

PATHWAYS PROJECT

ACIAR FIS/2016/300

Outcome Report Card at 63% completion

OVERVIEW - The project titled ‘Strengthening and scaling community-based approaches to Pacific coastal fisheries management in support of the New Song’, or ‘Pathways’ for short, is a \$7.4m research and development investment supported by ACIAR and DFAT. It aims to strengthen the institutional structures, processes and capacity to implement and sustain national programs of community-based fisheries management (CBFM) in Kiribati, Solomon Islands and Vanuatu. Aligned with an overall focus on CBFM, the project focuses on the economic, social and gender equity dimensions of coastal fisheries and consumption of fish. Pathways is a collaboration between researchers and regional and national networks and agencies in support of their policy objectives. The project brings together the Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong, WorldFish, the Pacific Community, and fisheries line agencies for each project country – the Kiribati Ministry of Fisheries and Marine Resources Development, the Solomon Islands Ministry of Fisheries and Marine Resources, and the Vanuatu Fisheries Department.

This document lays out a summary of progress towards the Pathways’ end-of-project outcomes. The simplified reporting and separation from the ACIAR Annual Report template flow from recommendation of the independent Mid-term Review in 2019. The End-of-Project outcomes were refined in November 2019 to more clearly articulate the development outcomes that are expected to be achieved by the end of the project. As per the project document, progress is rated using the following system.

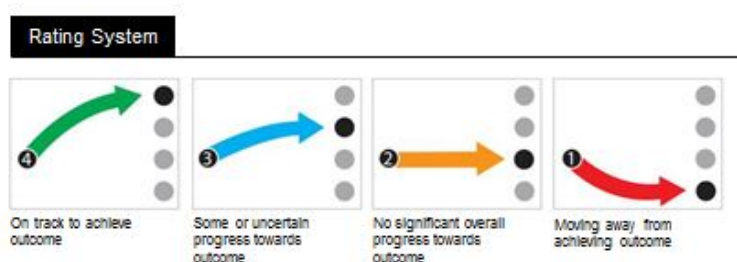


Figure 1. Results rating system

Development Outcome 1: National governments provide increased recognition and support for sustainable national and sub-national CBFM programs

Outcome 1.a. A long term, coherent and cohesive approach to strategic planning is evident in coastal fisheries agencies (KIR + VUT)



In 2019, we jointly facilitated consultations, development, and finalisation of National Coastal Fisheries roadmaps in Kiribati and Vanuatu, the first long-term strategies of their kind in both countries. To support translation and broad dissemination to key decision-makers, we developed 4-page summaries of the roadmaps in both Kiribati and Vanuatu which have been printed by SPC and distributed to donors (MFAT, FAO, World Bank, Japan Overseas Fishery Cooperation Foundation), in-country CBFM stakeholders and NGO partners, and other line Ministries. The Vanuatu Fisheries Department has prepared an implementation plan to operationalise phase 1 (years 1-3) of the Roadmap. In Kiribati, the Coastal Fisheries

Division is using the roadmap to guide donor funding and collaboration with other Ministries on important activities. The Director of Coastal Fisheries Division (CFD), Ms Tooreka Teemari, stated that, “The Roadmap is also used to guide donor partners and agencies in identifying areas or fisheries programs for support. CFD has already used the Roadmap to ensure some of the outcomes are achieved through funding support from Tobwan Wara, recurrent budget, Government support and other available donors that ready to support the programs.”



“The Fisheries Roadmap is an important document as it captures all the coastal fisheries programs including what are all the programs’ mandate under the Government of Kiribati KV20. It is important as it summarises the direction of the Fisheries Division within a 16 years period to try to achieve, a first for us.

And it provides an insight to other government ministries on our programs that require collaboration to achieve all our goals. Lastly, it assist donors to understand potential areas of funding/aid related to our overarching goals.”

Max Peter – Principal Fisheries Officer, CFD Tanaea

Figure 2. Max Peter – Principal Fisheries Officer, CFD Tanaea

Outcome 1.b. Integrated approach to CBFM across multiple sectors, national and subnational government, and stakeholders (KIR + VUT)



We worked to build the visibility and prominence of community-based approaches to national resource management, working in collaboration with and networking across government agencies and NGOs. On average, **80% of project activities were conducted in collaboration with one or more national agencies and/or other fisheries line agency units** (KIR = 84%; VUT = 75%). In Kiribati, there has been cross-sectoral support to coastal fisheries management through joint resourcing by the Attorney General’s Office and Ministry of Fisheries and Marine Resources Development (MFMRD) for a lawyer to work on the coastal fisheries regulations, as key legislation supporting CBFM. Vanuatu Fisheries Department held its first National CBFM Stakeholder Symposium in October 2019 with attendance from four Ministries and three NGOs.

In Solomon Islands, the forthcoming National CBFM Scaling Strategy has a section that makes specific reference to the livelihood diagnosis tool, “[A new idea for coastal fisheries](#)”. The application of this tool in the strategy is a recognition of the work that the project consortium has carried out in the intersecting space of improved management through CBFM and enhanced livelihoods.

Stories of change: Whole-of-government approach to CBRM in Kiribati



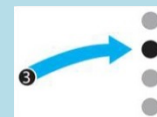
The Kiribati National Taskforce on CBRM, with secretarial support from the project-funded CBFM unit, met for the second time in August 2019, bringing together representatives of five Ministries and the Kiribati Tourism Board. A whole-of-government approach to CBRM means greater coordination of community-level activities. Although still in its infancy, Ministries now share proposed sites for work and joint teams from three Ministries have been sent to work in three islands so far.

“The Taskforce is useful in identifying areas of overlapping roles with Fisheries and other Ministries that also target communities in their past, current and on-going projects. The Taskforce is a platform for sharing information and identifying areas where CBFM [unit] can assist through their current and existing knowledge and approach to communities and to avoid conflict of roles through incentive and non-incentive programs that might demotivate the participation of the communities. Sharing of information is not always done well and the Taskforce can help us. The Taskforce has a potential to attract stakeholders’ interest in getting involved through integration of their programs that could be of beneficial to the communities.”

Tooreka Teemari, Director Coastal Fisheries Division

Figure 3. 2019 National Taskforce on CBRM meeting participants

Outcome 1.c. Increased ownership and investment by national fisheries agencies for CBFM / enabling environment created (KIR + SLB + VUT)



The project has engaged with national partners to contribute to strengthening the enabling environment for national CBFM programs at a pace and scale appropriate to each context. In Solomon Islands, where a Ministry CBRM unit already exists within the Inshore Fisheries Division, the project engaged early in driving the development of standard operating procedures (SOPs) for the CBFM unit at MFMR. This was important to have a structured approach for how to scale – contributing to deliberate mechanisms and capacity to support ambitions for scaling. From this foundational structural work the Ministry engaged with developing a scaling strategy, which is being published in 2020. The project worked with MFMR and MECDM as lead CBRM agencies to develop the national CBFM scaling plan. The scaling plan reflects national maturity in the CBFM enabling environment and the ambition to support growing numbers of communities implementing fisheries management.

In Kiribati, the CBFM unit is funded by the project and embedded in the Coastal Fisheries Division (CFD). In 2019, CFD resourced a staff member in the CBFM unit from their recurrent budget. Beia Nikari joined the team in January 2019 as a new USP graduate. He was trained by existing members of the CBFM team and

has led implementation of the project's fishery monitoring protocol in five sites across Kiribati. Furthermore, the CFD Director took ownership of the delivery of an integrated strategic plan for coastal fisheries. She built momentum behind the development of the roadmap and it was finalised within 6 months.

In Vanuatu, VFD has shown intention in institutionalizing a coastal fisheries division, although national plans to restructure VFD's organization have been delayed due to various broader structural delays (e.g. election in 2020, new mandates set by MALFFB and lags in administrative processing). This intention is evident in for example: (i) the operationalizing of the Roadmap into processes of departmental annual planning, (ii) allocation of new staff recruitments to the coastal fisheries sector activities (of 17 planned new recruitments for 2019/2020, in Q1 2020 nine were recruited for activities in the coastal fisheries sector) and (iii) the significantly higher investment in bolstering coastal fisheries production monitoring by the data section (previously focused on commercial fishing). The project has played a significant role in supporting all these developments.

Outcome 1.d. Increased capacity in CBFM among fisheries staff at national and sub national levels (KIR + SLB + VUT + REG)



The project has followed a model of in-practice training. Following an in-depth training delivered by the project team in Kiribati, Fisheries Extension Assistants (working for the Ministry of Environment, Land and Agriculture Division) and Fisheries Assistants (FA) trainees accompanied the team on 70% of activities in communities. Along with cementing the theory-based fisheries biology and CBFM information gained during the training, this method has worked to build FA trainees' confidence in working with communities as well as skills in facilitation. The CBFM unit has also trained four FA trainees in the project's fishery monitoring data collection protocols. The FA trainees initially accompanied the CBFM unit to undertake the work and through continuous training are now able to perform the activity independently.

In order to engage with the Solomon Islands Ministry of Fisheries and Marine Resources and build capacity for community-based management, Pathways has supported the secondment of a WorldFish staff member – Faye Siota – to the CBRM unit. Faye has operated as a team member of the CBRM unit in the Ministry. Management within the Inshore Division speak highly of the secondment arrangement, in particular, the benefits of the exchange of knowledge between NGO and government perspectives, and in building staff capacity in community engagement enabled through Faye's deep experience in working in communities with WorldFish.

In Vanuatu, there has been a marked improvement in the capacity, knowledge and resourcing of the CBFM team who are project staff, embedded within VFD. This resulted from training for team members in principles of CBFM and community facilitation (2018 and with repeated training in 2019 and 2020 for new recruits), research methodology (2019), gender (2018) and on-the-job training in the field. The team has disseminated those skills across the department by facilitating training through both peer-to-peer and expert-led modalities (community facilitation skills [2018], fish-based nutrition approaches [2008 and 2019], gender sensitive CBFM approaches [2020] and GIS mapping [2019]). All community-based work is by principle carried out in presence of either the provincial fisheries officer or the relevant authorised fisheries officer. The collaborative partnership with Wan Smolbag has further seen connections between VFD and civil society networks (like the Vanua Tai network) improve; evident for example in that all field activities explicitly include Vanua Tai community representatives where present.

Stories of change: From volunteer to future Fisheries Assistant in Kiribati



Rutiana was first recruited as a Fisheries Assistant (FA) trainee in 2018 through an open recruitment process. Before applying to become a FA trainee, since 2015 Rutiana had volunteered with the CBFM unit under PacFish. She assisted with data collection on gender. Rutiana really liked the work and decided to volunteer more of her time with the project. She reached out to the Director to be attached with the CBFM project during which time she learned about the CBFM work at the community level. She gained confidence to apply for a position at MFMRD and is getting her degree while doing her training. Once her training is completed, Rutiana will be assigned as the sole FA to an island in Kiribati.

Rutiana says that she is well aware of the CBFM work and she feels confident in assisting with CBFM activities at the community level. She is also very happy to have been trained in catch monitoring data collection and was a data enumerator in two sites in Kiribati in 2019.

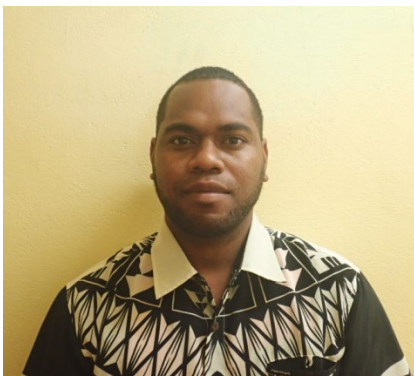
Figure 4. Rutiana – Fisheries Assistant Trainee

Outcome 1.e. Increased capacity in CBFM among project staff (KIR + SLB + VUT)



Pathways has organised a number of in-house trainings aimed at project staff. Topics include gender and social inclusion, research methods, interviews and questionnaire design, catch monitoring data collection and analysis. Further in-country training has benefited from Pacific-to-Pacific exchange of expertise. For instance, a recent gender training aimed at VFD staff (including CBFM project staff) and a nutrition awareness training were both delivered in Vanuatu by Pacific Islander staff. The modality of the Pathways approach does not only rely on traditional modes of training delivery, for example, where staff are lectured. On-the-job training and associated on-request support from the Pathways team in Wollongong have allowed in-country project staff to gain knowledge and skills which go beyond CBFM. For instance, the country co-leader model with a country leader based in Wollongong and one in the partner country has allowed in-country leads to gain exposure to government processes, HR processes, to improve their project management and financial record keeping skills. Other skills include team work, the ability to train others and to collaboratively write reports and scientific articles.

Stories of change: Increased capacity to undertake CBFM data collection and train others



Eight MFMRD and VFD staff participated in training on the Pathways fishery monitoring protocol at the University of Wollongong in June 2019, one being Abel Sami. Abel returned to VFD and organised and implemented a training program for 10 community monitors and 10 VFD observers to collect catch data from fishers in their home locations. He oversaw Round 1 data collection in five locations in October and November 2019. Data are now being analysed by Abel and the team, and are already showing interesting and surprising results. These data are the first point in evidencing the ecological benefits of CBFM. Since then Abel has been called in by other VFD divisions to run trainings and provide technical assistance in designing and implementing data collection activities by the department.

Figure 5. Abel Sami – CBFM Project Officer, VFD Port Vila

Development Outcome 2: CBFM is effectively scaled out in Kiribati, Solomon Islands and Vanuatu

Outcome 2.a. Increase in communities implementing CBFM principles (KIR + SLB + VUT)



Pathways and its precursor projects have engaged with 134 communities and established new fisheries management plans in 45 with a further 18 under development. In the final 12 months, Pathways will employ two key surveys to measure progress towards this outcome. Firstly, a CBFM Plan Review will take a 'deep-dive' into how management plans are going in select project sites – are they being implemented, what's working, what's not, does the plan need revising, how can the plan be supported in future? Secondly, a scaling survey will measure CBFM uptake not only in project sites where we have directly engaged, but also a sample of surrounding sites where community-to-community 'organic' diffusion may have taken place, or where communities may have started implementing CBFM principles based on a radio segment they heard (part of the scaling strategy in Kiribati and Vanuatu).

In Kiribati, the team is not only working with Pathways communities but has established partnerships with other partners such as the UNDP-GEF funded project (LDCF) and the MFAT institutional strengthening programs. Pathways project leverages these partnerships to reach more islands in the Gilbert group. The Pathways CBFM team has trained Fisheries Extension Assistants (FEA) based in three LDCF islands to conduct initial awareness with communities on CBFM. In Abemama, following an awareness session, the Island Council reached out to request a visit from the CBFM team. The team visited once to provide more detailed information about CBFM and fisheries management. One of the communities, Abatiku, was very interested and clearly had already discussed setting up management rules. On a second visit, the Pathways team found that Abatiku community members had independently drafted a vision and ideas for their coastal fisheries management plan. Some of the rules of the first draft of their management plans were immediately put into action (e.g. cleaning the shore, ban on small mesh size nets) while elections of a CBFM committee was carried out to celebrate the finalisation of the management plan.

In Solomon Islands, the strengthening of the national CBFM program of work supported provincial-level efforts. Initially this focused in Malaita where WorldFish had an established program. In late 2018, scaling efforts expanded to Isabel province through WorldFish seconded staff, Faye Siota, who was tasked within the Ministry as the contact person for CBFM in Isabel. Previous generations of the project had been unsuccessful in CBRM engagements in Isabel province. Faye's work in the province led to a growth in number of communities engaging with the CBFM process, and, importantly, engagement with the Isabel Provincial Fisheries Officer. The PFO has since requested further support to engage in awareness raising activities at a larger scale. Four new communities have requested support since first engagement in Isabel.

In Vanuatu, calls for information and support by civil society linked to Pathways activities has seen a marked increase. Firstly, following the rollout of the CBFM play 'Twist Mo Spin', VFD received phone enquiries about information on *tabu erias* and fisheries management which prior to that had not occurred. Secondly, there are two recent instances of note whereby communities with CBFM plans have reached out to VFD for technical assistance or advice as part of their management activities, as illustrated in the follow two stories.

Stories of change: Kwamera CBFM plan implementation



In February 2020 the community of Kwamera contacted VFD following observation of a sea urchin outbreak in their *tabu eria* since implementing fishing restrictions in 2019. Technical advice about the ecology and management of sea urchin was provided for the *tabu eria* committee to develop their own plan for eradication. Their plan was discussed and approved in subsequent phone calls. Periodic updates will indicate whether there is decrease in sea urchins by anecdotal observation and followed up on subsequent visits to the community by the Pathways team and the provincial fisheries officer.

Figure 6. Kwamera community members

Stories of change: Aniwa *tabu eria* management plan implementation



The communities on Aniwa island have twice contacted VFD in early 2020 with regards to requesting advice for *tabu eria* openings. In March 2020, VFD was informed by the communities of their intention to open their *tabu eria* following the death of a chief in Imatu. All the island's *tabu erias* were opened for one day to allow fishing with handline, diving and bamboo fishing only. This was to provide fish for the funeral ceremonies. In April 2020 VFD was contacted once again for advice regarding the intention to open *tabu erias* of two of the three communities and on particular measures to consider in those openings. This second opening was required following restrictions on travel to Tanna due to COVID-19 government regulations, effectively stopping trade and food purchases for people on Aniwa. The *tabu erias* were opened for two weeks, before easing of travel allowed people to travel to Tanna again and only bamboo fishing and diving were permitted.

Figure 7. Imatu *tabu eria* billboard

Outcome 2.b. CBFM contributes to social, economic and ecological benefits in communities (KIR + SLB + VUT)



We have a number of data collection efforts underway to rigorously measure the benefits of CBFM in communities. We have anecdotal and qualitative evidence of more diverse captures and improved availability of key species in project sites. A time series of quantitative measures in Kiribati and Vanuatu have been developed but it is too early to quantify trends in captures or catch rates. At this point, we have undertaken 329 qualitative surveys and 455 quantitative surveys, and recorded 454 catch photos of a total 7,893 fish, of 313 species, with a total of 2,997kg of catch recorded over 10 sites in Kiribati and Vanuatu. The Pacific Panel Study measures a range of possible metrics of well-being, including key rankings on perceptions of asset ownership, personal health and security. Baselines are currently being summarized and a follow-up round to measure change will be implemented in late 2020. The CBFM Plan Review in 2020 will also yield a deeper understanding of the social and economic benefits of CBFM in select communities.

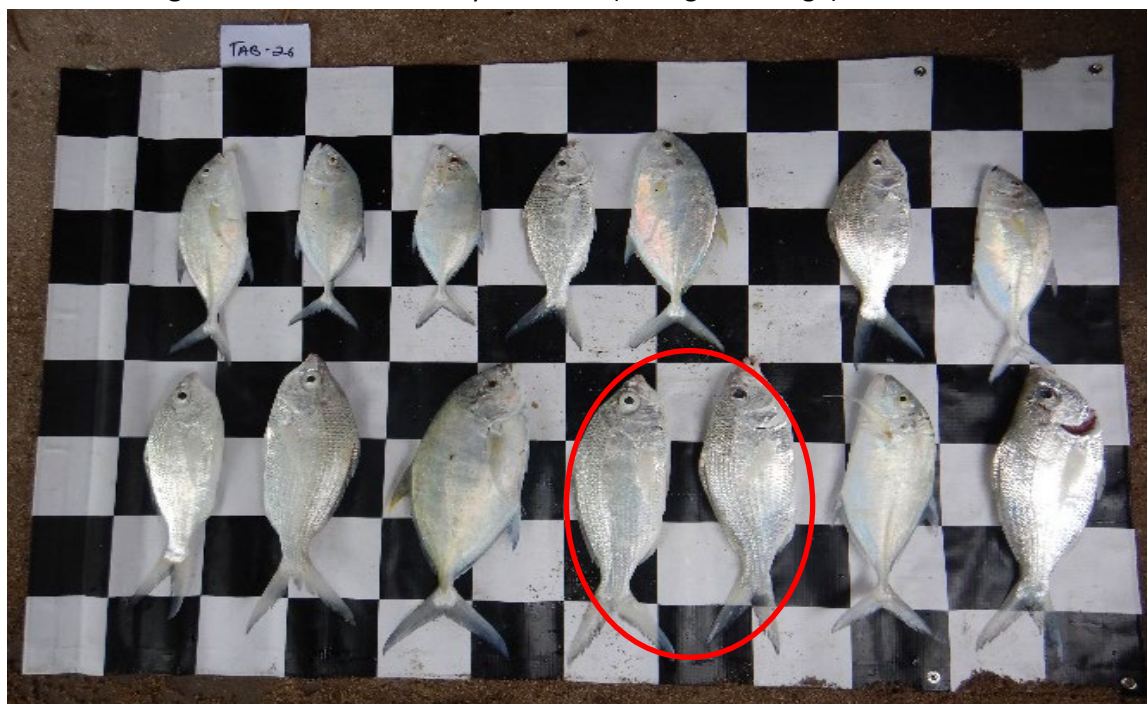
Stories of change: Reappearance of the tusk fish in Vanuatu (ecological change)



In Vanuatu, the Peskarus CBFM plan has been in operation since 2017, under PacFish. We implemented the Pathways fishery monitoring protocol in September 2019. Local community members gathered around the team collecting catch data from a fisher who had been out on the reef fishing ground, adjacent to the tabu area managed under the CBFM plan. One fisher in the crowd noticed one species – a tusk fish (wrasse) – that he hadn't seen for the past 10 years. "Today I am so happy to see one with a good size in the catch. I believe with the help of the CBFM plan, we slowly have the species coming back".

Figure 8. Catch monitoring digital photo data from Peskarus, Vanuatu. Photo credit: Abel Sami

Stories of change: Increase in silver biddy in Kiribati (ecological change)



In Kiribati, the Tabonibara CBFM plan has been in operation since 2015, under PacFish. We implemented the Pathways fishery monitoring protocol in September 2019.

“The ability of community members to recognise the benefits of their management rules first hand strengthens and empowers villagers to look after their marine resources”, *Beia, catch monitoring coordinator*

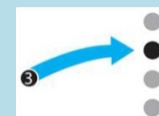
While the CBFM team was collecting catch data, team members regularly updated the communities and their leaders about what they could immediately see. For example, one of the biggest concerns of the community in 2015 was the status of silver biddy in the lagoon. The catch monitoring team reported that the average size of silver biddy harvested in Tabonibara far exceeded the fish size limit in the new Coastal Fisheries Regulations (min. 15cm fork length).

“It is great to see, people now can harvest silver biddy in great numbers and in healthy size in the lagoon not like in the past where everyone only harvests it during spawning season to get the most of it.” *Beia, catch monitoring coordinator*

Fishers from the neighbouring village of Marenanuuka also reported that they’ve witnessed the number and size of silver biddies increasing in the lagoon and showed appreciation towards the people of Tabonibara for their efforts.

Figure 9. Catch monitoring digital photo data from Tabonibara, Kiribati. Photo credit: Beia Nikari

Outcome 2.c. Regional information sharing and capacity development in CBFM (KIR + SLB + VUT + REG)



We supported the second annual FishSMARD (Sustainable Management Approaches and Research Development for Fish) meeting. FishSMARD binds together a network of fisheries practitioners in the Pacific who are working to improve community-based fisheries management. It is an initiative to improve peer-to-peer dialogue, learning exchange and skills development. What sets FishSMARD apart from other such groups is that it is “by and for professional peers in the Pacific”. The 2019 meeting in Port Vila was a first of its kind, and saw fisheries officers from Kiribati and Solomon Islands engage with VFD staff. It provided opportunity for VFD staff from other units to not only learn from other countries, but also input into dialogues about how best to implement coastal fisheries management in their province or area.

Development Outcome 3: Opportunities, viability and performance of livelihoods in support of CBFM initiatives are improved

Outcome 3.a. A participatory approach to livelihoods with practical tools available for partners to take to scale (KIR + SLB + VUT + REG)



Our approach to community-driven development, as an alternative to top-down ‘blueprint’ approaches, is based on participatory processes in which communities identify their problems and needs, mobilise resources and take collective action. It starts with asking the right questions of the right people to enhance coastal livelihoods. Pathways, in collaboration with Swedbio, has tested this approach with women’s groups in West Are’are, Solomon Islands. Following a participatory livelihood assessment process using [a tool](#) we developed, [women’s groups](#) in 12 sites operate solar-power freezers to store fish and other food products. The results demonstrate that women groups can operate a profitable and inclusive community-based enterprise by renting out freezer space. These community-based enterprises generate income and improve food security, benefiting more people for a fraction of the cost of a fisheries center, as a typical ‘blueprint’ development investment in coastal communities in the Solomon Islands. Our tested, participatory approach, using the livelihood assessment tool, offers an alternative package for fisheries agencies or other development partners to invest in on a national scale.

Outcome 3.b. A participatory CBFM approach is used in livelihoods/rural development sector and support programs (KIR + SLB + VUT)



Governments and their development partners are continuing to seek ways to support rural development. The project has shown that it is possible to seek lighter touches of development support with technologies that seem more suited to the scale and way in which people live their lives. Provincial government staff members that participate in project activities have also benefited from the process, as exemplified by this quote from Malaita Provincial Fisheries Officer Matthew Ishihanua:

“I have learned a lot from this project about how to implement and monitor community projects.”

The modality of working in the project and the impacts that it is achieving are resonating across sectors and agencies with strong awareness among national government agencies about project activities. A deliberate approach to reaching higher levels of government and regional agencies has come through the publication of materials that translate and make learning broadly available.

In Vanuatu, Pathways, together with other bilateral programs running in VFD (notably JICA Grace of the Seas), have cemented CBFM as a primary mode of achieving decentralized coastal fisheries management. For example, VFD’s data management unit has taken up participatory methods of data collection which were developed and piloted by the Pathways team. Over a 3-month period in 2019, fish coming in and going out of community solar freezers were logged in selected project CBFM sites. Results were presented to the data management team, which then led to plans for roll out of the freezer log sheets across all sites with VFD solar freezers. The rollout sees data collected by local community enumerators and results reported back to communities periodically.

In Kiribati, the Pathways CBFM unit is seen as community engagement ‘experts’. The Coastal Fisheries Division aquaculture unit had provided milkfish fries and sandfish larvae throughout the Gilbert Island

group at communities' request. Subsequently, reports of poaching by community members confounded the unit. They reached out to the Pathways CBFM team, who suggested that a participatory CBFM approach would assist in uncovering tensions or disputes within the community and its neighbours that lead to poaching as well as developing processes to deal with poaching events. The CBFM unit provided information and training on community consultation and facilitation methods which the aquaculture unit has now incorporated in their work.

Outcome 3.c. Improved livelihoods in select project communities (SLB + VUT)



In total, there are now 12 women's groups operating enterprises around the solar freezers. The last record of freezers performance and activity was conducted in April 2020. At this time 656 unique customers had used the freezer; indicating a broad use among community members; the committees had saved 42,214 SBD (~5140 USD 2020/04/22), the value of two freezers; 2784 kg of fish had been stored in the freezer, whereof most were tuna species.

In Vanuatu, the livelihood assessment guide has been implemented in seven sites after which follow-up activities were implemented such as fish preservation workshops and support to start up a fish bottling enterprise with one community's women's collective. In 2020, we will continue to monitor and engage in one livelihood intervention – a fish distribution venture and collective fish market in Sara.

Stories of change: Sara cooperative fish market



In Vanuatu, the project facilitated the establishment of a fish distribution market through a local community-cooperative in Sara (Santo). This was the result of a livelihood diagnosis process carried out 2018, which identified a need for more fish consumption in Sara given that all fish caught on the coast is normally transferred straight to Luganville for trade. In addition, this was seen as an opportunity to reenergise an existing cooperative group which over time had lost drive and members. So we worked with the Department of Cooperatives to develop a 2-week training and amended the curriculum by adding a fish component to cooperative structures. Following the training, the cooperative in Sara was given two start-up donations (5000 Vt from Pathways and 20 000 Vt from the Department of Cooperatives), which were unexpectedly topped with small donations from local leaders.

These were all used to organize fundraising activities which brought their start-up fund to 33 000 Vt. The cooperative built the fish market and bought a scale and dishes (the solar panels and freezer were provided by Pathways). Since its establishment, the cooperative has consistently bought fish from neighbouring coastal fishing villages. Monitoring of sales is maintained through a national freezer logging program that traces fish coming in and going out of the freezer, and this has shown consistent flow of fish into Sara. Furthermore, the cooperative has registered members in the community as shareholders, and in the first weeks following the set up the member base grew to 33 members (from a previous stagnation at 20). Dividends will be paid out at the end of each year, where shares are based on how much each member spends at the cooperative market. Most recently when TC Harold hit Santo in April 2020, the cooperative team took proactive action in removing and then reinstalling solar panels and freezers to protect them from the storm. As such, no damage or loss of fish was reported, so that importantly operations continued in the wake of the TC Harold when agriculture production was limited.

Figure 10. Training in solar freezer monitoring underway in Sara, Vanuatu Photo credit: Dirk Steenbergen

In Kiribati the project is not implementing a full fish-based livelihood intervention. Nonetheless, the Pathways CBFM unit has been a conduit to growing alternative livelihoods activities. In Marakei, Tekuanga village requested assistance of the CBFM team in 2017 during PacFish and finalised its management plan at

the end of 2017 during Pathways. The plan has been in operation since then. The community was concerned about the impacts their management efforts could have on their income and discussed the possibility of working together to build a milkfish pond. The CBFM team reached out to the aquaculture unit who provided advice and milkfish larvae. The community members built the pond, maintained it and monitored any poaching. In 2019, the community harvested their milkfish and started selling them to all the other villages in Marakei. The village made approximately AU\$5,000 from the sales. The money was deposited into the village's bank account. *"Our sincere thanks to Nei Tengarengare for assisting us in establishing out milkfish pond and our management plan which as a result benefited the community after 3 years of implementation"*, Unimane (male elder), Tekuanga.

Development Outcome 4: Increase social and gender equity in coastal fisheries governance, utilisation and benefit distribution

Outcome 4.a. Gender sensitive and transformative approaches to CBFM are developed that can be taken to scale (KIR + SLB + VUT + REG)



The Pathways approach integrates gender into all objectives of the project and innovates new tools to assess then improve CBFM inclusion. Our approach recognises that the knowledge, views, and objectives of all people who use fisheries need to be included for CBFM to be effective.

Integration has taken the form of including sex-disaggregated data, or gender reflexive data, as a baseline for quality research and development. In practice this has been done through updating project field trip report templates to include questions that document gender sensitive methods used by project staff while in communities, and reflexivity on how gender is shaping project outreach. This has been further supported by [a tool](#) published to help facilitators use, reflect on, and adapt gender-inclusive strategies in their work with communities.

To further support the integration of gender, the Pathways project has facilitated a series of trainings and associated training facilitator's guide to increase the capacity of local staff to engage in gender research. These trainings were specifically tailored to the needs of the fisheries officers and reflected findings from previous Pathways governance research (see Lawless et al, Gender equality is diluted in strategies for small-scale fisheries [in review, Fish and Fisheries] and also the Pacific Community-led [Pacific Handbook for gender equity and social inclusion in coastal fisheries and aquaculture](#) which Pathways contributed to.

Targeted research is currently underway to inform a set of tools and research framework to assess inclusion in CBFM processes and to determine which groups may be more vulnerable to exclusion. This work included a quantitative survey with some measures of empowerment, a semi-structured interview, and gathering data on aspects of the communities themselves. Further qualitative validation and triangulation in communities will complete this initial work. Findings will inform future engagement with communities, with the aim to improve feedback on inclusion to communities as they review their CBFM plans in the coming year.

Outcome 4.b. Project implementation is gender sensitive (KIR + SLB + VUT)



Gender inclusive facilitation methods are now mainstreamed into all community activities following training of project staff in December 2018. Overall, women make up over 40% of participants across all in-

country activities. 61% of written project outputs include gender and fisheries. Community-level project activities use gender sensitive facilitation techniques, such as making the meeting time available for women and men, allowing children in the meeting, having single-sex group work, and active facilitation of less vocal groups. These are reported in trip reports.

Stories of change: Inclusive facilitation techniques in practice



In Ukiangiang, a village in Butaritari Island in Kiribati, the village leaders were keen to protect their coastal fisheries. Some of the other villages on the island had newly launched community marine protected areas and the Ukiangiang village leaders were eager to use a similar approach to ensure the sustainable use of their coastal resources. They decided to create a marine protected area that was permanently closed to fishing, and included a major part of the sand flats and inshore reefs in the vicinity of the village. As a consequence, many women and youth were forced to walk further to access these habitats. Men without boats were also negatively impacted as they could no longer access their fishing grounds. As a result, many men without boats did not comply with the rules. The CBFM unit worked with the leaders of the village to widen the participation of other members of their community. Following meetings with various groups in Ukiangiang, the community marine protected areas boundaries are being revised.

Figure 11. Women’s focus group in Butaritari

In Solomon Islands, for the 80 activities in communities for which gender is recorded by WorldFish staff during 2017 - 1 January 2020, 53% of participants were women and 47% of participants were men. This suggests equitable attendance at information sessions about CBFM among men and women, and participation of men and women in activities WorldFish facilitated or attended on decision-making about CBFM.

However, some activities do not have gender segregated data. Recording of gender was not done in 13% of all activities (n=80), and it was observed that this largely occurred due to three reasons: activities organised by partners such as provincial governments often meant gender data was not recorded by WorldFish staff, activities where numbers of participants were large (e.g. public events in urban areas) and project activities which were about fishing rather than community management (e.g. FAD-related activities) did not collect gender data. Further communication with provincial governments and fisheries staff to request gender participation data on *all* activities could be valuable to track participation in as many activities as possible.

Stories of change: Fishery monitoring for all



Coastal fisheries research is often gender blind. It tends to focus on men's fishing activities, such as boat and offshore fishing, while overlooking other critical fishing and value chain activities, such as gleaning and processing, that tend to be carried out by women in the Pacific. Results perpetuate the idea that fishing is what men do and reinforces the assumption that there is no need to include women in fisheries decisions (Kleiber et al 2019).

The Pathways fishery monitoring protocol implemented in Kiribati and Vanuatu is 'gender integrated'. In practice this means that we collect catch data from *all* fishers including 'gleaners' (most often women and youth) who fish the intertidal zone and collect a large portion of invertebrates. Reporting their catch is important because it is largely destined for household consumption, and therefore has nutritional impact at the household level. In 2020 we will report our data to national agencies. It will be the first time invertebrates are included in coastal fisheries data in both countries. We hope it will reinforce women's contribution to coastal fisheries and that their voices, concerns and solutions should be heard in fisheries management and decision-making.

Figure 12. Catch monitoring digital photo data from Kiribati. Photo credit: Beia Nikari

Outcome 4.c. Increased national level commitment towards gender and social inclusion (KIR + VUT)



Coastal fisheries divisions in both Kiribati and Vanuatu have made a national commitment in their national roadmaps to broad social inclusion to minimise, for example, gender-based marginalisation. As the first strategic planning documents of their kind in both countries, this is an important achievement, with clear messaging around requirements for gender integration in implementation flowing out of these plans.

In February 2020 Pathways supported the Vanuatu Fisheries Department to host the first Gender and Social Inclusion workshop. Both VFD staff and other stakeholders came together to share ideas and learn about gender sensitive facilitation techniques to be used in the office and in communities, so that all voices are heard. The Department's support of this workshop demonstrates increased national level commitment towards gender and social inclusion. The Kiribati Ministry of Fisheries and Marine Resources Development will also hold a similar workshop in 2020.

Outcome 4.d. Increased capacity among fisheries staff to consider gender and social inclusion in their work (KIR + SLB + VUT)



Pathways has facilitated gender training in Solomon Islands and Vanuatu, aimed to raise capacity for gender integration amongst Pacific fisheries practitioners. Increasing capacity was done through the training materials, but also by inviting local gender experts, to increase local connections between the gender and fisheries practitioners. We assessed the short-term uptake of the gender training through

gender attitude survey before and after the training. Overall gender attitudes were more progressive after the training for both women and men, although women started with more progressive attitudes. This may have been especially true in the Vanuatu training because many of the women participants were practitioners from the gender and development field. These gender attitudes surveys provide a quick snapshot result, and will be followed up in six months with follow up qualitative questions about the integration of gender.

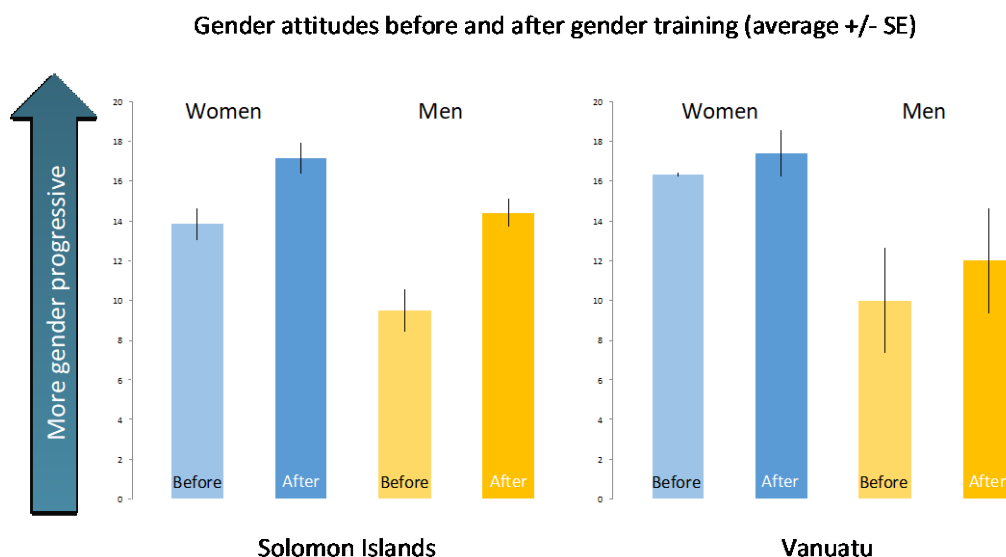


Figure 13. Average gender attitudes were more progressive following the training. The questions were slightly different for the Solomon Islands and Vanuatu training, so the two should not be compared.

Stories of change: Becoming a gender leader in Solomon Islands



“I first starting working as the gender focal researcher in WorldFish in 2019, with very little experience in gender research. Throughout the year, I learnt a lot from my colleagues and from fellow gender experts what it meant to integrate gender the work that we do especially when working in communities. Working in this role has provided opportunities to write and publish gender related work. Last year, I have carried out my first gender strategic research using photovoice which was published on International Women’s Day this year in the SPC Women and Fisheries Bulletin. This allowed me to not only sharpen my research design skills, but also exploring other participatory methods which is useful for community engagement and reflection.”

The opportunity to lead gender research in Solomon Islands has equipped me for other roles such as being the National focal point for the Coral Triangle Initiative Women leader’s forum that has enabled me to work with women, and men who are working in leadership roles in the marine, and environmental sector in Solomon Islands. Using the experience in WorldFish, I have co-facilitated gender trainings in Solomon Islands, and recently in Vanuatu. These trainings offered an insight into the work that relevant stakeholders are doing in their countries, but also an opportunity to learn and listen to stories from the men, and women themselves. I believe wearing the gender sensitive hat, should be everyone’s responsibility. We live in a world that is changing rapidly, but if we are going to change the world we live in, we have to change ourselves. And that means changing the way we think about men, women, and youth in our societies.”

Chelcia Gomes, WorldFish Solomon Islands

Figure 14. Chelcia Gomes leading research data collection with a photovoice participant

Outcome 4.e. Increase in inclusive CBRM practice at the community level (SLB)



Targeted research was conducted in Solomon Islands in 2019 on who and how people are included in the CBFM processes ('participatory exclusions' research). This research addresses issues of inclusion in CBFM in the Pacific, with particular attention to gender. The data forms a baseline in 11 locations in Malaita and Western Province, with 660 participants (331 M / 329 F). Data are currently being analysed and summarised. In 2020, the CBFM Plan Review will evaluate levels of inclusivity in participation, and measure any change in the intervening year.

Research in one community in Western Province, Solomon Islands was conducted using the PhotoVoice method to bring light to women's and men's roles in fisheries, led by Solomon Islands WorldFish staffer Chelcia Gomes. 275 photos were captured by 6 participants (3 M/3 F). Results were published in the [SPC Women in Fisheries Information Bulletin](#). This innovative method was found effective, but more useful to triangulate other research on gender, community-based resource management or fisheries.

Some data from the Solomon Islands is showing evidence of inclusivity at the community level. 94% of CBFM community associations for which Pathways has information on (n. = 18) have women representatives, although the majority of these (n. = 13) have minority female representation. Data about men and women in leadership roles is not as readily available as membership data, but around one third of committees reported women in leadership roles of Chair, Vice Chair, Treasurer or Secretary. All committees that had equal male and female or all female membership had women in leadership roles suggesting membership does influence leadership, although 30% of minority female membership committees also had at least one female in a leadership role. The most common leadership role for women in the CBFM committees is Treasurer.

Development Outcome 5: Promote food and nutrition security in the Pacific food system through CBFM

Outcome 5.a. Approaches to nutrition behaviour change for CBFM communities and national and regional policy development are developed that can be taken to scale (KIR + SLB + VUT + REG)



Pathways has built a suite of tools and new information aimed to help communities and the national agencies supporting those communities to incorporate fish into their diet to address the burden of malnutrition (undernutrition, overweight/obesity) in the Pacific region, particularly for Solomon Islands and Vanuatu. This package includes diagnostic tools, informational materials, and a training of trainers package.

The two main tools at the community-level include a nutrition diagnosis and the dietary diversity tools. The tools were pilot tested and validated by researchers in 2018. The **nutrition diagnosis** takes place in a community over a number of days through a series of focus group discussions. It is aimed at understanding the ways fish are caught, processed (for sale and for household use), and cooked by households; the level of nutrition knowledge and attitudes in the community; and community perceptions on constraints and opportunities to improve nutrition. The diagnosis phase in Pathways was used to inform **behaviour change communication products** (informational posters in Bislama and a DVD in Vanuatu). These products will be further tested during an intervention in two sites in Vanuatu. VFD staff have received training in using these

products during general CBFM community awareness sessions and have reported that they've received positive feedback from participants.

The **dietary diversity tool**, using 24-hour recall on food consumption and food frequency, is both a measure of nutrient intake and a means of monitoring and evaluating intervention outcomes. The diagnosis and dietary diversity tools are currently being used in 3 sites in Solomon Islands that form part of the solar freezer livelihoods intervention, to measure change in diets and nutrition. Baselines are complete and endline data collection is set for late 2020.

A **Training of Trainers package** is currently in development aimed at training national fisheries and health agency staff to be able to raise awareness and knowledge in communities around fish for good health.

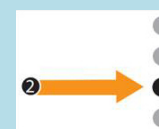
Outcome 5.b. Improved integration of approaches to CBFM and nutrition security at the national level and among selected intervention communities (KIR + SLB + VUT)



At the national level, in the three project countries, there is evidence of integration of fish in nutrition policy and planning dialogues and in nutrition in fisheries planning. In Kiribati, the Ministry of Health is participating in the CBRM Taskforce that Pathways staff have twice facilitated. In Vanuatu, nutrition is now included in VFD annual business planning. Furthermore, collaboration with Ministry of Health has increased, with representatives now participating in VFD's annual national CBFM stakeholder forum and the Pathways-facilitated nutrition trainings, and with continued co-development of information material (e.g. nutrition video and translation of nutrition posters). In Solomon Islands, the WorldFish nutritionist and Fisheries staff have participated in the steering committee for development of the Food and Nutrition Security Policy being spearheaded by FAO.

At the community level, nutrition diagnosis and dietary diversity baselines have been completed in 5 sites in Solomon Islands and 2 sites in Vanuatu. Improved use of fish for nutrition will be assessed at endline in Q3/Q4 2020 in Solomon Islands.

Outcome 5.c. Project and national government fisheries staff have increased capacity to integrate food and nutrition in their work (KIR + SLB + VUT)



Training completed for 18 participants from VFD, Agriculture, Health, Wan SmolBag, and JICA in Q2 2019 on nutrition approaches and how to collect nutrition information, and use of behavioural change communication materials (The First 1000 days and Benefits of fish posters, and the nutrition DVD). Activities planned for Q2 2020 have been modified, deferred or terminated as part of the project's adaptation to COVID-19 related domestic travel restrictions.