



**MINISTRY OF FISHERIES
& MARINE RESOURCES**

Community Based Resource Management in Solomon Islands

PROVINCIAL SNAPSHOTS 2022

by Ministry of Fisheries and Marine Resources and WorldFish

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Reference: MFMR/WorldFish (2022) Community Based Fisheries Management in Solomon Islands: Provincial Snapshots 2022. Edited by J. Saeni Oeta. MFMR/WorldFish.

Acknowledgements:

We thank the following contributors to the report: Ivory Akao, Assaneth Buarafi, Priscilla Pitakaka, John Mark Osikalia, Michael Laumani, Peter Kenilorea, Faye Siota, Chelcia Gomese, Meshach Sukulu, Anouk Ride Simeon Baeto, Iulah Pitamama, Thompson Miabule, Jordon Gregory, Frazer Kavali, Wilson Eta, Malakia Malasy, Wilson Kyio, Job Hukamoana, Jacob Wale, Willie Kokopu, Malachai Tefetia, Martin Jasper, Silas Laulisi. This work was funded by the Australian Government through the Australian Centre for International Agricultural Research (ACIAR) project FIS-2020-172 and was undertaken as part of the One CGIAR Research Initiative on Resilient Aquatic Food Systems.

Introduction

The Ministry of Fisheries and Marine Resources (MFMR) and the Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) are promoting community based resource management (CBRM) as the central strategy to ensure sustainable use of coastal ecosystems in Solomon Islands.¹ To support this strategy, the Solomon Islands Government has developed new legislation and policies, for example the *Protected Areas Act* (2010) and the *Fisheries Management Act* (2015). Community-based resources management in the Solomon Islands context is described as an integrated conservation and development approach supporting biodiversity conservation, climate change adaptation, food security and rural development.²

For many years, several initiatives have sought to support CBRM across the country. The purpose of this report is to assess the coverage of CBRM for coastal areas in each of the nine provinces in the Solomon Islands as of 1 November 2022. This report provides a snapshot of known gaps and needs in CBRM and was formulated with input from the CBRM Section at MFMR, the Provincial Fisheries Officers, WorldFish researchers as well as relevant implementing agencies in the provinces.

For the purpose of this report, we consider CBRM as communities implementing some form of management; either with a written management plan, or communities with some tabu restrictions around place, type of fish and gear used to catch fish that is not written in a formal plan, or more formalized arrangement such as Marine Protected Areas. Some provinces have many communities already with management plans and related investments such as training and conservation and management activities. Other provinces have had less investment by government and non government stakeholders to date, and so less is known about CBRM activities, although traditional *tabu* (forbidden or closed) areas and other rules may be in place. Therefore, this report summarises a snapshot of what is known at this time, based on available data and experience, particularly of Provincial Fisheries Officers and agencies based in the provinces.

Provinces are presented in alphabetical order, however the colour code indicates two categories of provinces: (i) provinces with considerable reach and investments (marked Blue); and (ii) provinces with considerable needs and lack of investment (marked Yellow). These assessments are formulated in consultation with the CBRM unit and stakeholders who are involved in CBRM across several provinces, and are a guide for the purposes of activity and project planning only.

1 MECDM/MFMR 2010
2 MECDM/MFMR 2013

1. Central Province

1.1 Introduction

Central Province consists of three main island groups: the Florida Islands or commonly known as Ngella, Savo Island and Russell Islands. Ngella is composed of four islands namely Nggela Pile, Ngella Sule, Sandfly and Buena Vista.³ Russell Islands are located to the West of the main island Guadalcanal. Russell islands comprises of two main islands which are Pavuvu and Banika with other several small islets.⁴ Savo Island is a volcanic island located about 35km North to Northwest of Honiara with some unique species, such as the megapod birds. The main township in Central Province is Tulagi which was the former capital of Solomon Islands.

The total population size for Central Province in 2019 was 30,326.⁵ The population growth has slowed with Central Province recording 16.4% population change, which is lower than the previous census report of 20.7%. The recent Solomon Islands Household Income and Expenditure Survey⁶ showed that 12.7% of Solomon Islanders live below the basic needs poverty line. Central Province has a rate of 5.6%, which is lower than other provinces, such as Makira.

Ngella and Russell Islands are home to some of the richest inshore fishing grounds. However, these have been affected by unsustainable human activities and natural disasters. Natural disasters have affected Central Province such as the extreme rainy season, which affects root crops and agricultural production of people in places like Savo.

1.2 Fish and aquatic foods

The primary marine and fisheries resources which are important are fish, shells, clams, and trochus. Data from the previous census shows that 77% of all households were engaged in fisheries and about 26% of households fish for their own consumption⁷.

In a recent survey of four sites in Solomon Islands, including Central Province, per capita consumption of fresh fish ranged from 98.6 to 110.9 kg per year⁸. Tulagi is a relatively small provincial township but they do have a market where reef fish is sold. Most fishers selling at the Tulagi market fish close to the township as there is no place to store their fish. Fishers also fish and sell at the Central Market in Honiara given their proximity to capital. Tulagi has a value chain network which includes fishers fishing at close reefs, middle men, markets which includes Tulagi and Honiara, village markets and private buyers⁹. A gender survey¹⁰ conducted in 2018 showed that it is common for men to travel to Honiara Central Market two to three times a week to sell their fish from eskies. Respondents stated that fishers themselves are responsible for selling their fish. Those who are not able to travel to Honiara sell their fish at the Tulagi market, by the roadside or to the restaurant owners nearby.

The sale of fish within the village depends on size. In areas such as Russell Islands, fishers price their catch according size and species. The buying price has changed recently. It has increased from \$10-12 to \$13-15.¹¹ In the past, Ngella islands have been known for aquarium trade. Other species traded are *beche de mer species*, clams and trochus which are of high commercial value. Seaweeds are also sold at the Honiara market usually on Thursdays and Fridays, however the recent COVID-19 outbreak has affected these sales.

- 3 Sulu, 2010
- 4 Wale, J. and LMMA Network, 2020
- 5 SINSO, 2019
- 6 SINSO, 2012
- 7 SINSO, 2009
- 8 Pinca et al. 2009
- 9 Brewer, 2011
- 10 SPC, 2018
- 11 Wale, J. and LMMA Network. 2020

In big Ngella, reefs are open to the public. As such, anyone can fish or dive in the reefs. In small Ngella, only reef owners are allowed to fish and dive in their own reefs.¹² Invertebrate species of high commercial value are lower in numbers than other parts of the Solomon Islands, probably a result of over exploitation. The survey showed the production and trade of lime made from corals is causing a lot of destruction of the reefs. Modern technology and knowledge has increased the demand for snapper in particular by tourists. Other species such as fin fish, invertebrates (such as trochus, clams, mud crabs, squid and crayfish) are also sold at the Honiara market and to Tulagi restaurant owners.¹³

1.3 Mapping

Previous interventions include information sessions by the MFMR CBRM Unit and LMMA network. Due to its proximity to Honiara, the province is better covered with information about CBRM and related activities than other smaller provinces.

Other requests from communities include support with aquaculture and *beche-de-mer* related activities, support for CBRM and mangrove conservation. In addition to the provincial government, The best information channels recommended for the province included liaising with:

- West Lavukal Conservation Network, which, with the help of the fisheries division in Central Province, established nine community based marine managed areas, within Lavukal ward throughout the Russell islands.
- GERUSA Network, otherwise known as the Gela, Russells and Savo GERUSA Natural Resource Management Network and district /island group, which have developed local action plans in 2009 to 2010.

There is a need for strategies which reach minority groups (e.g. women, youth, and people with disability). This could include awareness sessions in schools where teachers can explain to people who are illiterate especially the women, or house-to-house consultations in villages. The MFMR CBRM tracking tool highlights the need for teachers to assist in explaining materials to people who are illiterate, and that printed materials may not be shared with women in households, as they are more likely to be illiterate.¹⁴

Currently, there are two seconded officers under MFMR working at the fisheries division office in Central Province. There are five other staff who are employed directly under the province but they are limited in their experience of CBRM and several are close to retirement. Lack of equipment, notably printers and engines for the two boats can limit outreach work. A new ice machine will be installed in Tulagi in the coming months so the engine will be handed over during this time.

1.4 Priorities

The key priority action for the Provincial Fisheries Office is the registration of one to two marine managed areas, under the Fisheries Act with the PFO's assistance.

There are several requests raised during community consultations in Central Province on recent trips, mostly on Ngella. including:


- Discussion needed with MFMR on MOU agreement for Peanut Fish restocking at Lelebo MMA
- Request for proper training on MMA management to be provided for the Lelebo Monitors
- Interest to register mangrove areas under relevant acts and programmes
- Need guidance on how to address the Avi Avi Marina slipway because it is a main source of pollutants in the area
- Need support for communities that have MPAs or MMAs to continue progress

Ongoing talks around conservation have prompted communities to request aquaculture activities for income and livelihood options. The fisheries division is currently helping communities by installing FADs and seaweed farming but funds for such activities are limited. There are ongoing

12 Buarafi, A; Piturara, J; Bosamata, P; Lausuu, P and Posala, R. 2020

13 SPC, 2018

14 Wale, J. and LMMA Network. 2020



requests from communities to start aquaculture projects in Russell and Ngella, to breed species such as Tilapia and Prawn. There has not been any marine area registered for a long time. This means a lot of consultation and processes to follow in 2023 around CBRM.

The community based fisheries network, known as Russell Fisheries Network was started in 2019 but has had limited funds. Recently they applied for the Economic Stimulus Package funds through MFMR and \$1.47 million was approved. Capacity building is needed for the committee members of the network for training, including on savings such as saving clubs for women.

2. Choiseul Province

2.1 Introduction

Choiseul Island is covered by a tropical rainforest with higher hills as a backdrop to most villages with valleys containing river systems that drain the surrounding catchment. Most areas have a narrow coastal strip that is intensively used for agriculture. The coastline varies from areas of rocky exposed headlands to sandy bays and areas dominated by mangrove ecosystems. Made up of three main islands (Choiseul, Wagina and Rob Roy) and over 300 small islets, the province contains a variety of habitats, ranging from fringing and barrier reefs, mangrove forests, sea grass beds, estuaries and small island ecosystems.

According to the 2019 provisional census report¹⁵, the population of Choiseul province was recorded as 30,619 people. This indicates an increase of 4,247 people in Choiseul in over 10 years showing a population growth rate of 2.8% per annum. This is second to the provincial population growth rate of the highest growing province, Guadalcanal. The population in Choiseul is distributed throughout the 16 wards, ranging from 1062 to 2218 people. The vast majority of population resides in rural areas with only 3.0% of people living in urban areas; Choiseul has the lowest rate of urbanization in the Solomon Islands.

Choiseul previously has a total of 10,911 hectares of both marine and terrestrial area protected through the Luru Land Conference of Tribal Community/The Nature Conservancy Luru Protected Area Network (LPAN) and other community protected areas. To date, only 2,852 hectares of both marine and terrestrial area is protected and under active management and protection, whilst 8,059 hectares are either inactive or managed on voluntary basis (formally recognized by the community, disputed or areas of interest). Choiseul province has a Choiseul Province Ridge to Reef Conservation Plan that has been endorsed by the Luru Land Conference of Tribal Communities to guide the establishment of one terrestrial and one marine protected area in each of the 12 wards. Its completion is a collaborative effort from Choiseul community leaders, provincial government, The Nature Conservancy and local NGOs and includes areas marked from lowest to highest priority for both marine and terrestrial area protection¹⁶.

Marine resources are abundant in Choiseul province, however, one of the greatest threats from land based activities is logging.¹⁷ Many communities under the LPAN program are today working collaboratively with NGO partners towards the management of their terrestrial areas, looking at ways forward to protect their terrestrial areas and working towards registration under the Protected Areas Act. Four tribal groups (Sirebe tribe, Vuri Clan, Padezeka tribe, and Siporae tribe from south Choiseul) have been successful.

Resource management has been a core priority of Choiseul province since 2000 when The Nature Conservancy (TNC) and GIZ¹⁸ began initial work that later facilitated the establishment of the Arnavaon Island Marine Conservation Area (ACMCA). Although the Provincial Fisheries office was established in 1992, CBRM was not a priority until 2012. With limited resources, limited information sharing and awareness was done in the early days as part of the PFO's activities.

By 2005, the partnership with TNC resulted in the establishment of an environmental office within the LLCTC headquarters (located near Taro), the formation of a LLCTC Environmental Committee and employment of a full time LLCTC/TNC Environmental Community Conservation Officer. This officer is the primary point of contact for local communities. Since 2005, the environmental program has focused predominantly on marine conservation, and TNC, LLCTC and provincial fisheries have worked to assist nine local communities in establishing Locally Marine Managed Areas (LMMAs) on their reefs.

¹⁵ SIG, 2019

¹⁶ Choiseul Province Three Year Development Plan 2022-2025

¹⁷ Choiseul Development 3 year plan

¹⁸ GIZ short form for the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH

2.2 Fish and aquatic foods

Marine Resources play a major role for livelihood and also in the culture of people of Choiseul. Some aquatic resources are also being used not just for food but in other ways, such as utensils to prepare custom food, for example oyster shell is used for grating taro. Fishing and gleaning is one of the main subsistence and livelihoods activities for women and men in most coastal communities. According to the Provincial Fisheries Office, men usually fish either on reef edges or in deep-sea while women mostly glean on the reefs and in mangrove areas. Both men and women are involved in selling fish, aquatic plants and invertebrates at the market. As a main source for protein and socio-economic needs, many engage in fishing and gleaning for shells and other crustaceans such as crabs. Fish supply today sometimes does not meet the needs of the growing population not only in township areas but also in the most populated communities in Choiseul e.g. Sasamunga/ Panggoe.

In Northern parts of Choiseul, outboard motor boats were first used in the 1980s by a few fishers for fishing. Today, most fishers throughout the province depend on OBMs for fishing trips unlike before where most used dugout canoes to fish and to travel. This makes fishing very expensive given the fuel price cost (SBD\$120-140/gallon in 2022) in Choiseul. Marine product sales at logging camp areas support families in the area and are usually the main market spot for some communities.

2.3 Mapping

The program by TNC and LLCTC has a goal to protect a minimum of 10% ecosystems in Choiseul (both marine and terrestrial) in accordance with minimum criteria of the Convention of Biodiversity of which Solomon Islands is a signatory¹⁹. Between 2018 and 2019, TNC led a review status program for the LMMAs that have been established under the LPAN, as per Figure 1 below. The review found evidence that only two (Tangu in Boeboe and Zinoa in Voza) have been active so far with most challenged by land/marine issues that have often been disputed. PFO, through support from TNC, is focused on the two active LMMAs for ongoing work.

Choiseul province reviewed their Provincial Fisheries Ordinance 2011 through a province-wide consultation in 2020, with funding support from the Pacific Islands Regional Oceanscape Program (PROP). The document was passed by the provincial assembly in 2020, but is still on hold at the Attorney General's chambers. The PFO is looking at strengthening the current two active LMMAs through the registration of their Management Plans under the Choiseul Provincial Fisheries Ordinance 2020 once it is finalized by Attorney General.

Figure 1: Known management areas in Choiseul Province in 2022

	Community	Designation	Status	Partner
1	Zinoa	LMMA (No take)	Voluntary	LLCTC/TNC
2	Parama	LMMA (No take)	Dispute	LLCTC/TNC
3.	Redman	LMMA (No take)	Voluntary	LLCTC/TNC
4	Chivoko	LMMA (No take)	Dispute	LLCTC/TNC
5	Rabakela	LMMA (No take)	Dispute	LLCTC/TNC
6	Tabubiru	LMMA (No take)	Voluntary	LLCTC/TNC
7	Muzo	LMMA (No take)	Area of Interest	LLCTC/TNC
8	Moli	LMMA (No take)	Voluntary	LLCTC/TNC
9	Vacho Island	LMMA (No take)	Unknown	LLCTC/TNC
10	Kubokalae (Mamarama)	LMMA (No take)	Area of interest	LLCTC/TNC
11	Masilot (Susuka)	LMMA (No take)	Voluntary	LLCTC/TNC
12	Kamaketebo (Dudurava)	LMMA (No take)	No longer active	LLCTC/TNC
13	Kubopaete (Boe)	LMMA (No take)	Unknown	LLCTC/TNC
14	Lituni	LMMA (No take)	Voluntary	LLCTC/TNC

	Community	Designation	Status	Partner
15	Reqe Island	LMMA (No take)	Area of interest	LLCTC/TNC
16.	Malaguni (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
17	Karanqo (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
18	Tarapaipana (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
19	Luqu Vila (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
20	Kokoru (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
21	Qilaveana (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
22	Bebelama (Robroy)	LMMA (No take)	Area of interest	LLCTC/TNC
23	Katurasele	Managed Area	Existing community protected area	LLCTC/TNC
24	Tuzu	Managed Area	Existing community protected area	LLCTC/TNC
25	Tandanai	Managed Area	Existing community protected area	LLCTC/TNC
26	Tagu	Managed Area	Existing community protected area	LLCTC/TNC
27	Chivoko	Forest protection area	Existing community protected area	LLCTC/TNC
28	Vuri	Forest protection area	Proposed protected area	LLCTC/TNC
29	Sirebe	Forest protection area	Designated	LLCTC/TNC
30	Siporae	Forest protection area	Gazetted, Designated	LLCTC/TNC
31	Padezaka	Forest Protected Area	Proposed protected area	LLCTC/TNC
32	Kubongava	Forest Protected Area		LLCTC/TNC
33	Baukolo	Forest protected Area		LLCTC/TNC
34	Boeboe	Forest protected Area	In progress for registration under PA Act 2011	LLCTC/TNC
35	Gabili	Protected Area	Proposed	LLCTC/TNC


(Source: Choiseul Province, Three years development plan 2022-2025, pg 17-19)

The Choiseul Provincial Fisheries Centers (PFC) are located in Taro, Sire (Katupika ward) and Wagina, however, at this stage, only the Taro PFC is operational. Taro PFC currently has four fisheries officers (2x seconded to the MFMR, 2x direct appointee to the province). One female and one male are working as seconded officers, intended to be supported by one male and one female as direct provincial appointees. Currently there is only one female direct appointee in the role of fish marketing manager at the PFC. In Sire and Wagina, the PFC has been non-operational for years now so no PFOs are based at these sites.

PFO suggests that CBRM awareness is needed in the Northern part of the island, though resource management awareness has been done in bigger communities in this part of the island in past years. He notifies that most management work so far has been concentrated in communities in the South. Less EOIs for CBRM support might be received by PFOs from communities in northern areas and PFO funding limitations mean less reach in these areas for CBRM visits.

According to the active provincial development plan, women in Choiseul are involved in a number of existing organizations which include church groups, Choiseul Provincial Council of Women and other interested groups that focus on advancing women's development in Choiseul province. KAWAKI is another environment women's group with members from Choiseul province, Wagina and Kia in Isabel that come together to support initiatives in the Arnavons Marine Protected Area. This is also part of the empowerment program for women in these three areas (who also depend on resources on the Arnavons Islands) in terms of livelihood support and for capacity building enhancement.

Fish is often sold at the PFC provided that they use the center's facilities and buy ice from the center as well. Fish sold at the center is often sold to local consumers and sometimes bought by visitors to Taro and returning to Honiara. Fish is also sold by local business people and at the local market (fish and marine foods) where they are sold as single items. For example, marine products are usually sold \$2-\$3/shell, \$30-\$40/mud crab and \$12 or above per fish, depending



on its size and species. These prices also depend on the number of fishermen/women and number of sea products available. Most communities around Choiseul market fish and collect other marine products in their local areas, to receive a small income to support with basic needs. Marine products are sometimes cooked and sold at the local markets, in township areas and in communities.

Sasamunga is a densely populated community and the only rural site within the province to have a Constituency Fisheries Center (CFC). However, it is mostly for storing chicken and sausage and not much for storing fish. Fish is in high demand and a main source of protein all around Choiseul, thus fish catch is fast to be sold when reaching shorelines.

2.4 Priorities

The PFOs indicated that number of requests for support they received from communities is mostly for CBRM awareness in communities in North Choiseul, follow-up with community management development and implementation. Recently an expression of Interest (EOI) was received from Zaru community. The community has been active in doing traditional management in their marine area, however, they are looking for technical support from PFO for the establishment of a management plan. Therefore, PFO intends to focus on Zaru community for the implementation of CBRM processes.

Apart from that, PFO intends to focus on the two active communities, Taqu and Zinoa, to strengthen their LMMA efforts and offer support towards the gazette of their management plan once the Choiseul Fisheries Ordinance 2020 is finalized.

The PFO is looking to change the current approach of implementing activities in communities because of low participation by some community members. Thus, the PFO may need to identify approaches that enables more participation and inclusivity so CBRM can capture people's interest and include all members of the community and continuously improve the inclusivity of its outreach. Despite these challenges, compared with other provinces, Choiseul province is advanced with regards to resource management initiatives supported by the government (national/provincial), LLCTC, NGO partners, and community based organisations.

3. Guadalcanal Province

3.1 Introduction

Guadalcanal Provincial hosts one of the largest populations of all the provinces, estimated at 154,150 people. The census shows a large increase in population size since the last national census, which showed the provincial population size at about 106,023. The data shows an average annual growth rate of about 3.7 from 2009 to 2019. This makes the province the second highest in the country.²⁰

The 2009 census report indicated for the Guadalcanal Province that population by age dependency ratio is 85. There are eight constituencies in Guadalcanal Province, 21 wards and 4 regions. There are four main centers in Guadalcanal Province namely, Manikalaku (Marau), Aola, Tetera, and Lambi. Only two of these centers are currently actively running activities, and these are Maikalaku and Aola. Avuavu and Kuma in the weather coast area are considered sub centers. Planning is underway to list Henderson, Variana and Mamara in West Guadalcanal as centers for Guadalcanal Province. Guadalcanal province currently has 92 big villages. On average, a large village in Guadalcanal is estimated to have between 400 to 600 people. Villages along the coasts are more likely to have more people than those living inland. There are three main coastal centres in Guadalcanal Province. These are Manikalaku in Marau (Marau), Aola and Lambi.

While 12.7% of the population in Solomon Islands living below the poverty line, it is significantly higher in Guadalcanal Province and Makira Province. The Solomon Islands Household Income and Expenditure Survey (HIES) 2012/13 estimated that there are around 24,000 people living with poverty in Guadalcanal Province.²¹

Heavy rainfall, flooding and landslides between the years 2017 to 2020 influence hardship, as population increases, particularly in the peri urban areas around Honiara. The National Disaster Management Office reported that 575 people (including 386 children) were evacuated from the Nazareth Apostolic Centre and Tenaru area after flooding destroyed their homes. Communities living along the coasts and banks of the river were affected and hundreds of people were forced to leave their homes. An estimate of about 100 homes and gardens were destroyed.²² In 2018, heavy rainfalls triggered flash floods in Honiara and surrounding areas. Initial assessments in Honiara showed the biggest impact was on people living in squatter settlements. Flooding also continued in 2019 with heavy rainfall associated with Tropical Cyclone Penny and affected an estimated 23,708 people (4,480 households). In 2020, two people died and six people went missing during a landslide caused by heavy rainfall on Guadalcanal.

3.2 Fish and aquatic foods

The types of fish and aquatic foods which are important in local diets in Guadalcanal province, include eel fish, tilapia, *bahovu* (fresh water fish), prawn/*ura*, water cress, fresh water shells, tuna, snapper, marlin, reef fish such as parrot fish, and surgeon fish. Species such as snapper, jawfish, grouper and bream are most commonly harvested for commercial/selling. Most of the harvesting takes places in Obirau ward, Longgu ward, Sahalu ward, Savulei ward and as far as Tangarare ward where fishers fish these high value commercial species. Mangroves and seaweed are mostly harvested in Marau. Marau has the highest number and coverage of mangroves in Guadalcanal. Tilapia is most commonly harvested at Lauvi lake (coastal) and Lees lake located inland.

Villages around Guadalcanal are commonly organized to have a market day at least one day

20 SINSO, 2019

21 World Bank/SIG, 2018

22 SIBC, 2022

a week. Markets also take place in centers, in logging camps, in boarding schools and on the roadside. Most villages in Guadalcanal sell at the Honiara Central market, White River market, Fishing Village market, Henderson and Corona market/Alligator Creek. There are proposed formal markets to be built in the Henderson area and at Mamara. There are currently five community fish markets at Marau which are funded by World Vision. When CFCs were active people sold fish there, but now these are inactive. Landing sites for people fishing for tuna, located mostly at Northwest Guadalcanal at Visale area, are also areas of fish markets.

The three main species of *beche de mer* in Guadalcanal Province are brown sandfish, lollyfish and white teatfish and these are from Marau and West Guadalcanal. Marau Sound and the area around Honiara were the main harvesting sites for coral for the aquarium trade. Fewer than 50 villagers are involved in supplying the main exporting companies.²³

Most women fish along the reef in Guadalcanal using bamboos and by gleaning. Women mostly collect mangroves in Marau where the mangrove population is higher than other areas. However, not all fishing areas or species caught are traditionally accessible and allowed for women. Baitfish are restricted for women to catch especially in the men dominated area. Some island reef sights are restricted because they are burial sites of ancestors and places of shark worship in the past therefore, women are restricted from fishing in that area.

3.3 Mapping

The current capacity of the province is limited to the capacity of two officers and both of them are male. There are also two assistants directly employed by the provincial government. 60% of CBRM communities and 90% of fishing activities are accessible via truck, therefore, a limitation is access to vehicles.

The best information channels and sources in areas of need where information can be gathered and given out include: key events such as Guadalcanal Province Second Appointed day, Church gatherings, schools, clinics, stations and markets, community meetings and networks and social media as there is 80% of network coverage in Guadalcanal. Strategies to reach people left out such as women, youth, and people with disability include targeting women's division programs during their programs in the communities.

3.4 Priorities

The areas of need for CBRM scale up include:

- Need scaling up on CBRM in Longgu ward, Aola ward, Moli ward, Tangarare and Savulei ward, Tandai ward, Sahalu ward
- Awareness (depending on stages communities reached from records from GPG), training on development management plan, training of rangers, assessments
- Management committee members need training on their roles and responsibility
- Integrated management areas might need non-fisheries activities such as livelihoods to alleviate pressure on fisheries from growing populations.

The priority actions (short and long term) for the province are:

- CBRM activities must continue in the province, particularly awareness in South East Guadalcanal and West Guadalcanal and support with CBRM plans in Birao and Longgu wards
- Rural community fisheries development to support rural livelihoods to improve fisheries centers by upgrading the existing structures in Marau and Lambi.
- Draft provincial fisheries ordinance to be gazetted
- Post-harvest and export trade for commercial species in province.
- Aquaculture development where MFMR can continue to support tilapia and fish farming in terms of training for fish farmers and provide project materials for fish farmers. A key interest is the introduction of prawn farming as prawns are seen as higher value than tilapia. Guadalcanal is a prime site as there are large freshwater rivers and bodies of water.
- Exploration of revenue sharing between government and provincial of tuna species caught within provincial waters.

4. Isabel Province

4.1 Introduction

Isabel Province is one of the many islands within the Solomon Islands and the Pacific that is rich with biodiversity within its provincial boundaries. The island is Solomon Islands' longest, with the tip of the Vikenara point all the way north to the Onogou Island (also called Ramos Island), South-West to the San Jorge Island and along the fringes of the mainland to the North-western tip across to the Arnavon Islands.

The total population of Isabel province is 30,399, and the province has an average annual growth rate of 1.5 as recorded in the 2019 census. The total number of coastal communities around Isabel is around 176 and this includes small family settlements.²⁴ Regarding population density, Isabel records one of the lowest with only seven people per square kilometre²⁵. The main coastal towns or substations are Buala Station (Maringe District) and Kaevanga Station (Hograno District). Eastern Isabel has a higher concentration of wards as compared to the western part, and also constitutes above average poverty rates of 9.2% living below the basic needs poverty line²⁶.

Over-exploitation of natural resources and developments like sea transportation, logging, coastal development, possible mining and also growing tourism means that Isabel Province is undergoing a drastic shift in how they view and use their ocean. Isabel has more attention from mining companies than other areas due to the nickel deposits found there.

4.2 Fish and aquatic foods

In the far west of the island, Kia community has a rich biodiversity of mangroves, seagrass, reef flats, fringing reefs, atolls and lagoons. They have access to a variety of marine resources such as shells (mangrove and reef), crabs (mud crab and crayfish) and finfish (reef and deep water) which can be harvested for their local diet. In East Maringe district, the communities are facing the open ocean with a stretch of several barrier reefs which fishers access. These reefs are rich in finfish species. Fishing is mainly for deep water fish (tuna like species) or reef fish caught in the fringing reefs. On the eastern tip of the island, mangrove patches and reef areas are abundant. Finfish (reef and deepwater) and mangrove species (shells and crabs) provide protein in the local diet. These resources are, however, deteriorating because of the impacts of land-based activities such as logging. To the North, a stretch of fringing and barrier reef (North East to West of the island) provides access to marine resources for the coastal communities in this part of the island. With the advantage of a less concentrated population compared to East Maringe, marine resources (reef/mangrove/deep sea) are still the main part of the local diet and are accessible to different groups in the community. There is also catch of turtles, as they are cultural foods important for protein and in feasting events (such as church celebrations and cultural ceremonies).

Buala, Tataba and Kia have Provincial Fisheries Centers (PFC) which are operational and make ice cubes and blocks that fishers can purchase for fish storage during fishing trips and also for keeping fish fresh when it is sent to Honiara for sale at markets and privately. In Buala and Kia, private fishing businesses also purchase fish from fishermen/women and engage in fish sales at the local level. There is a permanent market structure in Buala, however, fish is often sold to the PFC or to local fish businesses where people come to purchase for consumption or to send over to Honiara.

In the north western part of Isabel (Kia) and north east, local fishermen run esky fish (reef fish) and send to Honiara for sale. Usually eskies from the Western end of Isabel are transported via

24 <https://www.arcgis.com/home/webmap/viewer.html?webmap=c0109945f84343ca8df5ca2134b0190>

25 SINSO, 2019

26 World Bank/SIG, 2018

ships, whilst in the Bugotu area they are usually transported by outboard motor boat, as it is much closer to Honiara. In Kia, women also venture into trading mudshells packed in 10kg or 20kg reused rice bags and sent to relatives or friends in Honiara to sell. Some women in Kia have also started selling mudshell and clamshell meat, and also taking custom orders from Honiara.

Apart from the PFCs buying fish from fishers, other local individuals also compete with the PFCs to buy fish. For example, in Buala, a number of individuals who have deep freezers are venturing into the fish business and providing services to the population in and around Buala. Fish is often sold to and at the PFCs or to local fish business owners in Buala, Tataba and Kia. Other marine resources (such as shells and crabs) however, are often sold fresh and also cooked at the markets in Buala, Tataba and Kaevanga. At Kia these resources are often sold fresh in the village or are processed/cooked before selling to locals and sometimes when ships arrive at Kia port. This also applies to Tataba and Kaevanga port where vendors target passenger ships to sell their processed marine resources. If not sold in the villages, these marine resources are put in eskies and sent to Honiara to sell. When there is surplus fish caught, it is common for some to be sold in the village or given as gifts to relatives.

4.3 Mapping

In Isabel, a women's organization within the Anglican Church of Melanesia, the Mothers Union, through partnership with The Nature Conservancy (TNC) has taken the lead in the implementation of resource management awareness in communities around Isabel province. Through TNC's program they have been the forefront of awareness programs and reaching out to people with specific resource management information. Most of the province's resources are held under customary land and sea tenure based on matrilineal inheritance but, in many cases, women have been excluded from decision making.²⁷ Strong pressures on land for logging and mining, relocation and the cash economy, have been leading factors to men disregarding the matrilineal protocols and, to an extent, the flexibility of women's practice to land and resource ownership.

Before there were women chiefs in many communities, but today there are very few women chiefs, as evident in the Isabel Council of Chiefs where only one female chief is represented. Customary tenure enables chiefs to place management measures on natural resources in order for them to recover. These closures are usually declared by chiefs or church elders and considered *tabu* (forbidden/sacred).

There are very limited opportunities for youths to develop leadership experience outside sports and their own youth organizations. Though limited in development opportunities, youths are embedded to their roots and are aware of their land rights through their mother.

One of the leading conservation areas in the province is the famous Arnavon Islands which is home to the Pacific's largest hawksbill turtle nesting rookery and feeding ground for green turtles. Other sites like Sasakolo, Litogahira, Lilika, Huhurangi, Sosoilo and Haevo are also famous for the leatherback turtle which have one of the highest number of nestings per year in the whole Western Pacific region. Turtle conservation initiatives are one of the most monitored and documented in the province and Solomon Islands, however, there is still a gap in documented academic research and traditional knowledge in other marine or oceanic species and habitats in the province.

The Isabel Provincial Government has two documents that focus on areas to manage, sustain, protect, enhance and/or rehabilitate the many resources and natural habitats in Isabel province. The Isabel Resource Management and Environmental Protection Ordinance 2006 and the Isabel Ridges to Reef Plan are two living and existing documents that can help the management of marine resources.

In terms of outreach, the Isabel Marine Spatial Planning team during community and stakeholder consultations in 2020 and 2021 in the different regions in Isabel found preferred methods include awareness through social media, radio, regular awareness and consultation in the communities with environmental and fisheries officers, visual aides, house of chiefs and community networks.

Ocean governance in Isabel Province revolves around the so-called "TRIPOD" which includes the Chiefs as traditional leaders, the Church, and the Government. These pillars of government have established and ensure parts of the ocean and resources are managed accordingly for their people.

²⁷ Maetala, 2008

PFO has accessed funds from the Mekem Strong Solomon Islands Fisheries (MSSIF) and the team is planning on targeting some communities that have not yet been reached, for CBRM related activities for example CBRM awareness and fish handling training. Other organizations like Live and Learn and WorldFish²⁸ under its partnership with MFMR has also carried out activities in some parts of the Province. The UNDP²⁹ has also funded similar projects including mangrove projects and the promotion of conservation. Churches and community leaders/chiefs and individual land owners continue to impose ocean conservation on identified areas to effect which also is recognized as ocean management.

Isabel province has five fisheries officers allocated to the province. Recently, they recruited one Fisheries Officer (FO) and now there are three MFMR seconded officers (1x Principal/1x Senior/1x Fisheries Officer). There are two officers under direct employment of the provincial government and all are male officers. In total, there are three officers based at the Buala PFC, there are no personnel at the Kia PFC and one officer at Tataba PFC.

There is also an Environmental Officer for turtle conservation recently recruited as a seconded officer to the provincial environment department with funding support from TNC. Others supporting this work includes Rangers from Arnavons, Haevo, Sasakolo and Litogahira who work closely with TNC and the Environment officer in the province.

PFO mentions that initial discussions for the formation of a Fisheries Advisory Committee (FAC) is a priority activity for this year's (2022) work plan. The province are also at initial planning stages for consultations for the development of an Isabel Fisheries Ordinance.

Figure 2: Known management areas in Isabel in 2022*

	Community	Designation	Status	Partner
1	Kmaga	Management plan	Active	MFMR, PFO, WF, COYES
2	Arnavons	MPA	Active	TNC, PFO, Prov. Env Officer, MECDM, MFMR
3	Haevo	MPA	Active	TNC, Prov. Env Officer, PFO
4	Sasakolo	MPA	Active	TNC, Prov. Env Officer, PFO
5	Litogahira	MPA	Active	TNC, Prov. Env Officer, PFO
6	Lilika	MPA	Active	TNC, Prov. Env Officer, PFO
7	Huhurangi	MPA	Active	TNC, Prov. Env Officer, PFO
8	Sosoilo	MPA	Active	TNC, Prov. Env Officer, PFO
9	Lelegia (initial phase for CBRM done)	Onhold because of dispute	N/A	MFMR, PFO, WorldFish
10	Talise, San Gorge Is.	Initial management plan draft in process		MFMR, PFO
11	Nareabu	LMMA	Yes	TNC/Prov. Env officer/PFO
12	Kologaru	LMMA	Yes	TNC/Prov. Env officer/PFO
13	Hakiki	LMMA	Yes	TNC/Prov. Env officer/PFO
14	Tasia	LMMA	Yes	TNC/Prov. Envi officer/PFO
15	Tataba	LMMA (mangrove)	Yes	TNC/Prov. Envi officer/PFO
16	Huali	LMMA (mangrove)	Yes	TNC/Prov. Envi officer/PFO
17	Tanade	LMMA (mangrove)	Yes	TNC/Prov. Envi officer/PFO
18	Rasa	LMMA (mangrove)	Yes	TNC/Prov. Envi officer/PFO
19	Vara	LMMA (mangrove)	Yes	TNC/Prov. Envi officer/PFO

*This table does not include some communities who are implementing traditional tabus in their reef areas led by Chiefs, tribal leaders and church elders. Religious tabu for open and closures have been very effective in some communities around Isabel.

28 TNC, 2012. Ramofafia et. al. 2007

29 TNC, 2012

4.4 Priorities

Diversion of funds due to the COVID pandemic has disrupted Provincial Fisheries Centre operations (especially for buying fish from fishermen), which is usually the priority focus for PFOs. Due to budget cuts, it has been difficult for the PFOs to carry out activities against their work plan this year. MSSIF is providing financial support for CBRM and Aquaculture activities as per PFO work plan and some visits to NW communities. Some communities have requested CBRM support verbally and no formal letter has been received as yet, but initial visits to these areas are needed. In late 2022, WorldFish supported activities related to an EOI for CBRM support from Kaloka ward received by the CBRM section team for the development of a management plan and awareness in some communities in eastern Isabel. There was a call from the Provincial Environment officer in 2021 to support the owners of the Onogou Is (Ramos Is) with awareness and supporting resources to develop a management plan, as they have shown interest to establish the island as a MPA similar to Arnavons. This will be a collaborative effort with existing partners in the province and national government as well.

Development of Isabel Fisheries Ordinance is also a priority. PFO intends to utilize all PFOs in the province for activities in the different zones. For example, if CBRM EOI comes from someone from Bugotu, then the PFO in Tataba should lead the activities there. This is efficient given that he is the officer responsible for that region. Therefore, it is recommended that these officers be involved in training opportunities.

CBRM awareness is a key priority for Isabel. Considering population density, spreading CBRM in the eastern parts of the province is key for any proposed activities.

5. Makira Province

5.1 Introduction

Makira Ulawa Province consists of Makira (San Cristobal) Island, Ulawa, Ugi ni Masi, Pio, Santa Ana and Santa Catalina. The Three Sister Islands, which are just recently inhabited, are part of the province. The main islands are volcanic, while the smaller islands are low laying atoll islands. The province has a total land area of 3,230 square kilometres.

According to the population census held in 2019, Makira Ulawa Province had a population of 52,006 with an average annual population growth rate of 2.5%. 3% of the population live in Kirakira, which is the provincial capital, whilst the rest (97%) live in rural areas³⁰. Makira has 664 communities, 534 of which are coastal communities. The population of each community in Makira varies between 20 and 500 inhabitants.

Estimates from the Solomon Islands Household Income and Expenditure Survey (HIES) 2012/13 indicate that 31.5% of its population is living below the basic needs poverty line, which accounts for around 16,700 people.

Makira province is vulnerable to natural disasters, including cyclones, tsunamis, floods and drought. For instance, in 2016, an undersea earthquake of magnitude 7.8 struck 62km South-West of Kirakira, resulting in the destruction of homes, properties, food sources and livelihoods. Properties damaged include 1,197 houses, 230 kitchens, 20 schools and four clinics and 30,400 people were impacted.

5.2 Fish and aquatic foods

Like other rural coastal communities in Solomon Islands, inshore marine resources, particularly finfish and shellfish are the main source of animal protein in household diets. Catch was estimated at 3,162 tonnes per year for subsistence fishing in Makira.³¹

Most fishermen fish only for household consumption, but on the occasions when there is surplus catch, that usually is given or sold to neighboring households. The only exception is those fishers from Santa Ana and Santa Catalina who engage in longline fishing offshore using outboard motor boats to target pelagic species which are usually then sold in the provincial capital. Other catches which made their way to the fish market in Kirakira are from fishers within the central region. Their catches usually comprise of mainly reef fish and crayfish. Some villages in the Eastern side, the Star Harbor region, are known for selling mud crab in the Honiara Central Market.

Harvesting of mud crab is commonly done at night and is done largely by men and few women. This is possible due to the large mangrove forest that is located in the region. The catches are usually shipped to Honiara via boat. Fishing remains an essential source of food, income and wellbeing for the rural population.


In the entire province, there are only two known fish markets which are currently in a dilapidated state, needing repairs and maintenance. One is at the provincial capital, the main Kirakira fish market, and the other is the fisheries centre which is located in Namuga substation in the Star Harbour region.

Fish farming is slowly emerging in parts of Central Makira, Ugi Island, Three Sisters Islands and Tetere. There are about six households who have now engaged in fish farming within their respective backyards. These farmers are doing it not as a mainstay of household consumption, but to trial or for hobby purposes.

Little research has been conducted on local governance systems and leadership and their role in

30 SINSO, 2019

31 Arena, 2015



resource management in Makira. According to an interview conducted with a community leader from Santa Ana, the main form of management employed is the establishment of closed areas, usually headed by chiefs. This is still practiced in Santa Ana, Santa Catalina and other villages in the Star Harbour region. Local chiefly systems in these areas is still active and respected. The chief bans a reef area and opens it only on special occasions.

Gender-specific taboos, which prevent women entering certain closed areas and prohibition of the consumption of certain marine animals, were cultural practices which were observed in the past. However, nowadays due to Christianity and the weakening of cultural traditions, these practices are fading away. Several villages are Seventh Day Advents (SDA), which regard some marine species especially shellfish as unclean, these are forbidden to be consumed. These villages tend not to harvest these species, which has an unintended consequence of conserving certain invertebrate species.

5.3 Mapping

According to the Principal Fisheries Officer based in Kirakira, the current main regions of focus in 2022 for CBRM are Ugi Island and Three Sister islands. Their team covered a good number of communities already (see map below of CBRM awareness reach). Santa Ana, Santa Catalina and Star Harbour (marked in red) will be the next regions to focus on. The main reasons for the selection of these sites are due to continuous heavy reliance on marine resources by the villagers for food and income, which resulted in the obvious decline of their inshore marine stocks.

In Santa Ana and Santa Catalina, their chiefly system is still practiced and very likely women and youths will not miss out on community meetings because absenteeism is seen as an act of disrespect to the chief who is often the convenor of meetings. However, separate meetings of men, women and youth are appropriate for deliberations and discussions across most areas. Chiefs and church leaders are a potential information channel to rely on in order to get the message out to the majority of the rural population. Approaches suggested by their PFOs to ensure inclusivity are:

1. Use focus groups of gender segregated peers
2. Figure out suitable timing for women and men to attend meetings or awareness programs (usually evenings work for everyone)
3. Schools to be targeted for awareness
4. Work with churches to organize the programs

Figure 3: Potential areas needing support for CBRM



Blue depicts communities on Ugi Island which were previously visited by PFOs under Mekem Strong Solomon Islands Fisheries (MSSIF) program. Green depicts communities on Three Sisters Islands which were also previously being visited by PFOs. Red are communities who voluntarily practice some form of traditional management but have not yet been visited by PFOs. However, these communities are prioritized by PFOs for support and considered as the third region that they will target for CBRM engagement. According to the PFO, Santa Ana, Santa Catalina and Star Harbor regions will be the next targeted region for awareness in 2022 and 2023.

5.4 Priorities

The top priority actions for urgent attention is to organize a follow-up trip to communities visited last year (Ugi & Three Sister Islands) by the PFOs. These visits will be aimed at (1) drafting simple management plans for these communities, and (2) addressing the requests and gaps identified during the awareness trips last year.

The main requests/gaps identified by PFOs for Makira province are listed below:

- The people requested more fisheries science knowledge, on the basic biology and ecology of marine life. They expressed their interest in broadening their understanding of how marine life and ecosystems function.
- Since awareness talks were already conducted in most of the villages in these sites, a follow-up trip should be planned to form management committees and draft simple management plans.
- Communities requested to formally register their management efforts as a Community Based Organisation (CBO) under the Charity Act to perhaps attract funding from government ministries and other organisations.
- Communities requested regular visits from PFO, MFMR and NGOs to keep the momentum/initiative going.

6. Malaita Province

6.1 Introduction

Malaita Province has the largest population of 173,347 which is 24% of the total Solomon Islands population, with an average population growth rate of 1.3%. The population is largely rural: 3.9% of the population lives in urban areas, compared to 96.1% who reside in rural areas. However, the province also has high circular migration to and from Honiara and Guadalcanal. From a recent count, the province has 800+ communities. The total land mass of the province is 4,225 square kilometers.

Malaita has the third high incidence of poverty of all the provinces in the country. Estimates from the Solomon Islands Household Income and Expenditure Survey (HIES) 2012/13 indicate that 6.9% of its population is living below the basic needs poverty line, which accounts for around 11,800 people.

Like other communities in Solomon Islands, sea level rise is one of the major threats to coastal communities in Malaita. Based on observations from communities in Langalanga whom WorldFish has worked with, coastal communities have recently experienced extreme king tides, which were never seen in prior years. Severe floods on Malaita due to frequent heavy rain continue to severely damage agriculture and infrastructure. Road conditions continue to deteriorate and several bridges are exposed to damage during these bad weather conditions often affecting the movement of people and goods.

6.2 Fish and aquatic foods

Of the 800 coastal communities in Malaita, many depend upon fisheries beside agriculture as a major source of food and income. A study, conducted in 2013, estimated a total of 8,131 tonnes of finfish are harvested annually by subsistence fishers.³² Reef fish remain the main fish species that coastal communities depend much on, followed by pelagic, shellfish and other invertebrates (the latter often harvested by women). A relatively large inland population have no direct access to marine food resources and so depend on freshwater fishery. They catch freshwater prawns and eels mainly for household consumption.

In terms of fish market infrastructure, the main fisheries centres in Malu'u and Afio substations were recently renovated and are now equipped with new ice making machines. Besides these main centres, there are also four Constituency Fisheries Centres (CFCs) recently built in Aoke Langalanga, West Are'are, East Are'are and Lau Baelelea constituencies. These fisheries centres are only accessible to fishers who live close to these sites. Others, who do not have access to these facilities, sell their catch on normal weekly village market days. In some areas, logging operations and ports or stops for shipping services are sites for women's marketing of fresh produce and cooked foods, producing significant income and generating savings for affected families.

A recent survey at the Auki Fish Market shows a total of 134 tonnes of fish with an estimated value of SBD\$5.4 million passed through Auki Market between November 2016 and December 2017.³³ Skipjack tuna composed the highest proportion of fish sold, followed by reef fishes at 75% of the total fish catch at the Auki Market.

In terms of gender and fisheries, around the whole of Malaita, there are rules based on traditional belief systems which included the prohibition of harvesting or consumption of certain species (sharks, rays, giant clams, crocodiles and sea cucumber) for women, and prohibition of women entering spaces historically used in traditional religious practices. To some extent, these practices

³² Arena et. al. 2015

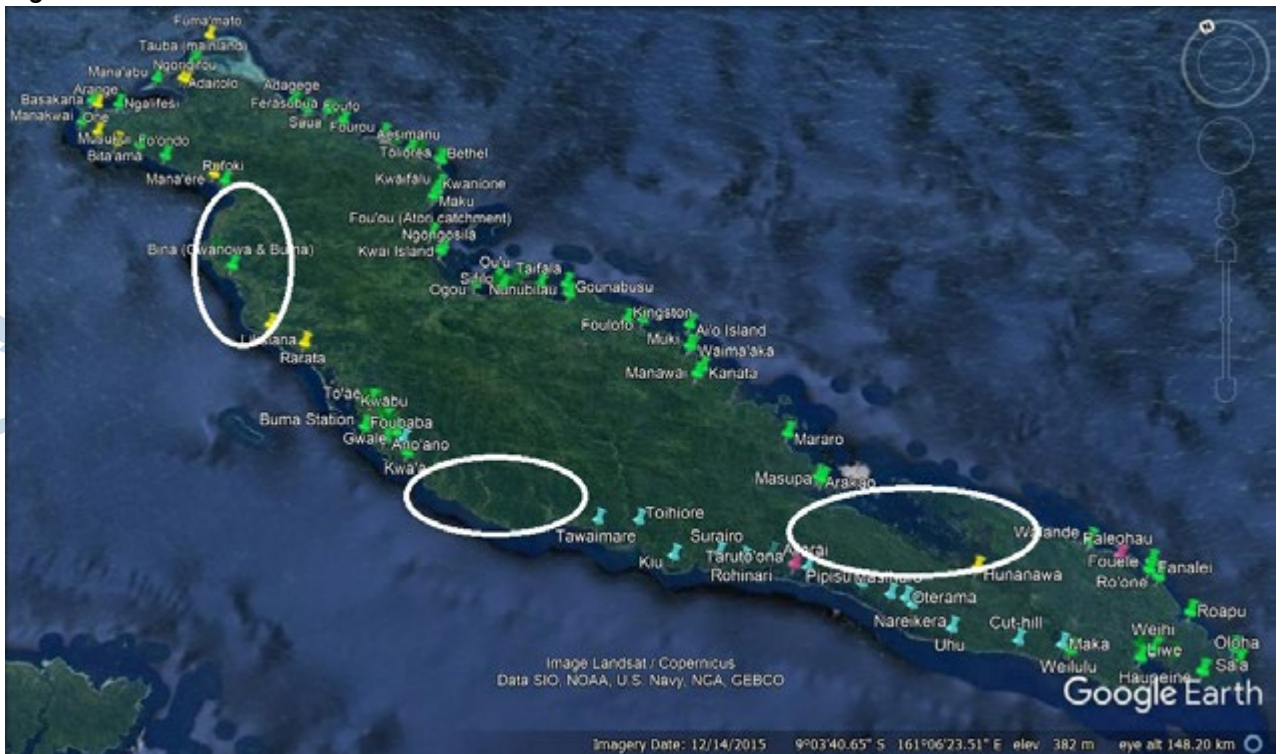
³³ Van der Ploeg, 2019

help to sustain the stocks of these specific species which are considered sacred. However, nowadays due to Christianity and the commercialisation of some of these restricted species, these rules are not observed anymore. That said, fishing, particularly of open sea species is more often practiced by men, while other inshore areas (such as mangroves)³⁴ are more the domain for women's harvesting.

6.3 Mapping

Most of the regions in Malaita have already been reached through recent initiatives to reach communities with CBRM awareness and other previous engagements. Malaita Provincial Fisheries Office is relatively well resourced, compared to the other provinces, with four staff, and several projects underway, notably with WorldFish and previous MSSIF funding to support costs and learning from CBRM awareness and support. The map below depicts community CBRM and livelihoods initiative engagement reach in Malaita Province as of August 2022.

Figure 4: CBRM reach in Malaita Province



Green depicts work under the Pacific European Union Marine Partnerships (PEUMP) Project, blue are the sites that WorldFish worked in under the “Enhancing Livelihoods while Governing Marine Resources in Pacific Island Countries” (SwedBio Livelihoods) project, purple are communities MFMR CBRM Section have reached, and yellow are communities reached through the Australian Center for International Agricultural Research (ACIAR) Pathways project. The three white oval shapes are gaps or areas not yet visited. Note that this map is missing a few sites due to the ‘fit’ of the Google Earth image.

6.4 Priorities

Priority actions needed now are to:

- Follow up with already trained Community Facilitators (CFs) on their management plans
- Visit remaining areas not yet visited to conduct CBRM awareness. The outbreak of COVID, have postponed some planned trips.
- Support to communities that have management plans, including installing FADs, training and other activities.

7. Rennell-Bellona Province

7.1 Introduction

Rennell-Bellona Province, also commonly known as Renbel province, has 147 coastal villages on both islands, with 92 on Bellona and 55 on Rennell island. In the 2009 population census, it was reported that the total enumerated population of Rennell-Bellona was 3,041, which is equivalent to 1% of the total Solomon Islands population. It is the province with the smallest population size relative to the other provinces, with an average population growth rate of 2.5% for the period of 1999 to 2009. However, based on the population projections available³⁵ Renbel Province's population is growing rapidly; its projection for the year 2022 is estimated to be 4,465 people and it has a relatively high rate of dependents per working person.

It is important to note that the population in Rennell-Bellona is very small, and the small scale and relative isolation of the province creates other challenges regarding import of foods and access to services.

7.2 Fish and aquatic foods

Rennell-Bellona Province has a land area of 670.7 square kilometers, which is small compared to the substantial area of water the province possesses. In spite of that, only a handful of fishers (men and women) on both islands fish on the reefs for reef fish and invertebrates and even fewer engage in deep-sea fishing for pelagic fish. It is mostly only fishers who have outboard motor boats who engage in deep-sea fishing for tuna species. This was reflected in the National Agriculture Survey Report which shows that fisheries is considered a subsector activity for 0.6% of all households in the province whose primary activity is agriculture.³⁶ The majority in Rennell entirely depend on Lake Tenggano to fish for tilapia (*Oreochromis mossambicus*) while the majority in Bellona depends on the reef and open sea for fish, tuna and shells as a source of protein.

The tradition regarding who has rights to land and aquatic areas is a mixture of family and tribal ownership. Tenure of land on both islands is mostly under the ownership of tribes, especially areas with no human habitation. According to the PFO, coastal areas in both Rennell and Bellona islands are under customary tenure systems so that fishing grounds are owned by families and groups who live adjacent to the reef areas.

There have been talks and interest in communities on both islands about venturing into CBRM. For example, Lake Tenggano has various fishing grounds that are owned by families from Rennell.

Fishing on both islands is mostly for subsistence, however, on occasions fish are sold, or exchanged. According to the PFO, there is a Community Fisheries Center (CFC) being built, by MFMR, at Lavagu (East Rennell) that is currently inactive due to technical issues with the freezers and batteries. There is no formal fish market on both islands, however, they have places for fish exchange which includes the Provincial Centre's compound, school compounds, clinic area, boat access area and in the community. Unlike those in other provinces, fishers on both islands are not involved in the trading of fish to others. As stated above, fish catches, which are mostly reef fishes, tilapia and tuna species, are mostly for subsistence and rarely sold internally to the local people.

According to the Provincial Fisheries Officer, there is low participation of women in fishing on both islands due to the traditional fishing methods and other gendered roles practiced among locals. Women rarely or never engage in trawling which involves going out in the open ocean,

³⁵ SINSO, 2019

³⁶ Solomon Islands Government, 2019

requires driving a boat as well as handling larger sized fishing lines. Women tend to fish in shallow reef areas and in the lake for tilapia, reef fish and shells. Where gillnets are used, women are responsible for collecting fish from nets after the men cast the nets and leave them in the water for some time. FAD projects and basic fish handling training conducted on Rennell only focused mostly on men and not much was done to involve women. However, an area to reach out to women could be initiating another fish handling training for women since there have been no activities with women and women do have roles in fish handling.

7.3 Mapping

The province has a designated UNESCO World Heritage Site situated in East Rennell. It is the largest coral atoll in the world and the area surrounding Lake Tengano is found to contain many endemic species. However, the designated World Heritage Site is currently being disputed by the local people there with arguments on who has rights to and benefits from the area.

At the moment, the PFO is not implementing any form of CBRM awareness or related activities, however, the Ministry for Environment Conservation and Disaster Management (MECDM) have the East Rennell World Heritage Site (WHS) program which includes an ongoing support system to its Management Committee. Therefore, any CBRM activities within the Site should be aligned with this existing platform and add value to the corrective measures over the site. According to MECDM³⁷, entry points for community engagement within the Lake area or the marine area around the WHS is through the approval of the East Rennell WHS Management Committee. Hence, a letter to introduce the CBRM awareness program and its objectives must be submitted to the Management Committee prior to implementation of community engagement activity. Other supporting partners to guide ground work for CBRM are the Provincial Government, Members of Provincial Ward Area, PFO, MECDM, MFMR – CBRM section and Disaster Management Officers.

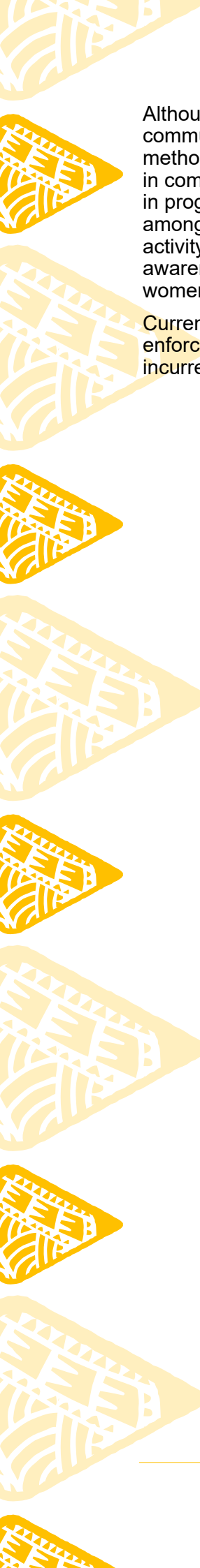
According to the Marine Spatial Plan fieldtrip report from MECDM, locals in the province prefer to have a locally managed marine zone than a permanent closed area. This would allow people to do their daily fishing activities since the majority use the inshore area, rather than offshore. Apart from that, Lughuhgi area has been placed under 'general use zone' because it is under Renbel province's jurisdiction. In addition, in Lavagu Bay there is a conservation area known as Tehakatuú and it was identified as a 'special use zone'. All activities were allowed in the 'general use zone' but mining is restricted to areas in East Rennell, Kangava Bay, Lughughi, Bellona, Magautu and Naone. At the time of this report, there were no reports sighted about the impacts of mining on fish or aquatic foods.

7.4 Priorities

Bellona is the island least visited by external visitors whereas Rennell Island is the hub for the provincial headquarters, major activities, meetings and consultations. There was no indication of declining fisheries on either island, as people report that their marine resources are still abundant. However, people on Rennell are starting to voice concerns that declining catches and deteriorating reef areas, soil quality and forest is inevitable given the large extent of logging (four companies operating in the past and two companies in active operation at the moment) and bauxite mining activities on the island. Thus, the PFO indicated that people on both islands would welcome the facilitation of CBRM related activities to safeguard the province's resources. He further indicated that Rennell Island would be the highest potential area for CBRM engagement in order to increase food security, compared to Bellona, which is not affected from extraction of its natural resources.

In Renbel province, there has never been any form of CBRM in the past until present times with the initiation of the World Heritage site at East Rennell. At this stage, the area of need is for immediate information sharing, strengthening of the provincial fisheries office and external team visits from MFMR/ MECDM, WorldFish and other NGOs. The information sharing activities should aim to ensure that people are aware of the issues that may have or will affect their marine environment and what management measures can be taken. There are other sectors already present in the province such as forestry, mines and energy, and environment. For fisheries, however, there is minimal CBRM awareness programs conducted, and a lack of widespread CBRM awareness on both islands.

37 Information provided by Agnetha Vave-Karamui, MECDM



Although it is good to distribute information using print materials, many locals prefer communication in local language which is not generally used in materials. The best channel and method to transfer information in the province is through the form of in-person public awareness in communities with provincial and national fisheries officers and NGO staff present and engaging in programs. The use of the local dialect for awareness is important to ensure impact is reached among communities in both islands. According to the PFO, CBRM awareness is a community activity so will involve all members of the community coming to one location to hear the awareness program. However, in events of surveys and interviews, it will be appropriate to meet women, youth and men separately.

Currently, there is only one PFO. There is also a need for funding for more awareness and enforcement of government and provincial policies and laws as well as other logistics costs incurred with fieldwork activities and plans.

8. Temotu Province

8.1 Introduction

Temotu province, previously called Santa Cruz Islands Province, is located in the Eastern end of the Solomon Islands. It is made up two chains of islands, which lie in parallel to each other from the northwest to the southwest, with approximately 371 coastal communities.

The 2009 population census showed that the total population of the province was 21,362, comprising 4% of the total population of Solomon Islands. Temotu has the second smallest population size by province, after Rennell-Bellona Province, with an average population growth rate of 1.2% for the period of 1999 to 2009.

Estimates from the Solomon Islands Household and Expenditure Survey³⁸ showed 7.6% people in Temotu are living below the basic needs poverty line. This is lower than the national average (12.7%), and is lower than Guadalcanal, Makira, Malaita, Western, Choiseul and Isabel provinces but higher than the estimated rates for Central and Renbel. Remoteness, with the province taking several days to reach by ship, and having intermittent flights, may bring other disadvantages that the HIES data did not capture at that time particularly in relation to access to food, medicine and other imports and services supplied from Honiara.

8.2 Fish and aquatic foods

Temotu Province has a land area of 868 square kilometers and a larger area of water within the provincial jurisdiction. It was reported in the Solomon Islands National Agriculture Survey Report that fisheries is considered as a subsector activity for 6.3%³⁹ households whose primary activity is agriculture. A study⁴⁰ conducted in Lata showed that most fish catches are snapper, tuna, bonito, and mackerel. The majority of fishers are men and their fishing activities occur in both coastal and deep-sea area, while women fishers' activities are limited to coastal reef areas for gleaning and fishing.

Fishing activities carried out by local people in the province are for both subsistence and income generation. There are places for fish exchange established in the provincial headquarters in Lata, and in communities. At Lata, fishers sell their fish catches at the Provincial market outlet, the wharf, established fish markets, namely, the Provincial Fisheries Office and three private operators Jerly Lano, Luke Paul Taula and Pivo Enterprise. The number of fishers who engage in fishing activities for income generation purposes is steadily increasing and so is the need for access to wider domestic markets in the province.

The fish market operators have an existing network of fishers, from different parts of Santa Cruz and the Reef Islands, who supply fish on a daily basis. The PFOs fish market procure fish from fishers coming from parts of Neo, Matu, Reef Islands, parts of Graciosa Bay, part of Malo and Nemba. Local businessman Jerly Lano's fish market obtains fish from fishers at Malo community (located in Travenion, a small island located adjacent to Santa Cruz); Luke Paul Taula gets fish supply from fishers from part of Neo; and Pivo Enterprise from fishers coming from coastal areas within the Nevenema Ward. According to the PFO, these three groups of fishers that supply fish to the three fish markets are not necessarily part of any existing fishing association but are able to supply fish on a daily basis. The PFO indicated that there are only three known fishers associations in the province, with the two active ones in Nemba and Graciosa. The one in Neo is inactive, but the PFO is working with fishers in the area to revive it. The existence of these fishers associations is to improve accessibility to small development projects and marketing networks.

38 World Bank/SIG, 2018

39 SIG, 2019

40 Tua, 2018

The PFO's proposed plans for the improvement of the Lata Provincial Fisheries Center (PFC) fish market is for the use of a Power Amp system (where the market manager uses audio music and microphone for advertisement of their fish sales) for advertisement purposes and for the province to employ a fulltime fish market manager. Other future plans are to establish mobile freezers in other parts of the islands to store fish that will be procured in communities then transported to Lata, and possibly Honiara.

Recently, the PFO had deployed five Fish Aggregating Devices (FADs) in parts of the Reef Islands under Constituency Development Funds and Provincial Ward Grants. Previously there had been FAD deployments in 2017 by WorldFish in Nemba, Neo, Matu and Nangu. However, each of those FADs are currently was inactive and physically no longer there. Other communities have expressed interest in acquiring FADs someday to support their communities and livelihoods.

Clamshell is an important species that local people from Utupua and Vanikoro harvest and process to be traded to local people in other parts of Temotu and Honiara as well. The fish species popularly sold at the market on a daily basis are tuna and snapper and market vendors set prices ranging from \$20 SBD for a whole fish (weighing between 1kg – 1.9kg) to \$100 SBD for a whole fish (weighing between 4kg – 5kg). However, formal fish market operators set their price ranges from \$25 SBD, per kilogram for tuna and reef fish species, to \$35 SBD per kilogram for deep-sea snapper. In Lata, reef fish is sold along the roadsides at \$100 per string of fish (with over 10 fishes in one string) and is rarely sold at the main market because these string fish products sell out quickly. The PFO indicated that there is high demand for reef fishes in Lata but supply is often low.

There is a plan, prepared by the Ministry of Foreign Affairs and Trade, in progress between MFMR and the province to extend the Temotu fish market to the domestic market in Honiara. However, progress was halted since COVID-19 restrictions were put in place by the government. Another consultation between the province and the Ministry of Foreign Affairs and Ministry of Commerce was held, a few years ago, to establish international export of pelagic fish (including tuna, red snapper and bream) to Vanuatu.

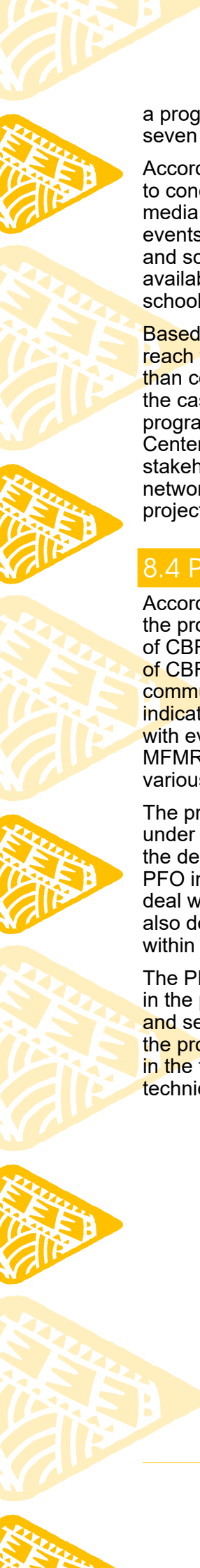
The PFO indicated that women fishers, mostly from Graciosa Bay and Reef Islands, were also part of the three groups that catch and supply fish to the fish market operators in Lata. The type of fish species that these women fishers supplied are mostly mixed reef fish, including snappers which are caught on the reef areas, unlike fishermen who go out further to catch tuna species and deep-sea snappers.

8.3 Mapping

Currently, the Provincial Fisheries Office have two seconded staff (one pending to arrive at the province) and one provincial direct employee. The division has its own OBM and fiberglass canoe for inter-island transportation but this in need of maintenance. There is no staff directly responsible for the fish market. The provincial fisheries office is housed within the Provincial Fisheries Center (PFC) in Lata.

According to the PFO, Temotu has had visits from MFMR, MECDM and OceansWatch for the facilitation of CBRM engagements in different parts of the province but these have stopped since the emergence of COVID globally. While MFMR and OceansWatch worked with some communities within Santa Cruz and Vanikoro respectively to facilitate CBRM, MECDM worked with communities in parts of Santa Cruz, Reef Outer Islands, Tikopia in the implementation of various environmental related projects.

It is reported that traditional *tabu* (forbidden) or seasonal closure of reefs is actively practiced in parts of the three main islands in the province namely Santa Cruz, Reef Islands and Temotu Outer Islands. According to the former PFO, the Temotu provincial fisheries office has initiated CBRM awareness in 2021 with funding support from Mekem Strong Solomon Islands Fisheries (MSSIF), Members of the Provincial Assembly (MPA) and communities. Under the MSSIF program, the PFO was able to conduct CBRM awareness in the entire Nevenema ward area, and will be covering three community clusters in the Nangu ward area and Bekapoa community cluster in Santa Cruz in July 2022. In the Reef Islands, CBRM awareness was conducted in Tuwo, Malumbu, Tanga and Malupu. On Utupua Island, awareness was done in Matebo, Nebao, Aventa, Asubuo, Partson High and Tanibili, while on Tikopia the PFO only conducted an awareness on the Fisheries Regulations. At the end of 2022, the PFO and WorldFish conducted



a program of CBRM awareness in 13 communities, of which one is in the North of Santa Cruz, seven in Vanikoro, four in Reef Outer Islands and one in the Reef Islands.

According to the former PFO, the best information channel for the province is community visitation to conduct CBRM awareness programs because of the geographical scattering of islands, poor media reach in the province and the fact that people hardly ever travel to Lata during provincial events. Printed information only reaches isolated islands through distribution via church events and school networks. The PFO suggested that CBRM information kits should also be made available at the Provincial Fisheries office in Lata to distribute through social networks around schools and churches.

Based on feedback from the Temotu Women's Resource Center group, the best strategies to reach women, youth and people with disability is to hold separate discussions with them rather than community wide meetings where they may be less inclined to raise questions. However, in the case of CBRM awareness, the process does not need separate discussions as the awareness program should be for the whole community. The women leaders of Temotu Women's Resource Center suggested that there is a need for the formation of a provincial network to support stakeholders and Ward Development Committees (WDCs) working in the province. A similar network called the "Provincial Alliance" was established pre-COVID-19 under a previous Oxfam project but is inactive since change of provincial administration and stakeholder staffing.

8.4 Priorities

According to the former and current PFOs, the 2019 three-year strategic development plan for the province has areas of focus related to CBRM that involves the promotion and strengthening of CBRM among coastal communities throughout Temotu province. However, the promotion of CBRM is challenged by the lack of a provincial law to regulate coastal activities and support community management practices. The PFO and the Deputy Provincial Secretary (DPS) indicated that Temotu Province needs an environmental or a fisheries regulation so they can deal with events that result in major environmental damages. The PFO indicated that his superiors at MFMR were already informed of the need for a provincial regulation, however the process with various parts of government was slow.

The process for the development of provincial fisheries ordinances will be facilitated by MFMR under the Pacific Regional Oceanscape Program (PROP) project, which has already facilitated the development of ordinances in Malaita, Guadalcanal, Western Province and Choiseul. The PFO indicated that having an ordinance would empower customary tenure systems to be able to deal with fishing rights, accessibility, environmental damages and management initiatives. It will also define the role and functions of the Provincial Government for the regulations of activities within its provincial waters.

The PFO is currently receiving funds from MSSIF and WorldFish to conduct CBRM awareness in the province. Apart from that, there are requests for the facilitation of additional fish handling and seafood processing training for fishers and other interested suppliers and operators around the province. A training on fish handling will boost the standards and quality of fish stocks sold in the fish markets in the province, add new knowledge and improve existing food preservation techniques.

9. Western Province

9.1 Introduction

The Western Province is an archipelago of 11 main Islands, stretching about 350 km from Shortland Islands in the north (close to Bougainville in Papua New Guinea) to its southern most point, the uninhabited volcanic crater Island (Mbulo), north of the Russell Islands of Central Province. There are more than 100 smaller islets and atolls forming barriers islets around larger islands with inner lagoons across the whole province, contributing to its richness of marine resources and its high biodiversity.

The total population of Western province is 94,209 with an annual growth rate of 2.1 (2019 census). 85.5% of the population reside in the rural areas and 14.5% are distributed across the urban township areas namely Noro and Gizo. The main coastal towns or administrative centers in Western province are Seghe (Marovo), Munda & Noro (New Georgia), Gizo (Gizo Is) and Nila (Shortland Is). There are around 700 coastal communities which includes small family settlements/hamlets in the province.

Ranongga Island constitutes a relatively small population, however, it is recorded to have the highest poverty rate in Western province. The largest number of poor people are therefore located in wards of only average-to-below-average poverty rates, reflecting the larger population in Gizo, Kohhing and Kolobangara.⁴¹

Western province has been faced with a series of natural disasters over the past years, which have negatively impacted many families and communities. For instance, the 2015 effects of algal bloom in the Marovo lagoon caused marine resources to die and restricted people's diets in the region during that period. The 2007 earthquake transformed the landscape of some islands, for example Ranongga uplift. Following the earthquake was the tsunami, which destroyed many communities in and around Gizo Island. Furthermore in 2021, a family in a settlement in Kolobangara were hospitalized for eating the fish species *Tetraodontidae*, or locally known as the Balloon Fish, which is amongst the toxic and poisonous species in the world and led to the death of two family members (adult and child).

9.2 Fish and aquatic foods

Western province is rich in biodiversity, with a high number of reef fishes and abundance of corals species. Njari Island located outside west Gizo Island was recorded to have the fourth highest fish count in the Coral Triangle region. Going out further to the Shortland Islands, the marine environment encompasses a high biodiversity and reefs are still in good condition and healthy.⁴² Species richness and healthy population of the reef communities tend to be highest in New Georgia and Shortland Islands, with Western province having the highest density of large reef fish in the provincial waters. The health of these marine environment are, however, threatened by logging and overharvesting.

Coastal communities depend mostly on finfish, bivalves, crustaceans and algae, depending on where the community is situated and what habitat it is surrounded by. Fish catch varies as well amongst fishermen where some go to fish at FADs for pelagic fish using OBM, mainly to sell at fish markets in nearby township areas such as Gizo, and often surplus also contributes to household consumption. Western province is one of the provinces with the highest catch for commercial reef finfish and invertebrates, with a total recorded catch of 5,283 tonnes/yr.⁴³

Gizo, Seghe and Shortland islands have a Provincial Fisheries Center (PFC) which operate in

41 World Bank/SIG, 2018

42 Arena et. al. 2015

43 Arena et. al. 2015

these sites to make ice cubes/blocks and also for fish storage. Fish markets are permanently constructed in Gizo, Seghe, Noro and Munda where fish are sold fresh. Processed fish are also sold at ship berthing ports. At every shipping port, women and girls sell processed fish in small semi-permanent market houses. This provides fresh food for passengers on board these ships.

Since the *beche de mer* ban was lifted in September 2021, many coastal communities have harvested the species which are sold to Chinese businesses around the province. Seaweed cultivation is also a key activity in some parts of the province. Some communities around West Gizo have developed sea grapes management plans; these are farmed and sold locally at the Gizo market. Others in Marovo venture to Honiara for sea grapes sales at the market outlets. This also includes sending esky finfish because Honiara have a better market price for these marine resources. In the Shortland Islands, known for their value-adding of smoke fish, the provincial and marketing division within MFMR are working closely with individuals and communities to expand and support market opportunities. Furthermore, for commercial purposes, the different lagoons are also a source for baitfish for National Fisheries Developments Ltd (a local tuna fishing company) fishing boats and communities also benefit from through agreements with the company. Within the processing sector of the tuna fisheries supply chain (SolTuna) in Solomon Islands, women dominate the workforce.


9.3 Mapping

There are a number of NGOs working closely with the PFO and Environment officer, with a focus on natural resource management. World Conservation Society, WWF and WorldFish are the three international NGOs within the province whose objectives are directed towards marine resource management or conservation. PFOs depend on these partners to lead CBRM initiatives within the province. WWF are employing Community Facilitators (CF) for their efforts in scaling CBRM, to support their resource management program and also as part of their capacity program for communities. The figure below shows the sites that each of these organizations is providing support for marine resource management and research initiatives.

Figure 5: Known management areas and partners in Western Province in 2022

	Community	Island	Management Plan	Status	Partner
1	Peava	Marovo	Draft to be submitted to MFMR	Active	WCS
2	Zaira	Marovo	Draft to be submitted to MFMR	Active	WCS
3.	Chubikopi	Marovo	Draft to be submitted to MFMR	Active	WCS
4	Vurana	Rarumana	Draft to be submitted to MFMR	Active	WCS
5	Munda	New Georgia	Draft to be submitted to MFMR	Active	WCS
6	Rarumana	Rarumana	Draft to be submitted to MFMR	Active	WCS
7	Santupaele	Kolobangara	Finalised	Active	WF
8	Leona	Vella la Vella	Finalised	Active	WF
9	Tan Huka	Kolobangara	Not yet developed	Active	WF
10	Eghotitovo	Kolobangara	Progressing	Active	WWF
11	Varu	Kolobangara	Finalised (Launched)	Active	WWF
12	Nusatuva	Kolobangara	Finalised (Launched)	Active	WWF
13	Nusa Mahiri	Kolobangara	Finalised	Active	WWF
13	Riguru	Simbo	Finalised (Launched)	Active	WWF
14	Saeraghi	West Gizo	Finalised (Launched)	Active	WWF
15	Sambora	Vella la vella	Progressing	Active	WWF
16	Valapata	Vella la vella	Finalised	Active	CBO (SVTA, Henry Kaniki)
17	Uriaupo	Vella la Vella	Progressing	Active	CBO (SVTA, Henry Kaniki)

The following information channels have been recorded in 2020 and 2021 in the different regions



in Western province: social media, provincial committees, print, text messages, radio, community meetings and consultations led by community leaders and Members of the Provincial Assembly.

Current provincial capacity and resources in Western province are as follows. There are 2 seconded officers (Principal and Chief) to MFMR based at the Gizo PFC. They are supported by provincial fisheries officers with one based in Seghe, one based in Gizo (mainly to support the operations of PFC) and one in Korovou (Shortland Is). There is also a provincial environment officer based in Gizo who also supports NGO partners and other stakeholders with natural resource management programs in the province.

9.4 Priorities



Vanga RTC is located in Kolobangara and the school is operated by the Catholic church. The Provincial Fisheries Office has received an EOI from the school principal requesting support for CBRM awareness, management plan set up and technical support for their existing tilapia farm. This interest was partly influenced by the involvement of a neighboring community (Tan Huka) in a WorldFish training held in Auki, following which the community representative has shared lessons and messages that reached Vanga RTC. Vanga RTC was visited by WorldFish and PFO in late 2022.

The priority focus for the PFO, is the construction of their new fisheries office which is underway through funding from the provincial government and provincial division MFMR. The deployment of 12 FADS spread across the four regions in the province (Marovo to Shortland Is.) is another priority for the PFOs under their work plan for 2022. The above activities will be supported by the provincial government and MFMR.

Furthermore, awareness on the national fisheries regulation is a pending activity for the PFOs that needs to be implemented as well. This includes community awareness and through media (the local station Radio Hapi Lagoon). Following the installment of the national fisheries regulation billboard at the Gizo market, it is important to hold a training of trainers as well for partners and provincial officers for supporting monitoring and compliance at the fish market especially.


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