, channels or larger construction)
- planning rubbish disposal
- planning village expansion

Examples of management rules

There is a lot of information in text books and guides that is intended to help fisheries managers and their advisors make good decisions about which rules to set to improve the sustainability and profitability of fisheries. This detailed information and guidance is however beyond the scope of this manual. The suggestions that we have given here are based on those that, in our experience, communities have suggested themselves in one form or another as local solutions to their identified problems. We encourage manual users to discuss the suitability of specific management rules for particular issues with the MFMR, other CBRM practitioners in Solomon Islands and also to consult some of the resources we identify in the back of this manual.



Tool Box: Further Information

Helpful information about management rules can be found in the following:

- SPC information sheets on key species (recommended management rules for some marine species)
- FishBase (catch/size limit information)
- SeaLifeBase (catch/size limit information)
- Solomon Islands Marine Life Book
- Cohen and Foale, 2013 (Periodic closures)

Gear restrictions

Gear restrictions limit or ban the use of equipment that damages the environment or results in over-fishing. Usually there are other methods that can be used that are less damaging. To make enforcement easier gear restrictions are generally applied over the entire managed area. Common gear restrictions include the banning of:

- **small nets** because they indiscriminately catch baby fish
- **traditional fish poisons** because they kill baby fish and can harm corals
- **night spearfishing** because this targets herbivorous fish which sleep on the reef at night. These fish are important to keep the reef clean from excess algae.

Catch/size limit

- **catch or 'bag' limits:** restrict the number of fish (or other marine resource) that each fisher can collect in one day. The number depends on the type of animal (generally rare or slow growing animals would have a low catch limit, whereas common or fast growing animals would have a higher limit). This helps by reducing the total take by the community, but provides enough fish for everyone to eat.
- **size limits:** minimum size limits are put in place to ensure juveniles have the chance to grow to maturity and reproduce before they are harvested. Size limits are

therefore based on the size at which that type of animal becomes mature. In some case maximum size limits may be put in place to protect the larger animals because they produce the most offspring e.g. trochus or because certain species change sex as they grow and a upper size limit protects those large size males or females (e.g. parrot fish)



Traditional tambu marker

Closed areas (tambu)

Solomon Islands people are familiar with tambus because in many areas tambus are/were used as a mark of respect when a Chief or person from the village died, to protect sacred sites or to save up resources for feasts. When asked to think about management, most communities will probably think of tambus. But management is about much more than just a tambu, and you need to ensure that the community understand that to reach their management goal(s) they will probably need to implement a range of rules and also use other strategies. It is important that the community has an understanding on the difference between tambus and other forms of management. In some cases, we have found that it may be easier for the community to implement a tambu in their early stages of management and then add more rules and strategies later down the track.

Bringing tambus into a management plan is a good way to make the link between traditional practices and new management techniques that are designed for the pressures, threats and opportunities that face fisheries today. Communities may want to use existing or traditional tambus, but they often seek advice on how to modify tambu rules or where to put new ones.

There are several ways in which a tambu can be used;

- **full closure:** An area is closed to all forms of fishing/harvesting to allow marine resources within that area to grow to maturity and reproduce
- **temporal closure** (Periodic closure): An area that is closed to all forms of fishing/harvesting for a certain length of time. The local community can then decide to open the area for a specific event (fundraising/feast) or for subsistence harvest. This 'temporal closure' is similar to many traditional forms of management in the Pacific, where a chief/leader has the power to open and close reefs to fishing
- **spawning closure:** This can be used to protect fish or other marine animals which spawn (reproduce) at certain months or times of the year. An entire area is closed to fishing/collecting during the aggregation/spawning event
- **combination:** Full, temporal and spawning closures can be included in the management plan for an area. This can be useful so that one section of reef/mangrove/seagrass remains closed while another area may be opened periodically to be able to ensure people have access to fish for consumption
- **specific use:** In some cases fishing within a certain area may be allowed only for specific use e.g. fishing next to the shoreline can only be done for consumption by people in the village (fish caught cannot be sold) or a specific area may be designated for traditional fishing practices only, or only a certain type of fish or invertebrate can be taken from an area but nothing else

There are no clear and certain rules about designing and implementing a tambu that will meet a communities management goal, because the outcomes will depend on several factors including the status and condition of the tambu area prior to management (both the habitat and the fishery), the type and time of closure and the intensity of fishing (both prior to closure and during opening).

Some general advice you can give communities on tambu areas include:

- some locations will be more productive or replenish faster than others because of the ecological conditions in that area

If the status of the surrounding fishing grounds is good and there are links (through currents and wind) between the tambu area and the surrounding areas, there is a greater chance the tambu will be replenish faster.

- some locations will be better than others for social reasons

Important questions to ask about an area or areas proposed for closure include; is it visible from the village so that it is easy to see if people are breaking the tambu? Will the closure of this area disadvantage a certain group of people more than others (e.g. women fishers, spear fishers, or an entire tribe).

- tambus will be more effective for some species than others

Fast growing species (often smaller fish or invertebrates) or those that have many offspring are better able to replenish and recover during closure periods (for example one or two years). Species that grow slowly (e.g. giant clam), that only have few successful offspring, or have been heavily fished down may need to be protected from fishing for many years for populations to build.

- opening of periodic tambus may be timed to coincide with times of social or economic needs. However, there needs to be a balance between giving resources an opportunity to replenish and taking resources to meet people's needs

Often the period of closure might have allowed some species to replenish or grow, but will not be long enough for other species (i.e. those that grow slowly, reproduce slowly or have been heavily fished down). If a tambu area is heavily harvested when it is opened, it may take longer to recover when it is closed again. Finding this balance between harvesting and closure can be helped by monitoring and observations that are used to inform and make changes to the management rules.



Penalties and enforcement

Penalties

To discourage rule-breaking, penalties or fines are usually included in a management plan. Most marine resource management committees will want to have a system for applying penalties and fines. Penalties or fines can apply to anyone breaking any of the rules laid out in the management plan. Some committees choose to have penalties based on kastom or some choose to apply cash fines.

Many communities are now looking towards the legal system to give them more power to enforce their management plans. Once a community has a written management plan and the plan is being implemented, it is expected that from 2013 onward there will be some options for legal recognition of that plan. These are:

1. Provincial ordinances (if available in their province)
2. The Fisheries Act (once the revised Bill is gazetted)
3. The Protected Areas Act

The community will require support to ensure their management plan adheres to the requirements for the specific legislation (see the following section on 'resource management plans').

Enforcement

The management committee and community leaders will decide who will issue the penalties to rule-breakers. So far, in our experience communities that have management plans have chosen either chiefs, resource owners or the management committee to issue penalties.

4.2 Management planning

- Monitoring
- Indicators
- Constructing a management plan

Monitoring

Once the rules have been decided, it is time for the committee to start thinking about whether the rules are having the desired effect. Monitoring simply means to observe or measure a situation to look for any changes. Selecting an 'indicator' can be a good way to concentrate on looking at specific changes that might represent more widespread changes. Based on what is seen or noticed by monitoring, the committee can make decisions on whether any of the rules or other arrangements in the management plan need to be changed.

Indicators

An 'indicator' is something that we might expect to show a change as a result of management. For example, if an area is made tambu for the purpose of increasing numbers of trochus, then the indicator is "the number of trochus" counted in a specified area or harvest.

For CBRM an indicator can be biological (e.g. the number of specific animals) or related to the community (e.g. behavior or social characteristics). Monitoring 'indicators' can show how management activities are, or are not, changing - but note that changes may be small, take time and may be difficult to see in the early years of management or where other factors have had a greater influence than management (such as a natural disaster or an unusual variation from year to year in the number of juveniles of a particular species, that arrive and survive in that area).

Previous experience from marine management activities in Solomon Islands highlights that indicators need to be simple (i.e. easy to understand and measure) and must be developed in discussion with the committee. Also it is important to agree upon ways that the committee can record and compare changes in their chosen indicators.

General tips for helping communities to select indicators

- advise the community to select only a few indicators, for example three biological and two community indicators
- if there are too many indicators it will be too big a workload for the committee/management team to continually monitor
- choose indicators that can be easily measured by the community

Biological indicators

Biological indicators can include fish, shells, crabs or other marine resources that the community is interested in seeing improve. The management committee can be encouraged to select indicator species that are harvested (fish and/or shells) and that are important to many people. The types of fish or shells that are important to the community will have already been highlighted during the diagnosis phase.

As a facilitator it is your role to guide the community in the selection of biological indicators. It is good if they:

- select species that are important to the community for food/income
- select species that are relevant to the objectives/goals of the management plan
- select species that will directly reflect expected changes in the management area e.g. if there were never trochus in the managed area in the past, then you would not expect them to suddenly appear so you should not select trochus as an indicator
- select a range of indicators to represent things that might change relatively quickly (e.g. fast growing and reproducing things like trochus, mudcrabs) and things that might take a longer time to recover (like bumphead parrot fish)

Community indicators

Social characteristics of the community can also be used as indicators. Social indicators may for example describe a change in people's behavior. Some examples that we have found to be useful include:

- the number of people in the community are aware of the rules in the management plan
- the number of people in the community accepting the management plan
- the number of times rules have been broken in a month (or week, or year)
- the number of cases receiving penalties compared to the number of rules broken

Monitoring indicators

Monitoring can be very simple like making general observations or it can be very complex requiring specialized training and data collection. Detailed information about monitoring methods is available through the SILMMA monitoring methods manual. While only some communities will be able to be trained and then maintain complex monitoring over time, any community can undertake and compare more simple observations (e.g. the weight or value of trochus harvested from a certain area of managed reef or the size of fish caught or seen on a managed reef). The level of complexity of monitoring that a community chooses will depend on the skills, motivation and ongoing availability of resources.

For CBRM, monitoring needs to be able to be sustained by the committee or community themselves. Our experience shows that monitoring that involves general observations, or does not have a significant cost associated with it (time or money) is more likely to be sustained independently in the longer term. Discuss with the committee the monitoring options that will be sustainable for them - this can be built up to more complex monitoring in the future if desired. To ensure the management committee does not become overloaded, you may want to suggest that they form a monitoring committee that is responsible for overseeing or undertaking monitoring activities.



Village youth proudly hold a poster of their communities management plan

Constructing a marine resource management plan

Now you are ready to pull together all the information (gathered through scoping and diagnosis) and write a management plan. It is likely that you will be requested to do this task for the committee, or they may have a resource person who can do this for them. A marine resource management plan is a description and formalization of management activities. For some communities this may simply be a poster that describes the goals of management, management rules and penalties for rule-breakers. For others it will be a more comprehensive document several pages long.

A written management plan is required if the community wishes to register their management under the new National Fisheries Act, Protected Areas Act or Provincial Ordinances. Management plan registration is not compulsory, but is an option to give some legal backing to the management arrangements described in the plan.

The details of the requirements for management plans under the Fisheries Act and the Protected Areas Act were given in Module 1 and are summarized again here.

Management plan requirements under the Fisheries Act (revised)

- goals/objectives of management
- boundaries of management area
- customary rights
- fisheries occurring within this area
- status of these fisheries

- threats to the fisheries – including environmental, social, cultural or economic effects
- management measures/rules
- indicators of the performance of management
- fines and penalties
- monitoring, reporting, assessment and revision including period for review

Requirements under the Protected Areas Act

- zoning of a protected area and a description of the activities that may be carried out in different areas
- activities that are prohibited in the Protected Area or zones of the Protected Area
- identification of species or habitat that need special controls
- management objectives
- application of relevant traditional management practices
- implementation and enforcement program
- public awareness programs
- research and monitoring
- staff and staff training
- proposed penalties to proposed rules

Optional inclusions

The committee might decide to include additional information such as a description of the composition and structure of the community. This may include, resource ownership, tribal structure, demography, language(s) and religion.

4.3 Management planning

- Implementing a management plan
- Adaptive management

Implementing a management plan

Once a management plan has been developed, it is now time for the management committee and broader community to implement their management plan. Prior to implementation, widespread awareness of the management plan is required. Awareness is important not only for the community or communities implementing the plan, but also for the surrounding communities.

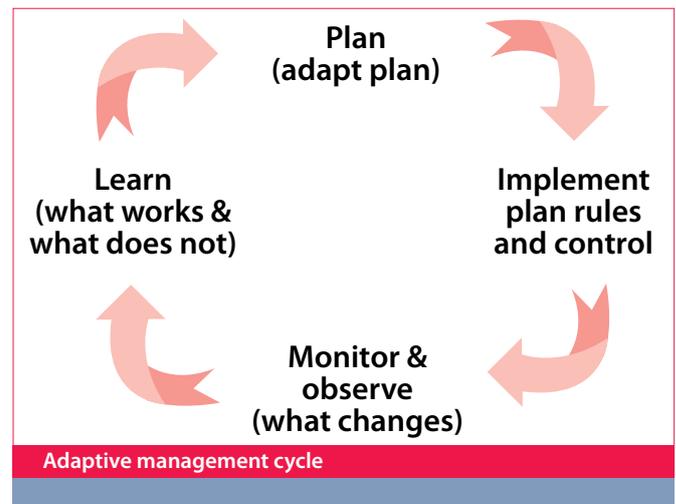
As facilitators or partners, you can support the community through this awareness raising process by assisting them to develop a poster or other awareness materials that describe the management goals, the management area, the rules, and the penalties for rule-breakers. The community may also want you to put out a press release (through the local paper and/or radio) to enable wider awareness of the communities management plan to those living outside the community.

Adaptive management

Adaptive management is simply 'learning by doing' or trying something and if it does not work, use what you have learnt and try something slightly different or new. For CBRM, adaptive management can be described as the process where the community develops and implements their management plan, and then after a set period of time they look for changes by monitoring and reflect on the management experience, and learn and adapt in response to these changes and experiences. If the community is happy with progress, no changes are necessary. If the observed changes are not what was expected, and are not desirable, the community may want to change (adapt) their management plan to help them reach their desired management goal.

When the management committee meets to review the management plan, they should use the information from the monitoring to think about whether they need to adapt or change management rules or other ways of doing things. For example, do people in the community think it is taking more or less time to catch fish compared to before? The committee should also reflect

on their overall experiences of management to guide their way forward. For example, what has been difficult to implement? Or, has the committee structure and meeting process worked well for them? Therefore, adapting management might include things like increasing awareness to improve compliance, adding new rules, removing some rules or changing others.



A facilitator or partners ongoing role in adaptive management

In many instances, unless a partner organization has the resources for a long-term engagement with a particular community, the reality is that communities will largely be left to monitor and adapt management on their own. As time goes on however, it is anticipated that Provincial Governments and SILMMA will be able to provide more advice to this phase of management.

You can assist the community create an achievable adaptive management process by working with them to identify suitable indicators, to agree how they can measure or assess these indicators and to develop a community timetable and process for assessing and adapting management. This may mean that your support is required to help interpret information from monitoring, facilitate a meeting to review the management plan and provide advice or information to answer questions that the community has after implementing management. There are also cases where your role as a facilitator may be required to assist the community work through problems or conflicts that have emerged and that are stalling their management progress. Also we recommend that the community is linked in to SILMMA so that it can be aware of opportunities for capacity building and ongoing support in the form of information and advice.



Monitoring fish catch



Module 5: Planning your time commitment to the CBRM implementation process

After this module you will know:

- some of the steps you can plan for full CBRM engagement with a 'seed' community
- some of the steps you can plan for to engage in CBRM with a 'lite' touch community



5.1 Planning your time commitment to the CBRM implementation process

- Full engagement with a 'seed' community
 - Suggested steps you can plan for
- Engagement with a 'lite' touch community
 - Suggested steps you can plan for

- accessibility of the community (i.e. how hard is it to visit the community)
- community characteristics and capacity (such as their willingness and readiness to implement and spread CBRM)
- clarity of tenure and ownership of marine resources in that area (in particular are there any disputes that might disrupt the management process and Implementation?)
- location of other existing 'seed' sites

Seed (or core) CBRM areas

In a seed community it is likely that each step of the process outlined in this manual would be facilitated by a NGO or government partner.

A seed community needs to be a reasonably well organized community that has a good chance of being successful at developing and implementing a management plan itself. But also they should be enthusiastic about CBRM and willing to share CBRM experiences and lessons - and therefore are likely to become a champion of CBRM and promote it in other areas that express an interest in management.

The following diagram outlines the main steps and that have been outlined in this guide so that you can plan your visits to the community. Depending on the particular community, some of these steps may be longer or shorter than outlined here. There are a number of activities that you, as a facilitator of CBRM will undertake outside the community, these are boxes are outlined in brown. Boxes that outline activities undertaken within the community are colored in.

Planning your time commitment to the CBRM implementation process

If an opportunity to work with a community presents itself (i.e. a community makes a request to your organization), it is important that from the very start you are open and honest with them. In particular, ensure that the community is aware of and comfortable with your approach and broad goals for CBRM.

There are two levels of working with a community that are based on the level of support, time and resources the partner will provide. These two levels of support or types of approach (establishing a 'seed' community or using the 'lite' approach) are outlined here. Whether a 'seed' or a 'lite' approach will be used in a particular area or community will be determined by a number of factors including:

- the partner's funding and time available to commit to CBRM activities



A village in the Central Islands Province

Scoping (before first visit)

- find out relevant information available (talk to key people and draw on local knowledge)
- build understanding of what is known about resource status, nature of fisheries, leadership arrangements
- find out if any related activities have been done previously in the community
- compile all available information and share with your team



Scoping and awareness (visit #1)

- first community meeting to explain and agree on the purpose and extent of your role in the CBRM process
- discussions with community leaders and resource owners to better understand why they have requested your assistance
- a time to get to know each other
- awareness DVDs on marine resource management
- plan the next visits to the community



Participatory diagnosis (visit #2)

- identify stakeholders
- understand governance and leadership
- identify resource ownership and areas of concern
- identify and increase understanding of key marine resources, habitats and species of concern
- community identifies a goal for management

Between visit #2 and visit #3

- collate information in preparation for verification on next visit
- identify information gaps to be addressed on the next visit



Participatory diagnosis (visit #3)

- verification information and address information gaps
- identify management committee
- identify management rules and controls to achieve management goals
- identify penalties and enforcement
- provide information / awareness relevant to the communities management goal

Between visit #3 and visit #4

- compile draft management plan from community input



Management planning (visit #4)

- verification of draft management plan
- identify biological and social indicators
- discuss monitoring methods and identify monitors
- agree final format and information for the management plan

Between visit #4 and visit #5

- compile final management plan based on community feedback



Adaptive management (visit #5/#6)

- support community to review and adapt management plan
- assess monitoring outcomes and solve issues
- provide support to management plan registration (if relevant)

Subsequent activities may include

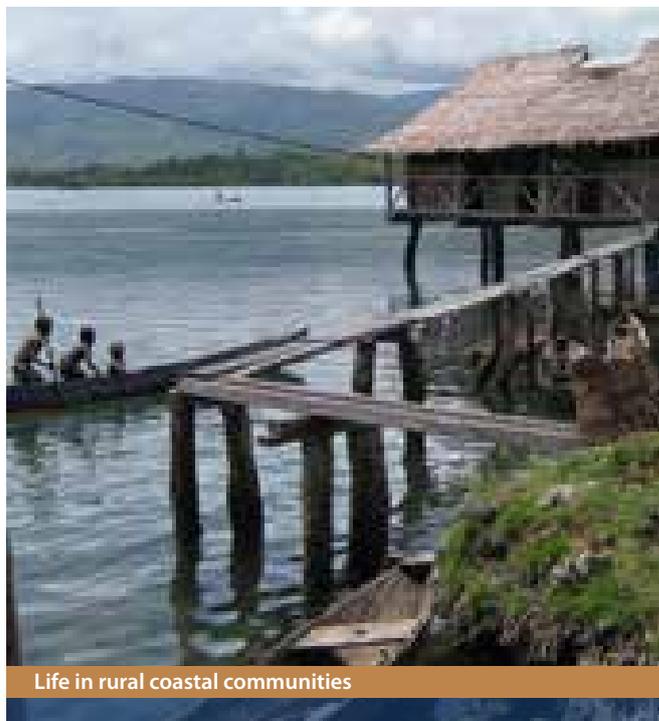
- arrange exchange visits to nearby communities (as relevant)
- source and provide targeted information (as relevant and requested)
- provide support to writing a management plan
- linking the community to SILMMA

Lite touch CBRM areas

A lite touch community is likely to be one that has expressed interest in having some assistance with implementing CBRM because they have received information about CBRM through neighboring communities or by sourcing their own information from the government or other organizations. The lite touch approach may be useful to help you plan if you have opportunity to visit such a community only rarely or opportunistically.

Many of the steps described in the guide can be completed by the community themselves if they are organized and have their own resource people to draw on. They may seek some specific support from government or NGOs where required.

If you are in a position to provide such support the diagram below shows some of the things to keep in mind when planning your first visit. During the first visit you can identify which steps in the management planning process communities have already done on their own, or will do on their own after your discussion. You will then be able to identify any additional information that you can provide and any specific activities that you can assist with as a follow up. For example, the community may wish to undertake a self-diagnosis, agree goals, rules and penalties but request some assistance in writing and registering a management plan. You will need to assess each situation on a case by case basis.



Life in rural coastal communities

Scoping (before first visit)

- find out relevant information available (talk to key people and draw on local knowledge)
- build understanding of what is known about resource status, nature of fisheries, leadership arrangements
- find out if any related activities have been done previously in the community
- compile all available information and share with your team

Scoping and awareness (visit #1)

- first community meeting to explain and agree on the purpose and extent of your role in the CBRM process
- discussions with community leaders and resource owners to better understand concerns, strengths and goals of management
- identify what additional information they require and what specific activities might be able to be offered
- provide information and awareness on marine resource management from other places in Solomon Islands

Subsequent activities may include

- arrange exchange visits to nearby communities practicing CBRM
- source and provide targeted information
- provide support to writing a management plan
- ensure the community is linked in to SILMMA so that it can be aware of opportunities for capacity building

Planning community visits for CBRM in a seed area.



The Tool Box:

Activities, awareness and information resources



Local association meeting

There are a number of ways to communicate with the community or with parts of the community, and throughout this guide we have referred to specific tools, activities and resources that we have found to be useful. The tool box provides details about how to use and apply some of these including:

- community or committee meetings
- focus group discussions and some of the activities you can conduct as part of a focus group discussion to stimulate a conversation around specific topics
- posters, handouts, presentations and DVDs

Facilitating a meeting or workshop

Facilitation processes and activities are all about participation – giving everyone an opportunity to contribute. It is the role of a facilitator to:

- select activities or processes that are appropriate to that group, and that will help the group to reach desired outcomes
- provide a suitable space and make use of this space to enable the group to work to the best of their ability (such as good wall space and floor space, with natural light source)
- keep track of time and progress (but not necessarily sticking to a strict, pre-determined schedule because some flexibility will allow for more time to be given if discussions are fruitful)
- not take sides or have pre-determined answers/outcomes
- not do the work for the group
- ensure that the groups' work is captured and recorded in notes, diagrams or pictures

Stages of a well facilitated meeting

1. Preparation
Before any meeting or workshop you will need to prepare yourself. Choose a number of processes and activities that you feel will be appropriate for that group of people, and will be useful for the purpose of that particular meeting.
2. Welcome
It is usual in Solomon Islands for someone like the chief or a village leader to welcome participants and provide some context about why the meeting is important. It is important that you, as the facilitator, are aware of who the

right person is for the job and that they are willing and prepared to make this initial welcome.

3. Opening
Most meetings or workshops will be opened with a prayer. After the prayer, the facilitator should provide a brief overview of the purpose of the meeting, why the attendees have been chosen to attend and to create a shared understanding of what will be achieved.
4. The heart
The heart of the workshop is where all the work happens. This is when the objectives, issues, plans etc are discussed and negotiated.
5. Summarizing and review
Regularly pause and summarize what you have done, this will remind people where they started and that they are making progress. Keep the broader workshop objective in mind and remember different people work at different paces. Ensure that the meeting is running at a pace (i.e. not too fast or too slow) so that all participants feel comfortable with how things are progressing.
6. Closing
Closing is also important so that you can summarize what has been accomplished in the meeting/workshop, and so that people leave with a feeling of achievement. At the end of a meeting/workshop people will want to know "what happens now"? The closing should also outline what the next steps will be. The closing should end with a prayer.
7. Finish on time
Try to ensure that the workshop/meeting is finished on time or earlier as people may have other commitments that they need to attend to. If there was a late start, it may mean that you will not achieve everything the group initially set out to do.
8. Reflect
After the workshop you should sit down with your team members and reflect on how the workshop/meeting went. This is not a reflection on the outcomes, but a reflection on how your facilitation was, and how improvements could be made in the future, what needs to be done differently and what really worked well. This will aid your future meetings and workshops.

Community meetings

Community meetings can be an effective way to communicate some types of information with the broader community; for example at the start of your engagement when you want to explain your role or when you want to deliver some information of general interest. Leaders will usually advise you of times when they would like you to address a full community meeting. Prior to these meetings ensure that you:

- prepare and plan your meeting
- introduce the entire team, who they are and why they are there
- ensure someone is dedicated to taking notes and keeping track of time
- introduce the purpose of the meeting and proposed agenda
- allow time for people to ask questions (and answer them)
- encourage participation from the audience
- hold the meeting at the appropriate time and place
- use available space well
- co-facilitate (use all members of your team during the meeting and people from the community as appropriate (e.g. chiefs, leaders))
- at the end of the meeting, summarize the meeting outcomes and report back to the entire meeting

Keys to a successful community meeting include:

- keeping discussions on track
- managing difficult and out-spoken personalities
- responding to difficult questions



Focus group discussions

Focus group discussions (FGDs) are a good way to get people to talk about the discuss their knowledge, feelings or perceptions about certain things - therefore they can help to gain an understanding of the community situation such as governance, leadership and community abilities or motivations for implementing marine resource management.

Focus groups involve asking a set of predetermined questions that help you stimulate discussions or doing activities which lead to gathering this information. Separate male and female focus group discussions ensure feedback is obtained from both men and women. You may also want to consider separating youth

(girls and boys). It is good practice to have male and female facilitators to lead the separate groups, as women may feel uncomfortable talking to a man – also remember to find out what is culturally appropriate in that community. From experience, it is good to have a two-woman and two-man team, as one team member can facilitate while the other records responses.

Focus groups can be undertaken for specific sub-sectors of the community. For example, questions about governance (e.g. about reef/land ownership, leadership structures, tribal leadership structures) could be directed to village leaders, whereas questions about resources and fishing might be directed a separate groups of fishermen and fisherwomen.

Before starting a focus group discussion you need to ensure that you:

1. select a location that is easy to find, that has minimal distractions, that provides a neutral environment and ideally allows the group to sit in a circle
2. plan the focus-group discussions i.e. what questions or topics will be covered (aim for maximum duration of two hours)
3. schedule the groups at a convenient place and time to the group
4. restrict the size of the group to about 6 – 12 people
5. preferably conducted discussions separately for women and men, you may also want to consider also groups of youth (separate for girls and boys)
6. make sure the following materials are available: colored pens, flip charts/ large sheets of paper, colored paper, sticky tape, camera, food (light refreshments, drinks)

How to run a focus group discussion

One of the team members should be designated as the facilitator and the other as the note taker. As participants arrive the team should greet and make small talk but avoid the topic of the discussion.

TIP: At this time the facilitators have a chance to quickly assess the communication styles of the participants, and so adjust their facilitation style to ensure that opportunities are created for all people to have their say.

Once all participants are seated and comfortable, the facilitator welcomes the group, introduces the other team member (s) and gives some background information and an overview of the topic. Emphasize that this is an opportunity for participants to give voice to their opinions and learn from each other. The facilitator should explain what the results of the group's discussion will be used for and what form the information will take and that no specific names will be used in any reporting.

The facilitator outlines the ground rules including:

- only one person speaks at a time
- all points of view are important to the discussions

During the discussion the facilitator should encourage all participants to express their views. If there are overly dominant participants, try to encourage responses from other quieter participants.

At the end of the discussion the facilitator should briefly summarize the main points of view and then ask if the summary is accurate or if anything was missed. Answer any final questions from the participants and thank the group members for their participation.

Focus group discussion activities

This section outlines some activities that you may want to use during a focus group discussion.

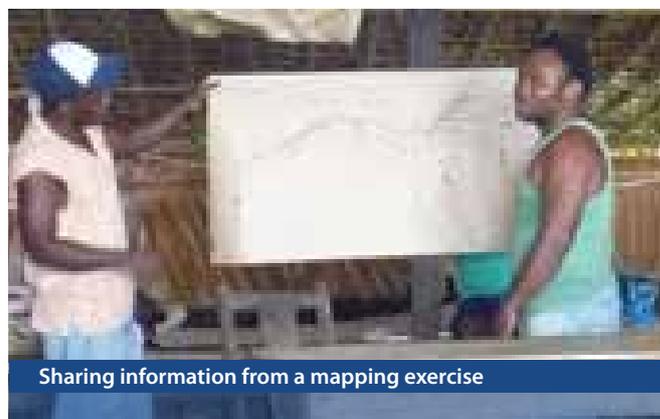
Matrix mapping of fisheries information

Matrix mapping can be used to identify the roles of women, men, girls and boys in fisheries, agriculture and other livelihood activities. The example provided here is based on fisheries.

Material needed: BIG sheet of paper, pencils, markers

Time: 1.5 - 2 hours

- ask the participants to identify the key groups or specific species of marine resources they collect (e.g. reef fish, pelagic fish, shark, mud crab, mud shells, trochus, edible aquatic plants (seaweed, mangrove fruits). Use local language, (and common names where possible) but gather enough information to be able to know what they are referring to - you can identify the scientific name at a later date
- create a matrix: List the different resources down the first column of a big sheet
- ask them to list the activities they do related to each of the fisheries, put these in a row along the top of the paper
 - fishing methods and gear type used
 - time of day/night for fishing
 - who is involved in collection (men, women, boys, girls)
 - who is involved in processing (men, women, boys, girls)
 - who is involved in selling (men, women, boys, girls)
 - whether the resource is for food or income
 - status and trajectory of the resources
 - breeding times and areas
- after the matrix is completed ask the group to look over the matrix to see if anything is wrong or missing. Encourage the group to discuss what they see on the matrix. Ensure you take a photo of the completed matrix.



Sharing information from a mapping exercise

Habitat or resource mapping

Habitat or resource mapping can be used to identify key habitats, fishing areas and species distribution. It can also be used to identify any traditional tabu areas, areas of importance and areas where there may be issues or concerns.

Material needed: BIG sheet of paper, pencils, markers

Time: 1.5 - 2 hours

Start with participants drawing a rough map of their marine resources area.

- ask participants to think about and list all of the main marine resources that they collect and use
- ask participants to draw in the key habitats and areas that they go to collect these resources
- draw diagrams on the map where the key resources are found.

Once the initial map is drawn, discussions can focus around different themes. For example, where they consider any issues or shortages of resources, where there are breeding grounds or where different animals migrate/shift to at different times of the year.

| Resources | Collection methods | Time for collection | Who is involved |
|-----------|--------------------|---------------------|-----------------|
| Kava | Hand pick | Low tide | Men |
| Muriang | Hand pick | Low tide | Men |
| Ilo | Hand pick | Low tide | Men |
| Sipa | Hand pick | Low tide | Men |
| Alimod | Hand pick | Low tide | Men |
| Pwahi | Hand pick | Low tide | Men |
| Lolope | Hand pick | Low tide | Men |
| Gano | Hand pick | Low tide | Men |
| A U | Hand pick | Low tide | Men |

Example fisheries matrix mapping undertaken during a womens FGD

SWOT Analysis

SWOT analysis is a participatory activity that can be used to help communities identify their weaknesses but also describe their existing strengths that they can build upon to improve resource management.

- S Strengths: community characteristics that can make resource management work
- W Weaknesses: characteristics that will challenge the community when doing resource management
- O Opportunities: things in existence externally that your community might build upon
- T Threats: external things that might hinder management in the community

Materials needed: Sheets of paper, Marking pens, sticky tape
Time: 2 hours

Work within small groups to identify their strengths, weaknesses, opportunities and threats. Use brainstorming to get discussions started.

Some tips for SWOT analysis

Strengths and Weaknesses

General areas to consider are:

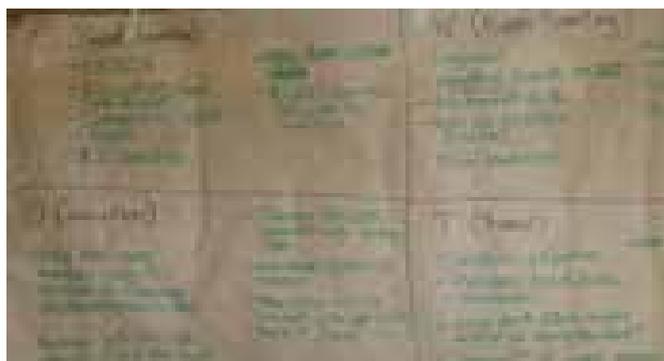
- human resources – people/groups within the community
- physical resources
- financial resources
- activities and processes – programs/activities run by the community
- past experiences - building blocks for learning and success

If the group is having difficulty naming strengths and weaknesses, start by simply listing community characteristics (e.g. we're small, we're connected to the tribe). Some of these may be strengths.

Opportunities and Threats

General areas to consider are:

- future trends - in resources or the culture
- economy - local, national, or international
- demographics - changes in the age, or gender, culture of the community (are there people living outside the community?)
- physical environment - is/has there been changes – what? What obstacles do you face?
- legislation – will new laws/management make things easier or harder
- local, national or international events



Example SWOT analysis undertaken during a mens FGD

Seasonal calendars

A seasonal calendar is a participatory tool to explore seasonal changes (e.g. activity-specific livelihoods, fisheries and agriculture production). If you conduct separate groups for women and men this can help you capture the differences in the seasonal calendar for men and women.

Material needed: BIG sheets of paper (or area of ground to draw on), pencils, markers, rocks.

Time: 45 min - 1 hour

1. ask the participants to draw a line or circle, indicating each month along the line or around the circle
2. it is usually easiest to start the calendar by asking about the weather (e.g. wind or rainfall). Choose a symbol for the wind/rain and put/draw it next to the column which participants will now use to illustrate the wind/rain. Ask the group to put stones or extra symbols under each month of the calendar to represent relative amounts of wind/rain (more stones meaning more wind/rain)
3. move to the next topic (see examples below). Additional issues for the Seasonal Calendar may be added according to the needs and interests of the participants

Example topics to ask

This tool is useful for many purposes and is often used as a research tool as well as a community planning tool including for looking at vulnerability to climate change. The topics asked will depend on the information that you are gathering. For example, for a fisheries management plan two useful topics to focus on are (1) the seasonal characteristics of the targeted fish or invertebrates which can give you useful information about life-cycles or changes in abundance and, (2) the way weather and seasons affect where people fish, what they fish for and how much people go fishing compared to doing other activities.

Here is a list that will assist you in planning the questions for your seasonal calendar discussion group. There may be additional or fewer questions asked than what is listed here.

- When are the rainy season?
- When is the time for rough seas?
- When is the time of drought/no rain?
- When is time of tides?
- State the seasons for major types of fish and other marine resources caught by the village?
- List the key species for sales and home consumption.
- Are there certain times of the year when there is no fishing?
- Are there certain times for fixing fishing gear/repairing canoes etc?
- Do people sell fish? Are there times of the year when people sell fish?

Other topics you may wish to include:

- agricultural production
- holidays and religious rest days
- fundraising
- paid work
- income/expenditure

After the calendar is finished ask the group to look over the calendar and see if anything is wrong or missing. Encourage the group to discuss what they see on their calendar. Make sure that you have also recorded what each of the symbols means on the calendar.

Historical time lines

Historical time lines are another tool that can be adapted to the situation at hand, they can be a planning or research tool and in the context of CBRM can be useful for people to think about and look at how their resources have changed over time.

Material needed: BIG sheet of paper, pencils, markers (If drawing on the ground: soft ground, stones, sticks and other available material to produce symbols)

Time: about 1 hour

Decide upon the time period to be considered that is easy for people to reference (e.g. for Solomon Islands the period of ethnic tension is a time frame remembered well).

Example topics

The topics asked will depend on the information that you are gathering. Here is a list that will assist you in planning the questions for your discussion group. There may be additional or fewer topics and questions asked than what is listed.

Demographic changes and trends

- What is the trend in population in the village. Note any major in-migration and out-migration in the village, if any, during certain periods.
- What actions and coping mechanisms did the villagers do to address the trend in population (e.g. population control, move to other areas, etc)

Natural Resources

- What are the major trends in environmental and resources

quality over the years?

- What actions and coping mechanisms did the villagers do to address the trend in natural resources (e.g. overfishing, other activities etc.)?

Local economy

- Highlight the years when the economic situation was considered good and when it was considered bad.
- Get the reasons why it was good or bad (e.g. agriculture failed, fishing was low because of drought, joblessness, etc.).
- What actions and coping mechanisms did the villagers do to address the declining trend in the local economy)?

Governance

- Highlight any significant changes in governance in the village over the years.
- How have these impacted positively or negatively on resource use and management?
- What actions and coping mechanisms did the villagers do to address any worsening trend in local governance?

Technology

- Highlight the introduction of new technologies in the village over the year, e.g. gears and techniques. Include other more general technologies that have impacted on resource use and management

Other topics of interest may include:

- human health
- floods
- drought
- crop Failure/Pestilence
- aquaculture and livestock failure/diseases



Community consultation and discussions using maps

Awareness and information resources

Providing information and raising awareness are important so that all members of the community are aware of the reasons for management, the goals of management and are aware of the specific management arrangements made in that community. When people understand the process and reasons for management they are more likely to comply with management and contribute their ideas and concerns into management decisions. Posters, handouts, presentations and DVDs are effective mechanisms to share information with a range of community members. In smaller groups you can use printed materials to illustrate the messages that you are talking about, in a large community group it can be useful to have a generator and projector to show visual presentations on a large screen. In that case you will need to carry a laptop / DVD player with you and in many cases will also need to carry a generator.

Power-point presentations and DVD/videos

Power-point presentations and DVDs of documentary films are an effective way to provide awareness about certain topics to a broad audience, especially if a full community meeting is held in the evening. Entertaining presentations are often a good way to start or end a community meeting. It is important however to ensure the presentation is not so long that people lose concentration before the main body of the meeting, or are tired and need to go to bed before the end of the video (especially where children are present).

The key to successful presentations are:

- arrange the timing of power-point presentations/DVDs around community activities (i.e. to avoid clashes with other events and maximize attendance)
- use the presentation to deliver a simple and non-technical message
- use pictures to tell the story
- involve local stories where possible
- use both language and pijin

Awareness presentations relevant to CBRM include:

- the role and importance of habitats (coral, mangrove, seagrass and the open ocean)
- life-cycles (fish, invertebrates, plants)
- the effects of land activities on the sea

Some example awareness presentations are provided in a CD at the back of this guide.



School awareness presentation



Men, women and children gather to watch a DVD on CBRM

DVDs are a popular way to share information in a more informal manner. There have been a number of DVD's developed recently in Solomon Islands which may be useful for your purposes, these include:

- Community marine resource management: motivations and experiences of CBRM from community members in the Jorio region of Western Province
- Lau lagoon: Fishing for the future: A DVD from Lau Lagoon, Malaita describing the approach to marine resource management of some artificial islands
- Marovo, Lagoon of Life (Kogu Tino): Awareness DVD focusing on ridge to reef ecosystem linkages, ecological processes and community level management interventions
- Women and Fishing: Training DVD to empower rural Solomon Island women interested in looking after their marine resources
- Fish and People: Innovative fisheries science communication

A copy of some of these DVDs has been provided as a resource at the back of this manual, or copies can be obtained from SILMMA.

Posters and brochures

Posters and brochures can be used to provide information about a wide range of topics including information about different plants and animals, habitats, life cycles, waste management as well as posters about the communities management plan.

The benefit of posters is that they can be left in the community to allow people to look at them and learn in their own time. They are also a great resource for schools. One of the only issues with posters is that they need to be given to someone that will put them in a community area, otherwise they will be put on the walls in one persons house.

There are a number of posters and handouts that have been produced and are available for use in Solomon Islands communities.

- SPC have developed a series of handouts on marine animals and plants that describe their basic ecology and management options (www.spc.int/coastfish/en/component/content/article/44/393-guide-and-information-sheets-for-fishing-communities.html)
- FSPI have developed a series of posters that talk about different marine resource issues (www.solomonseasustainables.com/ManageResources/InformationResources.aspx)
- WorldFish have developed a number of brochures e.g. mangrove rehabilitation, rabbit fish life cycles, growing corals (www.worldfishcenter.org/worldfish-publications)

Marine ecology and species information

- **FishBase:** a database on biological and ecological information about different fish
www.fishbase.org
- **Fish and People:** School program fisheries education
www.ecomedia.com.au/fishandpeople.html
- **FSPI Poster Series:** a posters about marine ecology
www.solomonseasustainables.com/ManageResources/InformationResources.aspx
- **SeaLifeBase:** a database on biological and ecological information about non-fish species
www.sealifebase.org
- **Solomon Islands Marine Life (Book):** ecology and management of marine resources in Solomon Islands
dl.dropbox.com/u/656556/Solomons%20Marine%20Life_18-2-11%20LR.pdf
- **SPC information sheets:** information on ecology and management of key species (e.g. trochus, shark, crown of thorns), habitats (mangrove, seagrass, coral reefs) and topics (CBRM, aquaculture and climate change)
www.spc.int/coastfish/en/publications/brochures.html
- **Solomon Islands Marine Assessment:** 2004 assessment on the condition and health of marine resources
www.conservationgateway.org/Files/Pages/solomon-islands-marine-as.aspx

CBRM journal articles and reports

- Alexander T., Manele, B., Schwarz, A., Topo, S., Liliqeto, W. (2011) **Principles for Best Practice for Community-Based Resource Management (CBRM) in Solomon Islands.** Report to the Coral Triangle Support Program (CTSP).
<http://usctsp.org/index.php?reports>
- Boso, D., Paul, C., Hilly, Z., and Pita, J. (2010) **Community-based adaptive resource management in Solomon Islands: lessons learned.** 2122. The WorldFish Center, August 2010 www.worldfishcenter.org/resource_centre/WF_2661.pdf
- Cohen, P. J. and S. J. Foale (2013). **Sustaining small-scale fisheries with periodically harvested marine reserves.** Marine Policy 37: 278–287. (or see www.spc.int/DigitalLibrary/Doc/FAME/InfoBull/TRAD/28/Trad28_03_Cohen.pdf)
- Coral Triangle Initiative (2009) **Regional plan of action, Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF)** p. 42. Coral Triangle Initiative, Manado.
www.coraltriangleinitiative.org/resource_by_type/61
- Govan, H., Aalbersberg, W., Tawake, A. and Parks, J. E. (2008) **Locally-Managed Marine Areas: A guide to supporting Community-Based Adaptive Management.**
www.lmmanetwork.org/files/lmimaguide.pdf
- Govan, H., Schwarz A. and Boso D. (2011). **Towards Integrated Island Management: Lessons from Lau, Malaita, for the implementation of a national approach to resource management in Solomon Islands.** WorldFish Center Report to SPREP. www.worldfishcenter.org/resource_centre/WF_2898.pdf
- Johannes R.E. (2002) **The renaissance of community-based marine resource management in Oceania.** Annu. Rev. Ecol. Syst. 33:317-40.
- MECDM and MFMR (2013) **Implementation Plan for the National Plan of Action of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security in Solomon Islands 2013-2016.** www.coraltriangleinitiative.org/resource_by_country/109

Plans and strategies

- **National Adaptation Programmes of Action (NAPA)**
<http://unfccc.int/resource/docs/napa/slb01.pdf>
- **Coral Triangle Initiative National Plan of Action (CTI NPoA)**
www.coraltriangleinitiative.org/library/national-plan-action-solomon-islands Solomon Islands
- **Solomon Islands locally Managed Marine Area network strategic plan**
www.solomonseasustainables.com/LinkClick.aspx?fileticket=HXNKM4Rb7U0%3D&tabid=86
- MFMR Inshore Fisheries Strategy (available from MFMR)

Legal resources

- Pacific Islands Legal Information Institute
www.pacii.org/

Organization websites

- **Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI - CFF)**
www.coraltriangleinitiative.org
- **Coral Triangle Initiative Solomon Islands**
www.coraltriangleinitiative.org/country/solomon-islands
- **Foundation of the Peoples of the South Pacific International (FSPI)**
www.fspi.org.fj
- **Kolombangara Island Biodiversity Conservation Association (KIBCA)**
www.kibca.org
- **Kastom Gaden Association (KGA)**
www.kastomgaden.org/
- **Locally Managed Marine Area (LMMA) network**
www.lmmanetwork.org
- **Natural Resources Development Foundation (NRDF)**
www.nrdfsolomons.org
- **Secretariat of Pacific Communities (SPC)**
www.spc.int
- **Secretariat of the Pacific Regional Environment Programme (SPREP)**
www.sprep.org
- **The Nature Conservancy (TNC)**
www.nature.org
- **Solomon Islands Community Conservation Partnership: (SICCP)**
www.siccp.org
- **Solomon Islands Locally Managed Marine Area (SILMMA) network**
www.solomonseasustainables.com/ManageResources/SILMMA.aspx
- **Solomon Sea Sustainables**
www.solomonseasustainables.com
- **Tetepare Descendants Association**
www.tetepare.org
- **WorldFish**
www.worldfishcenter.org
- **WWF**
www.wwf.panda.org



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