



WWF

CASE
STUDY

SI

2017



ENSURING SUSTAINABLE COASTAL COMMUNITIES

A CASE STUDY ON SOLOMON ISLANDS

Front cover: Western Province. A healthy island ecosystem. © DAVID POWER

Our Vision:

The people of Solomon Islands managing their natural resources for food security, livelihoods and a sustainable environment.

“Olketa pipol lo Solomon Islands lukaotim gud olketa samting lo land an sea fo kaikai, wokim seleni, an gudfala place fo stap.”

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March 2017

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SPECIAL THANKS TO WWF staff Shannon Seeto, Salome Topo, Jackie Thomas, Andrew Smith, Minnie Rafe, Zeldalyn Hilly, Richard Makini and Nicoline Poulsen for providing information for the report and facilitating field trips.

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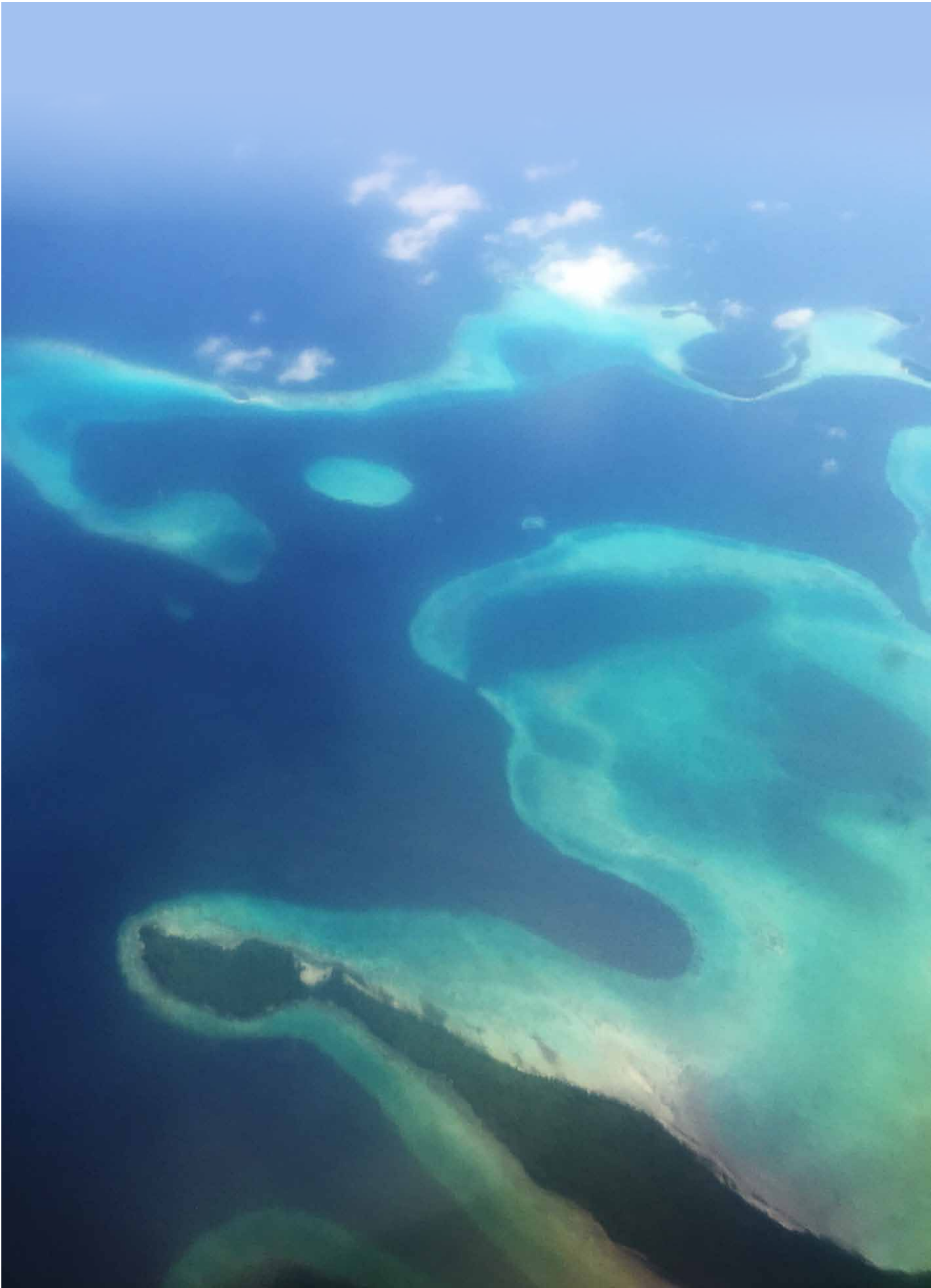


The WWF-Pacific (Solomon Islands) Sustainable Coastal Communities Programme is supported by the Australian Government, John West Australia, Critical Ecosystem Partnership Fund (CEPF), USAID REO, private Australian donors and WWF supporters in Australia and the Netherlands.

This publication is made possible by support from the Coral Triangle Program.

CONTENTS

3	A unique environment
7	Our outcomes and strategy
	Community-Based Resource Management
	Ecosystem Approach to Fisheries Management
	Sustainability: environment, economic and social factors
	Gender equality
13	Our work
	Inshore Fish Aggregating Devices
	Spawning Potential Surveys
	Sustainable livelihoods and women's empowerment
	Ridge to reef
27	Outcomes achieved
31	Challenges faced
	Project integration
	WWF resources
	Government capacity
	Complexity
	Alignment of priorities
	Leadership and responsibilities
	Cultural considerations
	Community capacity
	Logistics and equipment
37	Way forward
39	References



A UNIQUE ENVIRONMENT

Solomon Islands is one of the six countries that make up the Coral Triangle – the planet's richest centre of marine life and coral diversity. The biodiversity in the Coral Triangle includes over 6,000 species of fish and 75% of the world's coral species.

Social and economic vulnerability to coral reef degradation and loss is extremely high across the Coral Triangle, with Solomon Islands rated in the highest category of vulnerability globally (Burke et al., 2012). Human pressures on reefs have increased significantly within the Coral Triangle in the ten years since the first Reefs at Risk report was released in 1998. Between 1998 and 2007, the level of threat increased by about 40%, rising to more than 60% around Papua New Guinea and Solomon Islands.

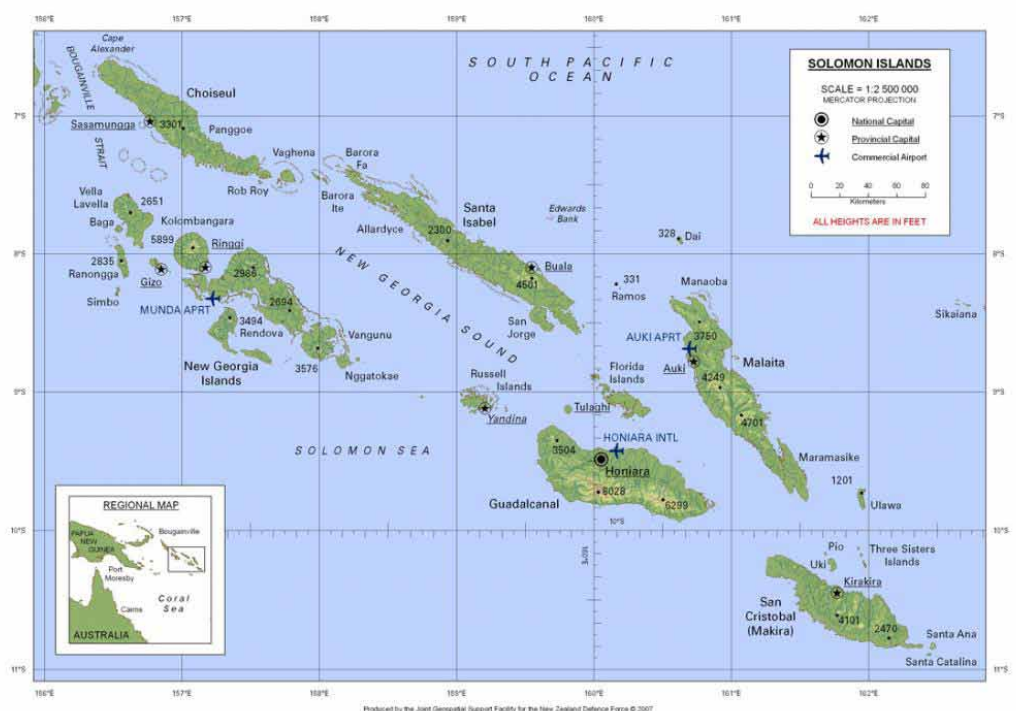
According to the 2012 *Reefs at Risk Revisited in the Coral Triangle* report, about 70% of reefs in Solomon Islands are at risk from local human activities. In addition, while fish diversity was high, there was a low number of target species (especially key reef fish), indicating that fishing pressure

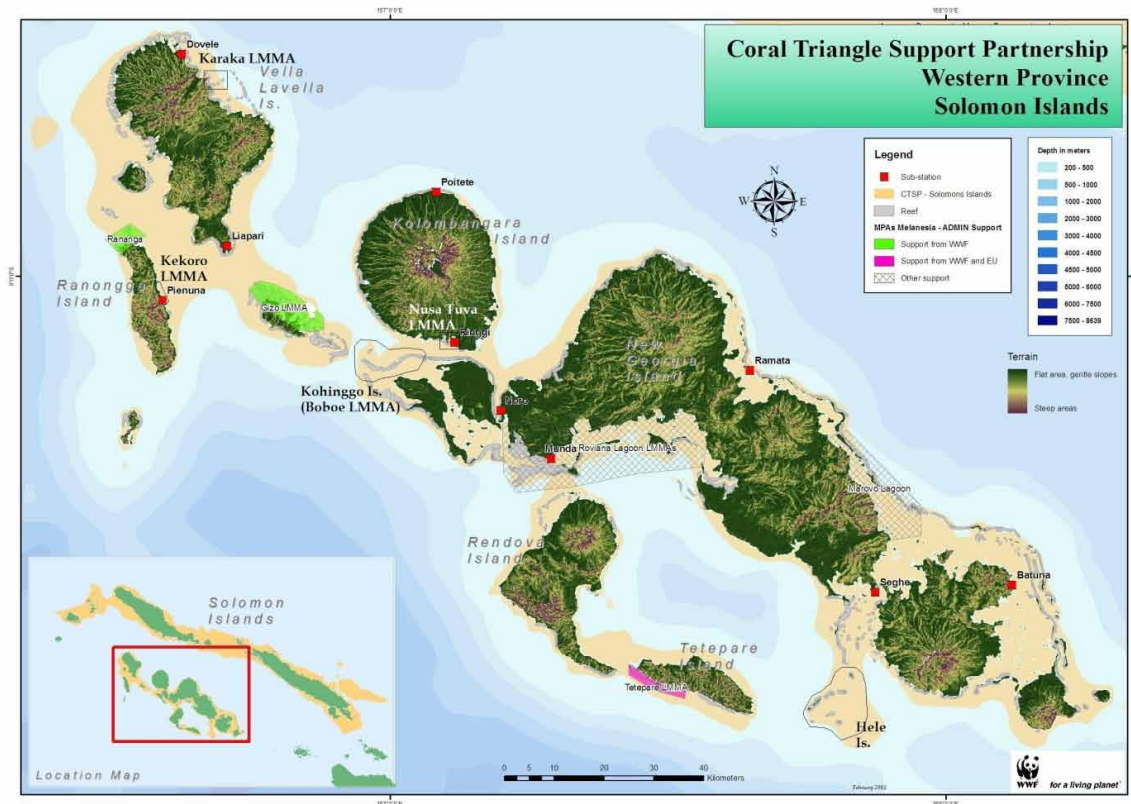
Left: Western Province from above.

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Right: Map of the Solomon Islands.

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was also high. When thermal stress and coral bleaching is combined with local threats, the area of threatened reefs increases to 80% (Burke *et al.*, 2012). Natural forest clearing for land use or the logging industry also poses a threat to surrounding reefs and seagrass beds from surface run off and increased soil erosion rates.

Most of Solomon Islands population lives within 25 km of the coast and are largely dependent on fish as their main source of protein, which comprises almost 75% of the rural diet of coastal communities. Income earned from fishing accounts for a large part of their livelihoods. Nationally, 85% of the 900,000 population is in the subsistence economy, and sustainable food security and livelihoods from the oceans is critical. More than 80% of households engage in fishing, and aggregating fishes likely make up at least 50% of marketed fish. It is predicted that by 2030, fisheries production will

not be able to meet demand. Growing population pressure on marine resources and their habitats is resulting in over-exploitation, food security and poverty issues.

Western Province is home to many habitat types, ranging from high elevation cloud forests and volcanoes to low lying atolls, making this region an ideal hub for tourism. Gizo town has grown rapidly to become the second largest town in Solomon Islands and has the largest fish market outside of Honiara, with fish and marine resources being sourced from the reefs and waters surrounding Ghizo Island and adjacent islands. In addition to the increasing market demand for fish and marine resources, the increasing local population is providing a greater subsistence demand for food fish as the cheapest protein source. With the limited livelihood and income generation options in the north-western region of Western Province,



Far left: Map of Western Province, Solomon Islands.

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SUPPORT PARTNERSHIP

Left: Crown of thorns starfish threaten some reef ecosystems, eating healthy coral.

© DAVID POWER

and with the urban centre in Gizo, more people are turning to fisheries as a means to generate income and to provide fish protein for their families. The range of threat drivers in the Western Province and levels of complexities of land and marine resource rights, governance and tenure systems, provide a prime location to test, apply and promote the wider adoption of Community-Based Fisheries Management (CBFM) as an approach to improve coastal fisheries co-management within an ecosystem framework.

The Western Province is one of nine provinces in Solomon Islands and is the focus seascape for this programme. It is comprised of 11 islands that stretch across 350 km. The total land area of Western Province is 5,500km². Approximately 90% of the population occurs in rural areas and within 5km of the coast (Foale et al., 2011), however, there has been an increasing migration to urban centres,

including Noro and Gizo (Rural Development Division, 2001). The Western Province has the second highest population (76,649) of all provinces in the country after Malaita. WWF's work focuses on the central part of the Western Province. The northwestern region includes: Ghizo, Kolombangara, Vella Lavella, and Ranongga Islands.



OUR OUTCOMES AND STRATEGY

Our work in Solomon Islands consists of multiple projects that come under one programme – the Sustainable Coastal Communities Programme. The three outcomes that WWF in Solomon Islands is looking to achieve include:

- ▶ Sustainable Fisheries
- ▶ Sustainable Community Livelihoods
- ▶ Ridge to Reef Community Planning

Historically, projects tended to be conducted in discreet, short-term blocks of time. Moving forward, WWF has recognised the importance of integrated management and has adopted Community-Based Resource Management (CBRM) as a core strategy, along with an Ecosystem Approach to Fisheries Management (EAFM). As part of this strategy, WWF is adopting a holistic view of long-term sustainability and not just the environmental benefits that can be provided, but also the related social and economic benefits.

COMMUNITY-BASED RESOURCE MANAGEMENT

Conventionally, management of natural resources has been regarded as a role for government policy makers and regulators. However, in the context of Solomon Islands, communities have historically looked after their own natural resources with ‘kastom’ traditional practices. Village chiefs handled community disputes over resources with land and resource owners. That has changed over time, with the social erosion of some of these long held traditional community structures and loss of values and rules about the importance of natural resources and how to look after them. Increased population and connectivity to local and global markets has led to increased fishing pressure on

Travelling home by boat after
women’s financial training
workshops on Kolombangara
Island. © NICOLE LOWREY

coastal reef systems, destructive fishing practices and overfishing in some areas.

Community-Based Resource Management (CBRM) is a strategy that has been adopted in the Pacific and Melanesia to encourage and support regional communities to have more of a say in the management of their natural resources. It is the principle natural resource management strategy in Solomon Islands, with principles guiding CBRM activities developed by implementing organisations (including Non-Government Organisations) in 2007. A more comprehensive approach called CBRM+ was coined for the *Solomon Islands National Plan of Action for the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security*, incorporating food security, ecosystem approaches to resource management, vulnerability and adaptation planning and protection of key species and habitats.

Community-Based Fisheries Management (CBFM) is a subset of this strategy and is focused on coastal communities adapting their traditional and local knowledge of fisheries resources into management solutions that can adapt to changing situations, take into account scientific information and integrate with government management and legislation. This approach recognises that it is difficult for government in island states to manage small-scale and rural fisheries, and that communities with strong social structures are well placed to take on an increased management role. Experience and evidence also points to management arrangements that integrate local knowledge and governance being more respected, valued and complied with than arrangements that do not involve communities or a 'bottom-up' approach.

The Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) and the Ministry of Fisheries and Marine Resources (MFMR) are the lead agencies for CBRM in Solomon Islands. The MFMR is implementing CBFM nationally with a view that



Above: Multiple tuna species for sale at the Gizo market.
© NICOLE LOWREY

Above right: A school of blackspot snapper swimming by mangroves and coral in Western Province. © DAVID POWER

“communities have the customary rights to their resources and therefore are key implementers and actors in the management of their fisheries and marine resources.” The Ministry is currently doing this through raising awareness on fisheries management and striking partnerships with government, provincial, and community level organisations to implement CBFM through an integrated approach.



ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT

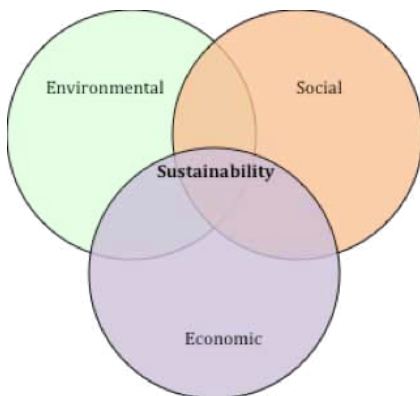
Part of WWF's strategy to implement community-based management is to take a more holistic view of conservation and look at the ecosystem as a whole, rather than disjointed parts or species that need individual attention, as well as the services they provide. The Ecosystem Approach to Fisheries Management (EAFM) concept was first developed at the Earth Summit in Rio de Janeiro in 1992. The Food and Agriculture Organization's (FAO) Code of Conduct for Responsible Fisheries (2003) outlined that "the purpose of the ecosystem approach to fisheries is to plan, develop, and manage fisheries in a manner that addresses the multiple needs and desires of societies without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems."

Our strategy is to implement a combination of the Solomon Islands government approach to CBRM and the Secretariat of the Pacific Community (SPC) Community-Based EAFM Guidelines. Under this approach, WWF waits for community requests for CBFM assistance, rather than entering communities without invitation. Once a request is received, an assessment of the feasibility of assisting the community is undertaken, and an agreement is signed between the community and WWF. We adopt an EAFM approach across the breadth of our work on coastal fisheries, incorporating food security, ecosystem approaches to resource management, vulnerability and adaptation planning, and protection of key species and habitats.



SUSTAINABILITY: ENVIRONMENT, ECONOMIC AND SOCIAL FACTORS

Sustainability is often described in terms of three pillars: the environment, the economy and society. It is thought that long-term sustainability is achieved when all three pillars are focused upon, as they are interconnected, rather than focusing on just one.



With a growing population, there is higher fishing pressure on coastal fisheries and ecosystems. Communities often do not see the tangible benefits of conservation, as benefits are long-term in nature and can be hard to see. Regional communities have limited opportunities to make a living, and marine resources are one of their only sources of income. Focusing on environmental impacts alone may have detrimental social or economic impacts on regional communities, and decrease the likelihood of maintaining environmental outcomes. WWF is therefore aiming to address social and economic issues by providing sustainable community livelihoods and new business opportunities, thereby reducing fishing pressure on coastal ecosystems.



Far left: Seaweed bunches and vegetables for sale at the Gizo market.

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Left: Women selling produce at Kuzi village, Kolombangara Island.

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GENDER EQUALITY

Gender equality is a national government priority in Solomon Islands, and the Permanent Secretary for the Ministry of Women, Youth, Children and Family has stated in the *Solomon Islands, Country Gender Assessment* report that “all ministries and sectors share the responsibility for achieving gender equality”. According to the 2009 census, Solomon Island women were only half as likely as men to be in paid work (26% of women and 51% of men). In rural areas, 81% of women were found to be in unpaid subsistence work compared with 58% of men.

In addition, a study by the Pacific Financial Inclusion Program found that rural Solomon Islanders have low financial literacy and knowledge about how banking works (Pacific Financial

Inclusion Program, 2010). Women usually manage the daily financial processes for their families, and evidence shows that when women are provided with access to financial services and financial literacy training, there is a positive impact on all household members. WWF is working on financial inclusion for women in rural communities as an integrated strategy with conservation efforts in the communities.



OUR WORK

With a growing population putting extra fishing pressure on marine resources and their habitats, over-exploitation is becoming a large issue for coastal communities, along with food security and poverty issues. We have therefore reassessed our approach and moved our focus from just conservation to include work to help ensure food security and livelihoods.

WWF has built a strong presence in Solomon Islands, working with government and communities on co-management approaches to conservation since 1995. With offices in Honiara and Gizo, WWF's conservation focus has been on projects located around Ghizo and surrounding islands in Western Province. Previous work in the region has included sustainable forestry, turtles, marine conservation and marine protected areas. While these have been successful to an extent, overfishing has still been occurring, in part due to a lack of other livelihood opportunities. As livelihood opportunities are a key priority for coastal communities, engagement in conservation efforts can be difficult if they cannot see a direct contribution to their livelihoods. WWF has therefore shifted priorities over the last few years to integrate livelihoods into the outcomes we hope to achieve.

With support from the Australian Government, John West Australia, Critical Ecosystem Partnership Fund (CEPF), private Australian donors and WWF supporters in Australia and the Netherlands, our work has focused on ensuring sustainable coastal communities. Our work to promote sustainable fisheries includes projects deploying Inshore Fish Aggregating Devices (iFADs) and monitoring of fish species using Spawning Potential Surveys (SPS). These tools allow us to engage with coastal fishers to progress the long, sometimes slow, process of Community-Based Fisheries Management (CBFM). The approach requires WWF to respond based on community requests for CBFM assistance, then an assessment of the feasibility of assisting the

Women learning about money counting.

© NICOLE LOWREY



community, and the development and signing of an agreement between the community and WWF. We also work closely to build capacity with the Provincial Fisheries Division, as we see them as critical to the long-term sustainability of CBFM in the Province.

To promote sustainable community livelihoods, we are working with women's groups to ensure that the benefits from the transition to more sustainable fishing activities and the focus on CBFM also contributes to improving livelihoods, not just improving food security. Women primarily sell the fish that are caught in the communities at the local markets. By targeting women for financial inclusion, we realised the benefits from sustainable fishing practices could feed into livelihood opportunities for women, which in turn would benefit families and communities as a whole. Women involved in the financial inclusion

Above: Women discussing how to set financial goals and how to calculate savings to reach their goal. © NICOLE LOWREY

Right: An inshore fish aggregating device in Western Province. © ANDREW SMITH / WWF-AUS

activities are able to save money and look towards other livelihood opportunities, which gives WWF the opportunity to incorporate environmental sustainability criteria into future business opportunities, and to encourage the women to be more engaged and proactive in resource management, e.g. CBFM.

Our third outcome, to promote "Ridge to Reef" community planning, is an approach to help create management plans for coral reefs that takes into account the fact that a significant threat to coastal reef ecosystems is the run-off pollutants from on land, or high in the ridge.

INSHORE FISH AGGREGATING DEVICES

Since 2012, WWF has been working to improve livelihoods of coastal artisanal fishing communities in Western Province, through piloting alternative fishing methods in collaboration with the Ministry of Fisheries and Marine Resources (MFMR). The alternative fishing method piloted was the use of Inshore Fish Aggregating Devices (iFADs), or ‘rafters’, as they are known in Solomon Islands. An inshore or nearshore fish aggregating device is a rafter that is anchored to the sea floor, far enough from the coast to attract pelagic fish species (those that are neither close to the shore nor near the bottom of the sea). Pelagic fish species such as tuna, rainbow runner and bonito are attracted to the rafter, and as they aggregate in one location, local fishers can paddle on canoe to the iFAD location and fish the pelagic species more readily. The purpose of introducing iFADs in the Solomon Islands was to 1) reduce fishing pressure on the near-shore reef systems, and 2) as a stepping-stone to addressing poverty and food security issues.

In 2013, WWF staff worked with local communities to complete Catch Per Unit Effort (CPUE) monitoring and training using the MFMR iFAD guidelines. A biological baseline was established and community members were trained in the construction of iFADS. Two pilot iFADS for Saeraghi and Paelonge were deployed by WWF staff, technical advisers and community members. However, before the Paelonge raft could be attached, the ropes and the floats were cut and stolen at night in an apparent opportunistic theft by people passing from another island. The Saeraghi iFAD was successfully deployed, but unfortunately within two weeks the lines were cut on this iFAD too. WWF joined with World Fish (who had also lost iFADs) on an extensive awareness campaign (radio, community meetings, etc.), targeting communities and adjacent communities for all further iFAD deployments. This had some, but limited impact. Since the initial

deployments, five more iFADs were deployed to surrounding communities. The longest deployment was of an iFAD in Petunia, which lasted six months before it was destroyed in a cyclone as the bamboo structure had weathered over time and had not been maintained.

WWF held a fisheries assessment workshop in February 2014, involving over 20 key fishers from around Ghizo and Nusatuva islands. Participants in the workshop and subsequent initiatives were introduced to methodologies for determining if a fishery is being overfished, and a monitoring program was established to determine if there was a shift in fishing activities by coastal fishers from the reefs to the iFADs. A project evaluation was completed in July 2015 and found that iFADs were making fishing more accessible and affordable for communities while they were functioning, and there was a reduction on reef fishing in



some (iFAD) communities, highlighting some opportunities going forward. It recommended that WWF conduct additional awareness work with both target and surrounding communities to reduce sabotage of iFADs, and work to develop a more robust iFAD design to ensure the ropes are not simply cut. It was also suggested that WWF could partner with MFMR and for them to construct and deploy the iFADs, with WWF providing the support to the community. WWF has taken these recommendations into account and has facilitated the establishment of a fishers' association between fishers of different communities, changed iFAD design from bamboo rafts to buoys on lines, produced and distributed an iFAD information manual, and moved to a facilitator role, helping

communities apply for iFADS with MFMR.

Duncan Kenny, Chairman of the Nusatuva Environment, Conservation and Development Association (NECDA), said WWF helped implement an iFAD for their community, but a logging barge either removed it or ran over it. When it was in place, all of the villages were using it. There was lots of training and an awareness campaign, and it was his opinion that the villagers understood the issues. The area was respected and data was being collected and monitored at the iFAD, showing that people were catching more fish at the iFAD and less on the reef. He would be interested in introducing a new iFAD for Nusatuva communities.

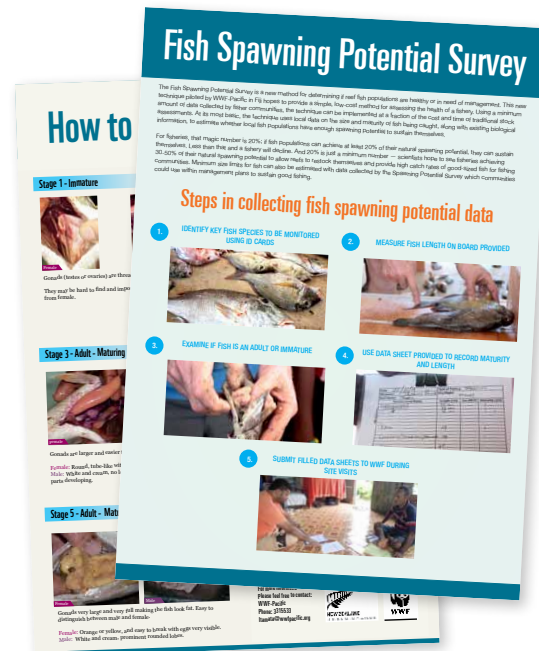


SPAWNING POTENTIAL SURVEYS

WWF is working with coastal fishers in Western Province and building their capacity to monitor the health of their own coastal fisheries. We are doing this by engaging fishers through an innovative approach to fisheries stock assessments, called Spawning Potential Surveys (SPS) - a length-based method for assessing the spawning potential of fish as a stock status indicator. Developed for situations with limited scientific data and expertise, it is especially relevant to Solomon Islands' coastal fisheries. With basic training, coastal communities can conduct their own assessments by measuring only several hundred fish of any species.

Under this monitoring strategy, fishers are taught to 1) select and identify up to 10 or so target species (these species are then used as 'indicator species' for the status of the community's fisheries), 2) collect the size distribution of target fish species in a catch and 3) conduct a one-off assessment of the "Size of Maturity" for the target fish species, as it varies from region to region. Using the data collected from fishers, we are able to estimate the percentage of fish in a local population that are readily able to breed, or spawn. This can then be compared to what the population would look like if it was an unfished stock. For example, a 20% Spawning Potential Ratio (SPR) equals the replacement level (like a couple having 2.1 children), so a sustainable fishery should be around 30-40% SPR. If the level falls below 20%, then the stocks are in decline and further management needs to occur as a priority.

This approach reduces the cost and time taken to complete assessments, can be carried out by all members of a community, and results are readily translated into appropriate management strategies. Involving community members, particularly women, in data collection and assessment helps them understand problems of overfishing, prepares them to implement appropriate management strategies, and allows them to monitor and obtain direct feedback on management actions.



Above: Guidelines for communities engaging in Spawning Potential Surveys.

Left:: Under the rafters palm leaves, small buoys and old sections of rope netting are hung to provide extra surface area and a substrate for algae, barnacles, etc. This provides food for small fish and larvae that aggregate there.

© ANDREW SMITH / WWF-AUS



ERIC'S STORY

ERIC KOTI is a member and advisor of NECDA. A Locally Managed Marine Area (LMMA) was set up around Nusatuva to protect the reef, but he says people keep fishing in it and that young people don't know the rules and come to catch fish at night when they will not get caught. He believes the LMMA has been good and he has seen the difference it has made from then to now. Before, there was not a lot of fish. With the LMMA, the fish have increased in number. The NECDA management committee decides the open and closed areas of the LMMA that people can or cannot fish in certain hours or days. NECDA has trained monitors to gather the SPS data, including four men and two women. Monitoring is always performed in groups.

Before NECDA was established, or any help was provided from WWF, protection of the reef was done by his family. WWF has helped by planting and farming corals and training villagers in spawning potential and aggregation methods. They still use these methods after training and now they know female and male size limits for certain reef fish. Everyone is involved in training, including women and men.

NECDA does community awareness of the LMMA with surrounding villages, including Vovohe, Kaza, Vani Kura, Ravai, Hapi and Vani Koro. NECDA did training with the villages to teach them how to look after their own reefs and about Nusatuva reef. He says the reef is like a garden. "Hem good" now but it was harder beforehand.

He believes the NECDA management committee is good but needs to be tightened. They try to chase people away from the reef, but the community must work together to raise more awareness. Now some people come to ask permission from villagers to fish the reef, and he appreciates when they ask. They teach people, who ask permission to use the reef, how to protect it and how to protect their own reef. NECDA also trains villagers to become tour guides and they encourage ecotourism around Nusatuva and the reef.



SUSTAINABLE LIVELIHOODS AND WOMEN'S EMPOWERMENT

In addition to piloting alternative fishing methods for coastal communities, i.e. Inshore Fish Aggregating Devices (iFADs), WWF has been working with communities and Community Based Organisations (CBOs) to improve livelihoods for coastal communities. This work has focused on gender equality and financial inclusion, as women primarily sell the fish that are caught at local markets, but are often left out of the decision-making when it comes to resource and financial management.

For the sustainable, long-term transition from fishing on coastal reef fisheries to pelagic fisheries, WWF recognised that fishers and communities would need to see the tangible benefits of their conservation and management efforts and have alternative means of livelihoods. The sustainable livelihoods project began in 2012 to 1) improve

food security and poverty alleviation, and 2) to develop a financial mechanism to ensure the long-term maintenance and management of the iFADs.

Using lessons learned from micro-financing globally and across Solomon Islands, micro-financing and small business enterprises in coastal communities became the main tools for improving livelihoods, as well as sustaining the iFADs. Financial literacy training was conducted with Gizo Environment Livelihood Conservation Association (GELCA) in 2013, leading to the establishment of the Gizo Women's Savings Club (GWSC). Seven financial literacy trainings were conducted at each zone (a designated group of closely located communities) within Gizo, and further training on leadership, governance and management skills was conducted for leaders of GELCA executive, GELCA women's executive, Nusatuva Environment





Conservation Development Association (NECDA) executive and NECDA women's executive.

The GELCA and NECDA Women's Savings Clubs were formed in November 2013 with governance teams comprising of a President, Vice-President, Secretary, Vice secretary, Treasurer, Vice Treasurer and two ordinary members. The established clubs handle three types of funds; savings funds from the individual women, a revolving fund which includes money working through the hands of women in the community through a small-loan component, and an operations fund that contributes a small fee annually for central office requirements. To participate in GELCA and NECDA women's savings clubs, a woman must be a member of one of the zones. A membership fee is not enforced, however, financial literacy training is mandatory for all members. In addition, a woman must purchase a savings club Passbook

Previous page: The group of women from seven villages that received financial training and have now started three new savings clubs. © NICOLE LOWREY

Left: Tabby teaching Taru about the role of a money counter. © NICOLE LOWREY

Above: Women presenting work from small discussion groups about the difference between spending money on needs versus wants. © NICOLE LOWREY

which costs SBD \$10 per passbook. Through training, women are encouraged to save their money, learn to budget for themselves and their family, and to think about beginning small-scale business opportunities through the small-loan component. To ensure any new businesses are in line with WWF's conservation and environmental goals, sustainability criteria for loans have been developed that must be met before a loan is granted to an individual.



DERIN'S STORY

DERIN KOTI is a part of Nusatuva Women's Savings Club. She managed to save SBD \$4000 (USD \$514) and took a loan of SBD \$500 (USD \$64) to start her own business last year. She bought a sewing machine and now makes women's dresses, skirts and blouses. She sells them across a number of villages, including Nusatuva, Ringi and Ilitona.

Derin has saved money and bought a sewing machine to make clothes to sell to surrounding villages. © NICOLE LOWREY



JULIE'S STORY

JULIE KORINI is a money counter with the GELCA Women's Savings Club in Gizo town. The savings club started in 2013 and she was appointed as a money counter in 2014. Her role as money counter is to physically count money that comes in and to check the individual women's passbooks to ensure the money balances out. She does this every Thursday fortnight.

Julie enjoys this role as she says she is helping other women in her community. Through the savings club, she was able to get a loan and receive business training, and has now set up a number of her own businesses. These include her own catering business, where she makes bean cakes and lemon juice, a broiler poultry farm, and dyeing sarongs to sell at the Gizo market. Her husband helps her with the businesses and has an active role in the poultry business. She says the savings clubs and businesses have helped her to save and pay for her children's school fees. She has two boys and one girl.

Julie works as a money counter for her savings club and has saved up enough money to set up a number of businesses. ©

NICOLE LOWREY



RIDGE TO REEF

WWF has partnered with The Nature Conservancy (TNC) and Ecological Solutions Solomon Islands (ESSI) in Ridge to Reef planning as part of its integrated, ecosystem approach to management. Ridge to reef planning was conducted with government staff and two community groups in Western Province; Kolombangara Island Biodiversity Conservation Association (KIBCA) and Gizo Environment and Livelihoods Conservation Association (GELCA), explaining the interconnections of ecosystems and how the activities occurring high in the ridge affect the reef below. The importance of conservation of terrestrial as well as coastal and marine environments was highlighted, and the benefits to communities in conserving biodiversity, securing livelihoods and ecosystem services, and building

resiliency against impacts of climate and other environmental changes. This workshop was facilitated by TNC and held on nearby Choiseul, looking at success stories from Choiseul and how best to undertake Ridge to Reef planning activities. Considerable interest was gauged in the concept and in participating in future participatory mapping workshops.

In the next phase, WWF ran community consultations in six local communities on Ghizo (Bimbolo, Saeraghi) and Kolombangara (Ghatere, Hunda, Kena, Vavanga) to communicate the proposed project and to determine community support and leadership. Awareness materials were produced and distributed, including radio announcements, posters and a newspaper article. WWF also produced a database of currently



Far left: Group photo of participants, WWF staff and ESSI facilitators. © NICOLE LOWREY

Left: GELCA and KIBCA representatives brainstorm ecosystem values and the services that ecosystems provide. © NICOLE LOWREY

available map data for future participatory planning mapping workshops (held by various organisations) and a plan of action for an implementation phase.

WWF is currently in the implementation phase of the project; a participatory mapping process. This phase aims to create maps for natural resource management planning, illustrating key ecological areas of high natural resource use and zones of potential environmental threat from resource extraction, climate change and population growth. After the mapping process, WWF will help facilitate the development of a Ridge to Reef Report with the Western Province Government, KIBCA and GELCA, to contribute to overall conservation management plans for Ghizo and Kolombangara Islands.

Ferguson Vaghi, head of KIBCA, has been fully engaged throughout the process with WWF. His goal with the work that KIBCA does is that “all

landowners fully understand what’s conservation and sustainable resource management”. On 21 February, a ‘train the trainer’ workshop, delivered by ESSI, was held in Gizo with six members from KIBCA and five from GELCA. They were trained to identify different ecosystems, recognise ecosystem values and potential issues and threats. Maps of Ghizo and Kolombangara islands were prepared and the two groups drew the important ecosystems onto the map of their island, including the key ecosystem services. During this session, WWF signed a service agreement with KIBCA to deliver Ridge to Reef training and mapping activities in Kolombangara communities. “We were also been supported in extending our communities knowledge base on Ridge to Reef,” says Ferguson. Participating members found the workshop to be a useful exercise and will now go back to train their own communities.



OUTCOMES ACHIEVED

Through awareness programmes on the overfishing issue and the Community-Based Fisheries Management (CBFM) approach, including the SPS method, we have expanded knowledge in coastal communities of the overfishing problem. Furthermore, the SPS method is recognised as a mechanism to commence CBFM with communities.

SPS training alongside awareness of overfishing has been provided to 110 people in four communities within the central Western Province region. Two of these communities have formally requested that WWF review their current Marine Protected Areas (MPA) Management Plans, and support them in developing CBFM-focused management plans. To date over 6,000 fish from over 220 species of fish have been measured, which is sufficient enough to develop assessments of stock status for 12 species of fish. This data has shown the fish are already below breeding levels needed to sustain the fish stocks for the 12 types of fish recorded. Communities can continue to monitor the status of their reefs using the SPS method, and utilise adaptive management strategies accordingly. We have also gained support and trust from the local fishers in the Gizo town and surrounding communities. The involvement of the Provincial Fisheries Officer in the SPS and CBFM trainings has amplified his understanding of the CBFM approach and the importance of the Provincial Fisheries role in a co-management approach. The drafting of an MOU with the Western Provincial Government is another achievement to fortify CBFM in the province and assist in building the government's capacity.

Though there were problems maintaining iFADs in the Western Province, for the time they were functioning, there was less fishing pressure on the reef and more pelagic fish were being caught. WWF has applied adaptive management principles to the work to transition fishing practices and is now in its second phase of the project, focusing on providing greater emphasis to monitoring, building staff and partner capacity, and improving integration of components. We are now shifting focus from the implementation of iFADs to taking on a catalysing

role, helping communities take ownership of constructing and deploying their iFADs. In 2016, WWF developed a manual for communities, outlining how to build and maintain an iFAD, and is helping communities apply to MFMR for equipment and funding. Hunda is one community currently applying for funding with MFMR. The iFADs are now just one of the management related options for communities within the CBFM framework. WWF has also helped establish a fishing association called the “Ghizo-Raru Local Fishers’ Association for Sustainable Fisheries”. With strong governance and leadership, the newly formed association will help to facilitate SPS, iFAD and financial inclusion work.

Financial inclusion workshops for women have had an extraordinary impact on livelihoods, with numerous women saving their earnings and some starting new businesses that have met environmental sustainability criteria. There are now a total of 742 women members across seven zones, having saved a total of SBD \$270,650 (USD \$34,765) and withdrawn a total of SBD \$125,659 (USD \$16,141). WWF is now focusing on training local women from the established women’s savings clubs to become trainers and conduct financial literacy, microfinance and small business training to new communities, and help to establish new savings clubs. Training of four local women was completed in February 2017, and three of the women helped conduct the financial literacy training with surrounding communities of Nusatuva in February 2017. Women came from seven villages to participate in training and by the end of the three-day workshop, three new savings clubs were established.

Ridge to Reef activities have been successful in increasing stakeholder knowledge of Ridge to Reef conservation planning. The goal of raising awareness on the need for a more holistic conservation approach, i.e. planning to conserve both marine and terrestrial biodiversity, including ecosystem services, was achieved. Community stakeholders have a greater understanding of how Ridge to Reef planning can help support food security and livelihoods, as well as improve the



SAVINGS CLUB QUICK FACTS

Total number of Savings Club members: **742 women**

Number of communities involved in the 7 Zones:
27 communities

Time since the Savings Clubs started (Nov 2013):
3 years, 5 months

Total savings: **SBD \$270,650 [USD \$34,765]**

Total withdrawals: **SBD \$125,659 [USD \$16,141]**

Number of loans: **150 loans**

Total amount loaned: **SBD \$110,845 [USD \$14,238]**

Total loan repayments: **SBD \$89,592 [USD \$11,508]**

Number of small business initiatives started:
120 business initiatives

Above: From left to right, Tabby, Dafisha, Rinda, Julie and Salome. WWF staff and three women from established savings clubs conducted training and helped women start new savings clubs in Kolombangara. © NICOLE LOWREY

health of their coastal reef resources. Activities facilitated by WWF increased capacity and support amongst Western Provincial Government staff, local associations (KIBCA, GELCA), and NGOs (Ecological Solutions SI, NRDF) for development of Ridge to Reef conservation plans for Kolombangara and Ghizo Islands. Data sets and information needed to support the analyses of threats and opportunities within the natural environments of Kolombangara and Ghizo Islands were identified for the participatory planning process. Based on lessons learned and discussions had with potential implementing partners, WWF and stakeholders are now better equipped to progress the implementation phase of a Ridge to Reef conservation strategy in Western Province.

A portrait of Gladys Fationa, an elderly woman with short, curly, light-colored hair. She is smiling slightly and looking towards the camera. She is wearing a patterned shirt with small floral designs. The background is a bright blue corrugated metal wall.

GLADYS' STORY

GLADYS FATIONA is the President of the Kolepuse Women's Savings Club (Zone number 5). She founded the club in 2014 after hearing stories about the savings clubs that WWF was setting up. She took the stories to women in her community, received great interest from the women, and attended a training course run by WWF. At this course, she learned how to save income from a business. She explained the concept of savings back to women in her community and set up a savings club with WWF's help. One of the most valuable lessons she says she has learned is to not spend money on anything unnecessary. She says the savings club works and is a safe way to save money, because the community all work together. No money has ever been stolen as a result.

Gladys has been encouraged to see women of all ages join the club; from the elders to mothers, young adults, teenagers and even children. One of the biggest challenges in setting up the club, she says, has surrounded the issue of transport for the women to attend and sell produce at markets, and to get to savings club meetings. When their local Member of Parliament heard about this issue though, he helped and donated a boat to the community.

Loans from the savings club are issued for a variety of reasons, and can be used for individual needs or to set up businesses. Women have set up businesses in her community selling market food, firewood and reef fish, thanks to the savings club. Loans have also been used to help fund roofing iron or water tanks for houses, and to help pay children's school fees. Gladys set up her own piggery business in 2012, where she would buy small piglets, fatten them up and sell them as adult pigs, keeping some breeding females for more piglets. She would often be able to sell a full-size pig for between SBD \$2000 and \$3000.

The club now has 101 women members. The men are happy as savings from the club help to pay children's school fees. Men will often plant crops and vegetables and look after growing the produce, and the women sell the produce and save the income received.



CHALLENGES FACED

Julie and Tabby waiting for a ride home after helping train women from other villages in financial literacy.

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PROJECT INTEGRATION

WWF is in the process of moving from multiple, discrete projects to an overall programme approach, where all projects are linked under the Sustainable Coastal Communities outcome. This has resulted in numerous challenges, such as a disconnect between some projects, and a lack of understanding about the linkages between projects and overarching strategies. For example, work to establish women's savings clubs has empowered hundreds of women and improved families' livelihoods, however, the integration with sustainable fisheries work did not happen as expected. It was originally intended that part of the savings from women's savings clubs would go into maintaining the iFADs, which in turn would be more productive for fishers. With the loss of numerous iFADs, this integration did not occur. WWF is aiming to better integrate the livelihood work by connecting the loan component of the savings club back to sustainability criteria and environmental outcomes. There have been similar integration issues with the CBFM and Ride to Reef work. Ridge to Reef takes an ecosystem approach to fisheries management and will lead to management plans being developed for whole islands and ecosystems. CBFM work is at the community level, with more detailed management plans to be developed for fish species, coral species, etc. Plans will be developed at two different scales, but little work has gone into how they connect at this time.

WWF RESOURCES

Internally, the WWF Solomon Islands office has had a tight budget and high turnover of staff in the last few years, and a loss of institutional and programme knowledge, and technical expertise. Two staff members were hired in 2015 and another two in 2016 to fill vacancies in the office. This has

slowed progress across some objectives, as staff were being trained and learning on the job. Some technical expertise has needed to be contracted out of the office, for example with Ecological Solutions Solomon Islands delivering the Ridge to Reef training. There is still currently no communications officer due to the tight budget constraints.

GOVERNMENT CAPACITY

With budget and staffing constraints across both national and provincial level governments, capacity to enforce fisheries regulations is somewhat limited. At the Western Provincial Government level, new fisheries staff have been hired and WWF has endeavored to build their capacity and knowledge of CBFM by inviting provincial staff to training and awareness activities for communities. We will continue to do so for future activities. We are also meeting with MFMR on a semi-regular basis to discuss progress going forward and aim to ensure both organisations are kept in the loop across all objectives, activities and outcomes.

COMPLEXITY

A major lesson learned through the WWF-Solomon Islands' programme is the complexity presented across the various projects. Where project objectives are easy to understand, the easier it is for communities to implement them. For example, applying size limits to the amount of seaweed that can be harvested and sold locally has worked well, as it has been easy to understand. Previous WWF work involved engaging two communities in management plans for potential Marine Protected Areas, but developing the management plans was a long, slow process as the complexity was hard

to relay to communities. With the SPS method, the extreme species diversity of fish species and multiple local names for the fish species limited the extent to which data could be gathered by community members. Stereo-video technology needed to be deployed for an expert outside the project to identify and measure fish. Additionally, the building, deployment and maintenance of iFADs has multiple layers of complexity. With a lack of widespread training, communities were unsure how to maintain the iFADs without outside help from WWF. This led to the bamboo structure of iFADs eroding over time and being damaged in storms. WWF has worked to break down this complexity by creating an iFAD manual with easy to understand language, instructions and a visual guide.

ALIGNMENT OF PRIORITIES

WWF has previously focused primarily on conservation objectives, and this can often be seen as in contrast to local communities' main priorities; food security and livelihoods. With better integration of programme objectives, WWF has worked to better meet communities' priorities. However, the priorities of one village or person may differ from that of surrounding villages and people. For example, there is ongoing tension on Kolombangara Island, with some villages advocating for logging to sustain their livelihoods, and others advocating for conservation and ecotourism. This has affected the uptake of activities such as Ridge to Reef awareness and planning. Additionally, communities with iFADs and SPS monitoring are motivated to protect their coastal resources, but the priorities of a few individuals in other villages differed and floaters and rope were cut, destroying the iFAD. WWF hopes to keep consulting widely to communicate the objectives of its work and to bring people together.

LEADERSHIP AND RESPONSIBILITIES

Strong leadership and clear delegation of responsibilities is needed to achieve our outcomes, and this has been lacking for some projects. Financial inclusion has been very successful, and this is in part due to the strong leadership within the WWF office, but also within the communities. Many women have stepped up to fill the President roles for their savings clubs, and responsibilities within those savings clubs have been clearly laid out for the leadership group and members. Responsibilities have also been made clear in Ridge to Reef work, where agreements have been signed with KIBCA and NECDA, and a number of members have been trained as trainers. There has been a lack of strong leadership in communities that had iFADs, and hence a lack of responsibility for building, maintenance and deployment of iFADs. WWF is working to improve this by taking a step back and facilitating to help communities build their own iFADs. The establishment of a fishers association will help move the responsibility for sustainable fishing from WWF back to the communities and the leadership group.

CULTURAL CONSIDERATIONS

WWF takes traditional and cultural considerations into account at all stages of the various projects, and this can often slow progress as time needs to be taken to understand these considerations. As we are working with communities to develop co-management approaches, their traditional governance, leadership and decision-making processes must also be taken into account when proposing management solutions. Communities have different cultural and traditional practices, and this is especially true of communities living in and around Ghizo Island which include local people, migrant communities from Malaita and nearby islands, Gilbertese communities, and expatriate communities. Where traditional village Chiefs are present, WWF builds relationships with them and helps drive work forward with their leadership. Land tenure or ownership is also taken into account, and WWF aims to consult with all the traditional owners of the land or marine resources. As women primarily sell the fish that are caught in the communities at the local markets, WWF adjusted its focus on sustainable fisheries to include the role that women play and targeted work to help relieve poverty alleviation and food security for women.



Ilitona village,
Kolombangara
Island.

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DUNCAN'S STORY

DUNCAN KENNY is the Chairman of NECDA. With help from WWF, NECDA was formed in 2007 and a Locally Managed Marine Area (LMMA) was started. Two weeks after its announcement, the 2007 tsunami occurred and a lot of the reef was lost, along with community houses. This caused the project to lapse. NECDA has been working hard since then. Tourism has helped with reef protection and NECDA has trained tour guides and rangers, on a volunteer basis.

Regarding the LMMA, Duncan believes it has “worked perfectly well”. Fishing was only allowed past 50m from the shore, and there are now lots of fish. Monitors work on a volunteer basis and help to monitor the sustainable use of the resources in the LMMA. The LMMA is still intact and management plans are in place. Duncan and NECDA's goal is to keep the LMMA for the benefit of future generations. Younger people can see the differences since 2007, compared to reefs of other communities, and are engaged with what's happening.

Duncan has met with the Provincial Minister for Fisheries before, who said he would help in principle but that there was no funding available or resources. He says WWF is the only organisation that has been able to give funding to NECDA. The LMMA tried to get legislative protection with the Solomon Islands Government and NECDA was sent the associated regulations. However, the LMMA could not be legislated as a Marine Protected Area (MPA) in 2012 due to the size of the proposed area, which was smaller than that deemed to be eligible for MPA status. Duncan says “we take ownership of ourselves”. NECDA looks after conservation, but also looks at agriculture, water and sanitation, and housing. Savings clubs that are being set up in the village and surrounding villages are helping NECDA look towards those goals.

COMMUNITY CAPACITY

Education is a limiting factor in regional communities, and a high amount of training and awareness raising is often needed to help build community capacity to implement project objectives. Training on the ground in the communities has built the capacity of community members to conduct SPS monitoring activities. Communities need to be aware of legislative rules, regulations and how government enforces them, if they are to help effectively move to co-management of their natural resources. Individuals also need to feel ownership over their resources and management responsibilities, and not to feel reliant on government or NGOs to take the majority of the responsibility. WWF is working on building knowledge and confidence in communities to help build their capacity to self-manage, but this hinges on communities wanting to play a bigger role in management of their resources. Communities may also want help and support, but proposed field visits by WWF often clash with their schedules and are postponed until a time and date can be agreed between all parties. This too can slow the progress of project outcomes.

LOGISTICS AND EQUIPMENT

Logistics is a major challenge in the Solomon Islands, as there are over 800 hundred islands that form the country and travel between them has to occur by boat. WWF is working with communities across multiple islands in the Western Province, and visits to the different communities must be planned well in advance to cater for boat and fuel needs, training materials, accommodation and food requirements, and weather constraints. If specific equipment is required or training material needs to be produced, it often needs to be sourced from Honiara, which can delay visits to communities further. Field visits are expensive, and the number of trips that can be planned in a year are also constrained by time and budget.



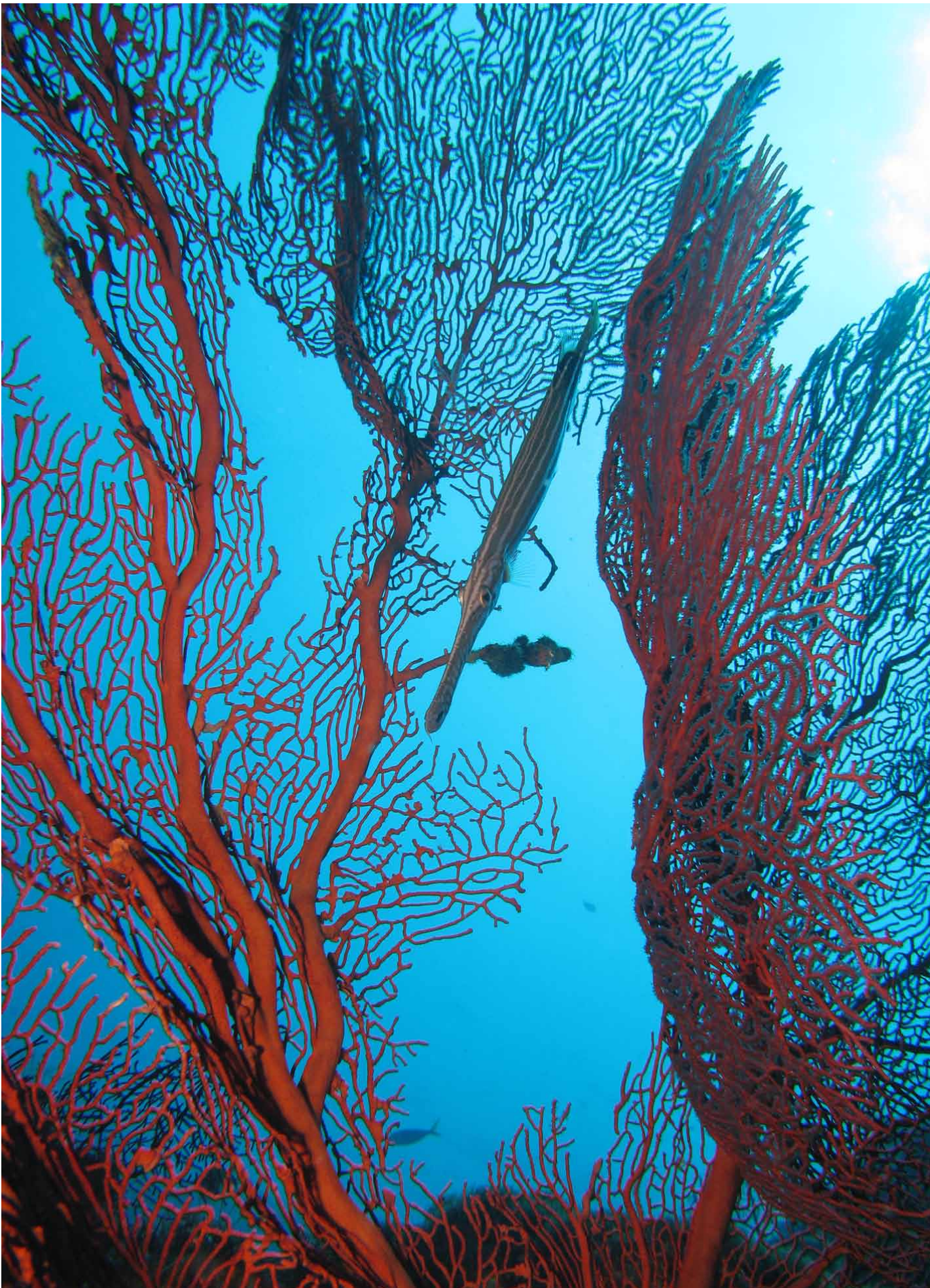
WAY FORWARD

The Sustainable Coastal Communities Programme has pulled together multiple projects aimed at ensuring sustainable fisheries, food security and livelihoods for local Solomon Islanders in the Western Province. While there have been some challenges regarding integration of the projects, the approach to combine social, environmental and economic benefits is helping to deliver long-term sustainable solutions to fisheries, ecosystems and livelihoods. WWF is looking to influence generational change, and is focusing on building community and institutional capacity so that reliance on NGOs can be minimised.

Recognising the challenges that have been faced, WWF is implementing solutions to improve work going forward. Knowledge is being shared within the office, with new staff being trained across numerous projects. Train the trainer programs are helping ensure knowledge is being passed on to community members, who in turn can train members of their own communities. Adaptive management is being applied, and lessons learned are being documented throughout project lifecycles.

In the next phase of our Sustainable Coastal Communities Programme, we aim to further empower women and engage communities and local government to address the structural and agential barriers to women's participation and leadership in the sustainable development and management of community-based coastal fisheries. We hope to expand the scope of the programme to other provinces in the future.

Two clownfish species swimming above an anemone. Bleaching is a potential threat to anemones as well as coral. © DAVID POWER



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**Why we are here**

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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