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National assessment and planning for improved fish handling in Solomon Islands

In partnership with



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1. Background

Fish handling refers to the practices, infrastructure and innovations that determine the quality and safety of aquatic foods, influence livelihoods and affect waste and loss. Initiatives that focus on improving or enhancing fish handling can result in better quality aquatic foods that are safer to eat, opportunities for increased income and availability of nutritious foods, and less waste and loss associated with the inshore fisheries sector.

In Solomon Islands, the country's Ministry of Fisheries and Marine Resources (MFMR) has identified priorities relating to fish handling in key planning documents:

“ Sustainable use will be facilitated through improved preservation, market access and enhanced livelihood opportunities for rural men and women, including vulnerable and marginalised groups, that access, use and benefit from inshore and inland fisheries.

— MFMR Policy Objective 1, Statement of intent #10 in the Solomon Islands National Fisheries Policy 2019–2029 ”

“ Develop initiatives that allow Solomon Islanders to secure food and nutritional security and derive economic and social benefits from the use of their inshore and inland fisheries resources.

— Strategic Action 2.1 in the MFMR Corporate Plan 2020–2023 ”

The MFMR and provincial fisheries officers (PFOs) have carried out various past activities relating to fish handling and also have ideas for improving this work in the future. In November 2022, the Annual Provincial Fisheries Conference included a half-day of presentations and discussions on fish handling. Short interviews with PFOs were conducted by WorldFish staff to understand the current challenges associated with distributing fish safely and hygienically in each province, existing activities carried out to improve fish handling, and ideas for future work. This report summarizes these discussions and interviews to guide planning for a future program on improving skills in fish handling. The conceptual elements of such a program and necessary next steps came out of a Fish Innovation project¹ reflection workshop in May 2023. Representatives from several organizations attended the workshop, including from the MFMR, PFOs from Western and Malaita provinces, the Solomon Islands National University (SINU) and WorldFish.



Women removing the shells from mangrove mudshells in Malaita, Solomon Islands.

2. Fish handling insights from provincial fisheries officers

2.1. Constraints to handling and distributing fish safely and hygienically

The PFOs identified several challenges hindering safe and hygienic fish handling and distribution in their provinces (Table 1). Many of the PFOs identified challenges associated with maintaining the cold chain. Specific issues included a lack of cold storage equipment such as eskies and freezers, and issues with ice-making machines, including breakages or equipment being unsuited

for the local context. In the plenary discussion, PFOs mentioned poor handling practices across the supply chain, including on fishing boats, during transportation and storage. For example, at some markets vendors display their fish on the ground when tables are unavailable or used for other purposes. Fish are also sold at the wharf or along the roadside, where there is little infrastructure to support good fish handling practices. Also, a lack of ice used in some locations leads to low quality fish being sold at lower prices.



Pulling in yellowfin tuna, Solomon Islands.

The PFOs mentioned poor freezing practices, too, particularly since it had become more common to use solar freezers in communities, as freezing fish for too long decreases the quality, specifically the taste. They suggested that solar freezers were less effective or reliable for making ice in some locations because of insufficient power during cloudy or rainy periods. They also mentioned the limited knowledge among fishers, fish vendors and/or consumers on how to handle fish properly, or the need for training on how to do so. A couple of PFOs also noted a lack of government funding and/or planning for rural communities, as well as a lack of coordination between partners—for instance, between government, nongovernmental organizations (NGOs) and rural communities, and between the Ministry of Health and Medical Services (MHMS) and the MFMR.



Practices for freezing and storing fish are often poor.

Main challenges		Central	Choiseul	Isabel	Guadalcanal	Makira	Malaita	Temotu	Western
Cold chain	Storage equipment (esbies, freezers) is not available or is unused.	Y	Y		Y		Y	Y	
	The fishery centers have issues with ice-making machines and/or other infrastructure.	Y	Y		Y		Y		
General handling	Fish are handled poorly on fishing boats, including by subsistence fishers.		Y					Y	Y
	There are issues with boats and trucks and/or poor handling during transportation.	Y	Y		Y				
	Freezing practices, including in communities using solar freezers, are poor.				Y				Y
Knowledge or training	There is a lack of knowledge or a need for training among fishers, vendors and consumers.			Y			Y	Y	Y
	Limited training is available for fishery officers.						Y		
Access	Fishery centers are not accessible to fishers living on distant islands.							Y	Y
Planning and programs	There is a lack of planning and/or funding by national and/or provincial governments, and a lack of coordination among government departments and partners.					Y	Y		Y
Other	Cheaper sources of ice, with unknown water quality, compete with fishery center ice sales.								Y

Table 1. Summary of interview responses: “What are the main challenges with safe and hygienic fish distribution in your province?”

2.2. Existing activities to improve fish handling

The most common fish handling activity that PFOs carry out in their provinces was providing training on using ice, gutting and filleting, and/or fishing techniques (Table 2). PFOs from several provinces mentioned having a standard presentation on fish handling, some which also included a practical component. However, most reported providing training only once in the previous year, and generally noted that frequency depended on workplans, available funding and/or requests from partner organizations. Other existing activities

mentioned included spreading information through pamphlets or posters, inspecting catches on arrival at the market, providing ice blocks and eskies to fishers traveling long distances and giving advice when fishers requested it. PFOs from only one province reported having no current activities relating to fish handling.

Fishers and vendors were the most targeted participants, though a few provinces also targeted consumers. PFOs also mentioned fish and chip vendors, women, youths and rural fish entrepreneurs as specific targets for activities in one or two provinces.



Services provided by PFOs include cold storage and ice-making facilities in fishery centers, though there are often issues with equipment.

2.3. Goals of fish handling activities

The PFOs in all provinces reported their main goals of existing fish handling activities related to producing quality fish for consumption or health and/or improving the quality of fish in markets or for sale. In addition, some also mentioned increasing incomes, producing value-added products and/or reducing fish spoilage. PFOs from one province also aimed to be inclusive in training to create widespread awareness throughout the community.

“ [So] People understand why proper fish handling is important for our health, to ensure quality fish is sold and bought ... [and for] maximizing benefits/value adding. — Choiseul ”

“ To improve fish quality that comes to markets ... To meet customer preference for fresh quality fish and to gain high value of money for fisherfolk targeting direct supply and sales of fish to hotels and restaurants. — Guadalcanal ”

“ To ensure quality fish are sold and consumed by everyone [and] to be inclusive in our training so that everyone is aware about safe and hygiene practices for handling fish. — Isabel ”



Reef fish for sale at Gizo market, Western Province, Solomon Islands.

Existing fish handling activities	Central	Choiseul	Isabel	Guadalcanal	Makira	Malaita	Temotu	Western
Training on fishing techniques	Y			Y				
Training on how to use ice	Y	Y		Y		Y		Y
Training on gutting and filleting fish		Y	Y			Y		Y
Distributing information sheets or brochures						Y	Y	
Providing advice to fishers on request (e.g. esky packing and storage)								Y
Inspecting catches at market							Y	
Providing ice and eskies							Y	

Table 2. Summary of interview responses: “What activities do you do related to fish handling in your province?”

2.4. Challenges to implementing activities to improve fish handling

The PFOs identified the lack of sufficient materials and equipment to provide training as the main challenge to implementing existing fish handling activities (Table 3). They also noted that training venues and infrastructure, such as cold storage, necessary for fishers to implement knowledge acquired during training were often lacking or not fully equipped. Funding limited the ability of PFOs to provide and support training,² as government planning or budgets had not yet prioritized this work. Instead, training typically depended on ad hoc funding from other organizations. National government activities relating to fish handling (through the MFMR) have tended to focus on building infrastructure, such as fishery centers, which are then handed over to provincial governments to operate and sustain. Income generated from such infrastructure is expected to be used to fund maintenance, though often it is allocated to general provincial revenue instead. During the plenary discussion, it was also said that limited government resources meant that NGOs

rather than government often carried out planning and implementation relating to infrastructure for fish handling, such as markets.

Interest from fishers or vendors was mixed, as was evidence of changes in fish handling practices as a result of training provided. PFOs from a couple of provinces reported that fishers were not interested or were reluctant to participate in or implement training. In contrast, PFOs also reported being unable to meet all community requests for training, particularly from those using solar freezers. Some provinces also reported positive outcomes as a result of delivering training. In Temotu Province, for instance, a group of fishers had established and registered an association after attending training on fish handling and started supplying better quality fish to the fishery center. Fishers had also started displaying catches in fish trays, rather than on dirty plastic, at the Lata wharf market. For women, household commitments occasionally affected their participation in training. In addition, communities often had expectations of receiving outboard motors, freezers or other follow-up assistance during or after training.

Main challenges to implementing activities to improve fish handling practices	Central	Choiseul	Isabel	Guadalcanal	Makira	Malaika	Temotu	Western
Materials and equipment for training are unavailable or insufficient.	Y	Y	Y	Y	Y	Y	Y	Y
Training venues are not well equipped.	Y	Y		Y				
There is a lack of cold storage facilities.							Y	
There is a lack of financial support or assistance, and funding is not prioritized in national and/or provincial government budgets.			Y	Y		Y		Y
Participants, especially women, have other demands on their time and availability.			Y					
It is difficult to reach fishers who live on outer islands.							Y	Y
Communities expect to receive material goods.			Y					
Fishers are uninterested in or reluctant to change.					Y		Y	

Table 3. Summary of interview responses: “What are the main challenges with your existing fish handling activities?”

2.5. Possible future work relating to fish handling

The PFOs in almost every province indicated that work to improve fish handling does fit into the priorities of their province. Connections described included (i) the prevalence of coastal communities in Solomon Islands and the importance of fish for income as well as food and nutrition security, (ii) the importance of distributing quality fish, including from geographically isolated communities, (iii) protecting consumers from food poisoning, such as ciguatera and histamine, and (iv) improving income opportunities in coastal and rural communities. However, it was also noted that government priorities can be politicized and therefore depend on the government in power at the time.

It was widely suggested that a program for improving fish handling should target fish vendors and fishers, including both those supplying fish to Honiara and other markets, as well as subsistence fishers. Other groups mentioned were school children and youths, as part of their school curricula, as well as fish and chip vendors, community groups, women and consumers in general.

In interview responses and during the plenary discussion, the PFOs raised a range of ideas for future work to improve fish handling across Solomon Islands. We have organized these ideas under five themes to help guide planning.



Photo credit: Wade FamilyWorldFish

Bonito in a motorized canoe, Langalanga Lagoon, Solomon Islands.

2.5.1. Theme 1: Training workshops

Both PFOs and the MFMR discussed updating training resources and possibly developing a standard training module for use across the country. Suggestions for designing new training resources included the following:

- Make it appropriate to the local context and rural communities.
- Adapt it to different target audiences, such as fishers, vendors and consumers.
- Emphasize simple practical skills, including a practical component in training workshops.

- Have a standard presentation available, with simple terminology and visual aids or pictures.
- Replace the English-language Pacific Community (SPC) video currently used with a new Pidgin video with actors from Solomon Islands.

The PFOs recommended conducting training at well-equipped sites and to use the local language, where appropriate, to convey key messages more effectively. They suggested including a fish handling module in the community-based resource management (CBRM) training package, which was launched in late 2022.³ PFOs and other trainers could deliver training to clusters of CBRM communities or groups of fishers to make it cost-effective.



Filleting practice during fish handling training at Radefasu village.

There were mixed perspectives on whether to issue certificates for attending training. This was considered useful for giving participants recognition for their attendance and possibly for providing evidence to consumers or association committees about the qualifications of fishers and vendors. In some provinces, such as Choiseul, fisher associations already specify criteria that fishers must meet in order to become a member—this could be expanded in future to include training in fish handling. However, certificates also raise expectations for further support or assistance from PFOs.

There was interest among PFOs to include training in value-adding activities, such as bottling tuna and smoking fish. The SINU has previously provided training to some communities in West Guadalcanal on how to bottle tuna. However, expanding this program to additional communities depends on funding. In the plenary discussion, it was also highlighted that communities often have their own ways of adding value to fish. Such information could be shared across provinces through peer-to-peer sharing.

2.5.2. Theme 2: Printed materials and other communication methods

The PFOs also suggested alternative ways of communicating information on fish handling. For instance, printed materials such as posters and brochures/pamphlets could be developed or revised from existing materials, translated into appropriate languages, and distributed to fishers, fish vendors and consumers. These could include standard operating procedures or best practice guidelines for handling fresh fish, freezing fish and making fish-based products, which could be developed with communities as part of broader community food safety programs. Radio or social media could carry community awareness campaigns to broadcast key messages, and erecting billboards at fish landing sites and marketplaces could carry simple messaging and pictures. Another option is to adapt communication and training materials so that teachers can use them for children and youths attending primary and secondary schools, as well as adults participating at rural training centers (RTCs).

2.5.3. Theme 3: Building partnerships and networks

Work to develop and implement a program on fish handling will require building partnerships across sectors and different types of organizations with complementary skills. The PFOs identified numerous stakeholders as having an important or potential role in providing information and training on fish handling. These included the following:

- national and provincial governments, particularly the MFMR and PFOs, the MHMS and MHMS Competent Authority, and the Ministry of Commerce
- education providers, such as the SINU, primary and secondary schools, and RTCs
- NGOs and other partners
- the SPC
- managers and security officers at markets.

There were several suggestions for practical ways to build these partnerships. For instance, PFOs could work with health officers to discuss fish handling as part of hygiene, nutrition and food safety training. Plenary discussions explored opportunities to build connections and share knowledge between the SINU and government fisheries staff from the MFMR and PFOs, both in terms of capacity building for PFOs (Section 2.5.4) and for the MFMR or PFOs to share on-the-ground experiences. The SINU has a seminar program twice a month where it



Billboard at market on how to choose good fish.

invites experts from government ministries and NGOs to give guest lectures to students and academics. More broadly, conference attendees emphasized the advantages of strengthening networks for sharing information on fish handling across communities, provinces and organizations. They identified organizations such as the Overseas Fishery Cooperation Foundation and the SPC as having worked successfully with youths to improve the quality of fish taken to market in the past.

2.5.4. Theme 4: Financial and technical support for PFOs

Interview responses and plenary discussions highlighted that implementing a fish handling program would require regular and adequate funding for these activities, as well as strengthening the skills and knowledge of PFOs. Currently, training on fish handling relies on ad hoc funding, typically from NGO partners, to work in selected communities. Furthermore, although some PFOs have skills in this area, others have not yet had the opportunity to attend training. The focus of programs is often on technical materials and training workshops, but it was agreed that for any of those plans to be useful PFOs need to have the capacity and confidence to share information and run programs. In the past, PFOs have typically attended short training courses at overseas institutions; however, this has not been possible over the past few years because of COVID-19 travel

restrictions. Within Solomon Islands, the company SolTuna currently offers a 2-day course on quality control, while the SINU only provides fish handling training as part of its undergraduate programs. However, there may be opportunities to develop specific short courses (Section 3).

2.5.5. Theme 5: Supporting communities to support themselves

The PFOs highlighted that a future fish handling program must also consider how to support fishers, vendors and communities to put into practice lessons or knowledge acquired through training. For example, previous experiences of PFOs demonstrate that fishers will often return to their usual poor fish handling practices if they do not have access to eskies and ice. The PFOs suggested that a future fish handling program also include providing cold storage equipment to fishers and/or vendors, if required. At the same time, they also expressed concerns about raising expectations in communities for additional support after providing training. WorldFish suggests it may not be practical for the government to simply give out the equipment required throughout the whole country. Rather, as several PFOs also suggested, it is necessary to consider ways of trying to help communities sustain or support themselves to implement change. Possible approaches for doing this could also be incorporated into resources produced for a fish handling program.



Cooked fish is commonly sold at markets and village events in Solomon Islands.

3. Fish handling training expertise at the Solomon Islands National University

Since a training needs assessment in 2012, the Department of Fisheries Studies (DFS) within the Faculty of Agriculture, Fisheries and Forestry of the SINU has endeavored to deliver high quality fisheries training packages in response to an increasing demand for fisheries training and capacity building from stakeholders, communities and individuals. Furnished with world class facilities in a modern, state-of-the-art fisheries complex funded by the Korea International Cooperation Agency, the department was commissioned in December 2017 and opened its doors to its first batch of students in 2018.

The DFS offers certificate, diploma and bachelor degree programs that fall under four major strands: aquaculture, seafood processing, fisheries economics and fishing technology. These four strands have separate laboratory facilities equipped to meet the training needs of its students, both local and abroad. The seafood processing strand in particular offers training packages relating to the three fundamental components of the strand: source of energy, food safety and various unit operations. The seafood processing units

cover both theoretical and practical concepts of inhibiting microorganisms, extending shelf-life and maintaining the quality and nutrition of seafood products through different preservation processes and technologies. As such, the DFS provides both academic and practical training related to handling and preserving fish.

The DFS is collaborating with the MFMR, WorldFish and the University of Wollongong (UOW) on the Fish Innovation project, which aims to enhance the capacity of national agencies and other partners to improve fish handling and preservation in rural communities in Solomon Islands and Timor-Leste. The DFS currently offers several fully fledged semester units related to fish handling, preservation, quality and safety of seafood products: Food Microbiology and Lab, Seafood Science, Seafood Processing and Lab, Fish Handling and Storage, Food Packaging, and Food Hygiene and Lab. The DFS could integrate the components of these units into a tailored training package that is accessible for rural communities. This would help improve food safety, food security and livelihoods in rural areas in the coming years.



Fish processing training conducted by the Department of Fisheries Studies, SINU, with students and community members.

4. Conceptual elements of a program to improve fish handling

There are several ways to improve fish handling, including helping people develop skills and knowledge (upskilling) as well as addressing structural constraints, such as poor market infrastructure (Figure 1). We propose that, together, this has potential to lead to innovations, which creatively solve problems or challenges. In turn, these can create system-wide changes that improve

fish-based livelihood outcomes and increase access to safe aquatic foods for consumers.

The experiences and ideas shared by the MFMR and the PFOs and summarized in Section 2, as well as subsequent discussions held during the Fish Innovation project reflection workshop, form a strong foundation for planning and designing a program to improve fish handling skills in Solomon Islands.

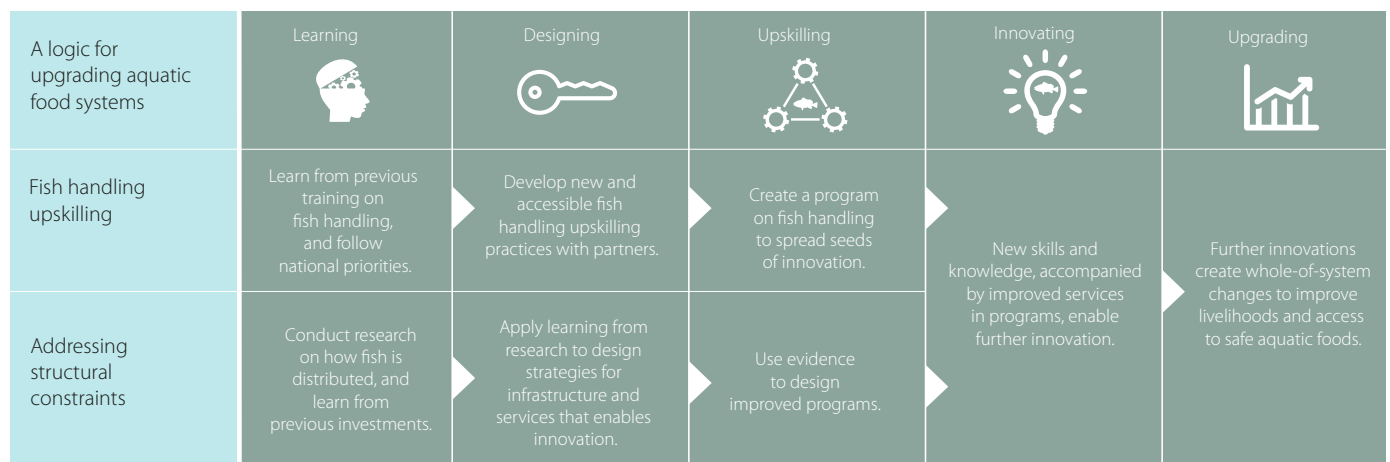


Figure 1. A proposed logic for increasing access to safe aquatic foods and improving fish-based livelihood outcomes.

4.1. Goals

The summarized goals of fish handling activities collated from interviews with PFOs provide a comprehensive set of objectives that can form the basis of a fish handling program in Solomon Islands (Figure 2).

4.2. Structure

Based on the findings presented in Section 2.2, past initiatives relating to improving fish handling in Solomon Islands have focused on providing training to fishers and fish vendors, typically in the form of 1- or 2-day workshops. Although these are important opportunities to share knowledge, they are also relatively resource intensive and rely on knowledgeable and confident trainers. This can limit the number of such workshops and therefore their reach. To improve the skills of fishers, vendors and consumers across all provinces in Solomon



Figure 2. Conceptual elements of a program to improve fish handling in Solomon Islands: goals.

Islands, the country needs a broader program of fish handling activities. As highlighted from the PFOs' ideas summarized in Section 2.5, upskilling can take place not only through targeted training workshops, but also by making information available through brochures, posters, signboards, and radio or social media messages or TV segments. Practical demonstrations—either as part of training workshops or standalone, for instance, at markets—are also effective ways to show how to use new techniques or make new products.

These resources or activities could come from several sources: national or provincial government staff, peer-to-peer sharing, civil society groups, rural training colleges, universities or NGOs. Their target audiences could include fishers, fish vendors, fish processors or community members making fish products and/or fish consumers.

Figure 3 outlines initial ideas to conceptualize a program on fishing handling in Solomon Islands. It comprises various types of resources, from printed

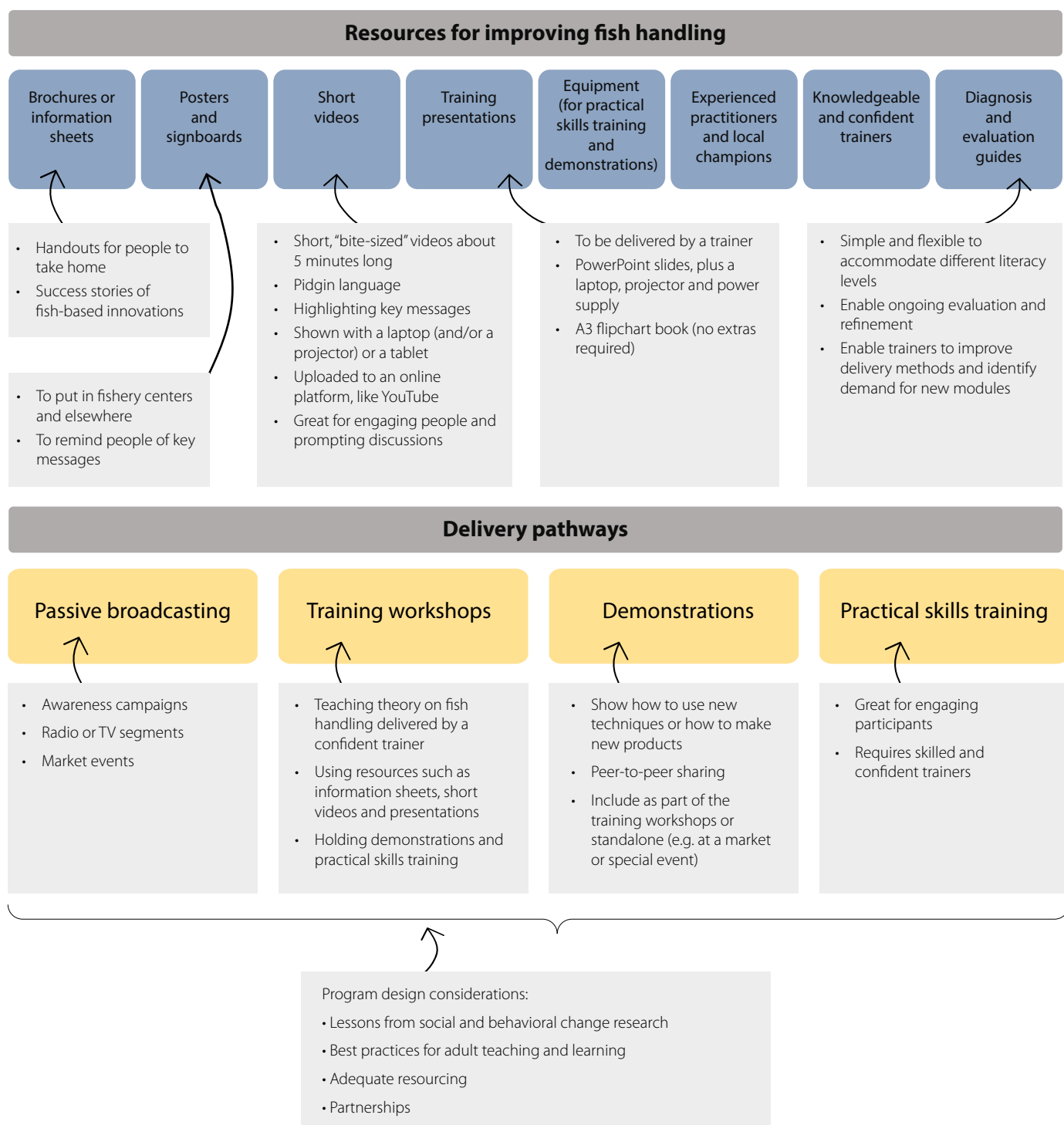


Figure 3. Conceptual elements of a program to improve fish handling in Solomon Islands: structure.

information sheets to the skills embedded in experienced practitioners and local champions—all of which can be used or delivered through various pathways. Developing a program on fish handling should also incorporate lessons from social and behavioral change research and best practices in adult teaching and learning.

4.3. Content

Based on initial planning sessions, the content of a fish handling program should cover key concepts relating to quality and hygiene, and best practices for incorporating these concepts along the supply

chain, from sea to plate (Figure 4). In addition, it can share innovative ideas for new fish-based products that add value, either in a conventional economic sense or some other form, such as shelf-life or nutritional content. The program will need to cover these elements in terms of theory or knowledge and in practical skills, and also include simple tools to guide diagnosis, evaluation and learning to continually refine the program. To accommodate gendered differences in harvesting practices, such a fish handling program should cover handling practices for not only finfish but also other aquatic foods, such as shellfish.

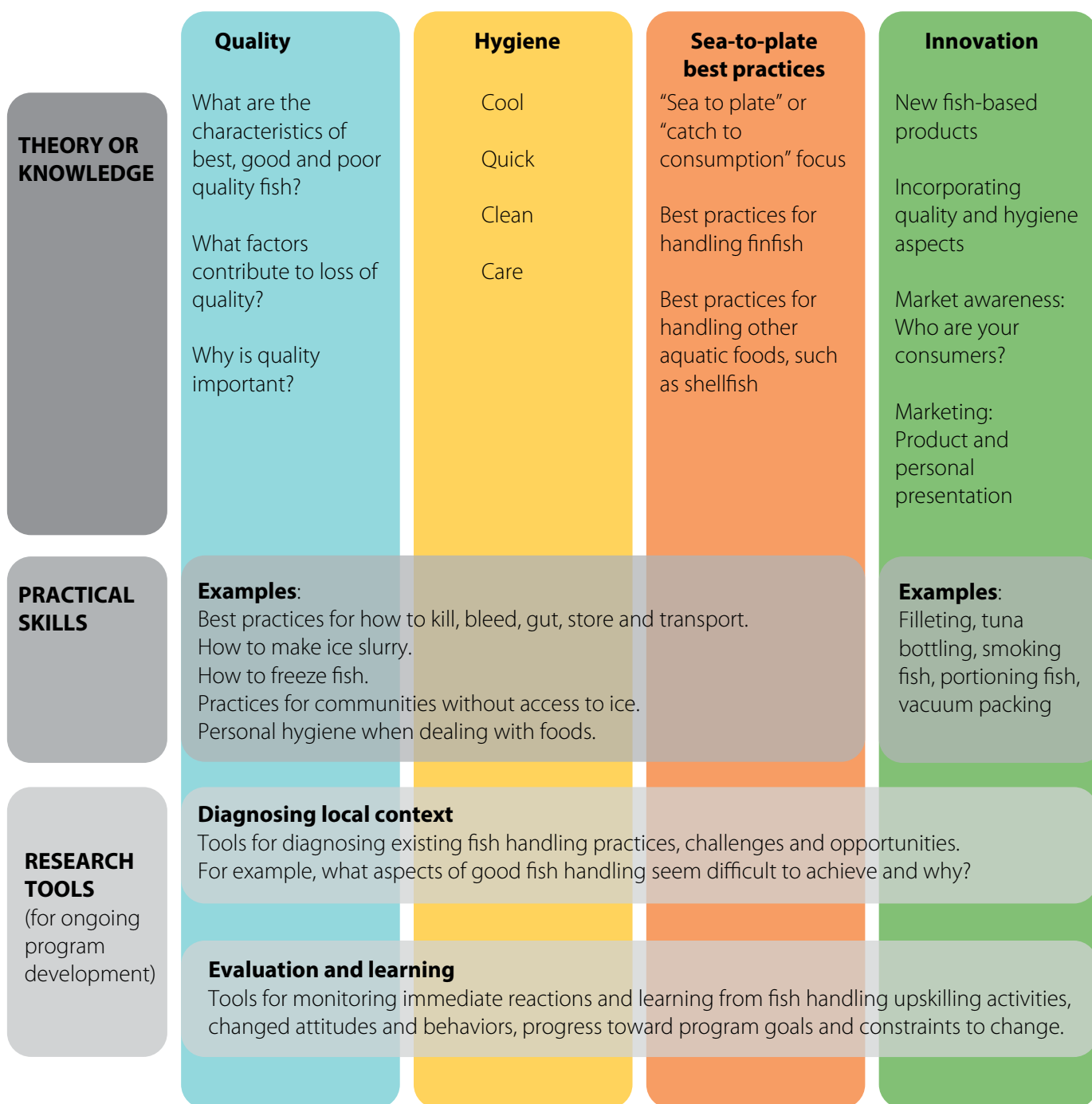


Figure 4. Conceptual elements of a program to improve fish handling in Solomon Islands: content.

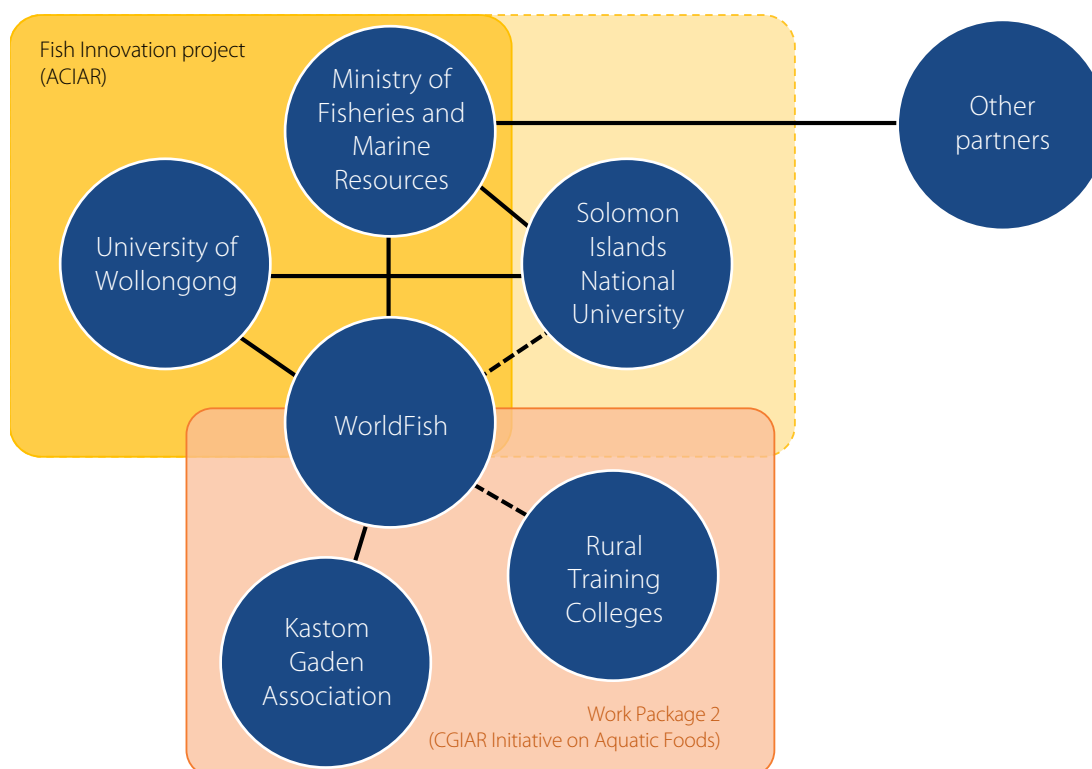
5. Next steps for developing a fish handling program in Solomon Islands

Planning carried out during the Fish Innovation project reflection workshop identified areas where progress had already been made and steps required to move the work forward.

5.1. Build from existing partnerships

Making information, awareness and technical training for fish handling accessible in Solomon Islands will require multiple organizations to work together (Figure 5). A key next step for these partners is to design and deliver a program of activities and materials, such as training, demonstrations and information handouts, in order to reach a wide audience. To achieve this, each partner brings unique perspectives and important contributions:

- The SINU has technical expertise in handling and processing seafood and experience as a training organization for students able to attend university.
- The MFMR is mandated to carry out work to improve fish handling throughout Solomon Islands, as articulated through its policy and planning documents, as well as technical expertise and experience in fish handling programs.
- PFOs have on-the-ground experience conducting past fish handling training, as well as knowledge of some of the challenges faced in providing such training in the provinces.
- WorldFish and the UOW have access to funding resources available through the Fish Innovation project and the CGIAR Initiative on Aquatic Foods, and they have the ability to provide coordination and technical support.
- RTCs and the Kastom Gaden Association (KGA) have expertise in providing training in rural communities and through broad networks.



Note: Dotted lines indicate where formal partnerships are in development. ACIAR refers to the Australian Centre for International Agricultural Research.

Figure 5. Core partners (blue circles) involved in developing and piloting activities to improve fish handling in Solomon Islands, and funding providers (boxes).

Once an initial set of resources is developed and piloted, we will also investigate potential partnerships with other organizations who might be interested in incorporating training on fish handling as part of broader health, nutrition or livelihood programs, such as World Vision, Save the Children and the Ministry of Women, Youth, Children and Family Affairs (MWYCFA).

5.2. Develop an initial set of resources for a training workshop on fish handling

5.2.1. Development process

The development of an initial set of resources for a training workshop on fish handling will follow a step-by-step logical process of design, pilot, refine and deliver (Figure 6). This process is deliberate about learning from what has been done before to provide training activities on how to handle fish properly. One of the messages from previous work is that training has often been delivered as single, isolated events, often using dated technical materials from overseas. The approach here is not only about developing locally appropriate content, but also about building capacity and confidence among a key group of actors to begin the process of establishing a programmatic approach.

5.2.2. Structure, format and content

The training workshop is proposed to be delivered over 2 days and comprise both theoretical and practical sessions. Content will cover elements of the four aspects identified in Figure 4: quality, hygiene, sea-to-plate best practices, and innovation.

It will also include research tools for carrying out pre-workshop diagnosis on existing knowledge and practices, as well as post-workshop evaluation of participants' immediate reactions and learning.

Although the final format of the training workshop has yet to be decided, key components will likely include the following:

- a presentation delivered by a trainer, either using a PowerPoint presentation or an A3-sized flipchart book
- a practical activity
- a printed handout for participants to take home
- an evaluation guide for trainers to use
- if time permits, a short video in Pidgin that highlights key messages.

5.2.3. Considerations for a pilot evaluation framework

Initial planning discussions also identified feedback needed from the reference group involved in the pilot. An evaluation should cover the structure, content and appropriateness of the training workshop and any supporting materials, as well as the built-in evaluation guide, and provide recommendations for future training of trainers (Figure 7). Feedback could best be obtained through use of two evaluation methods: (1) a discussion session held at the end of the pilot workshop and (2) an evaluation survey administered through either a written form or a one-on-one interview.

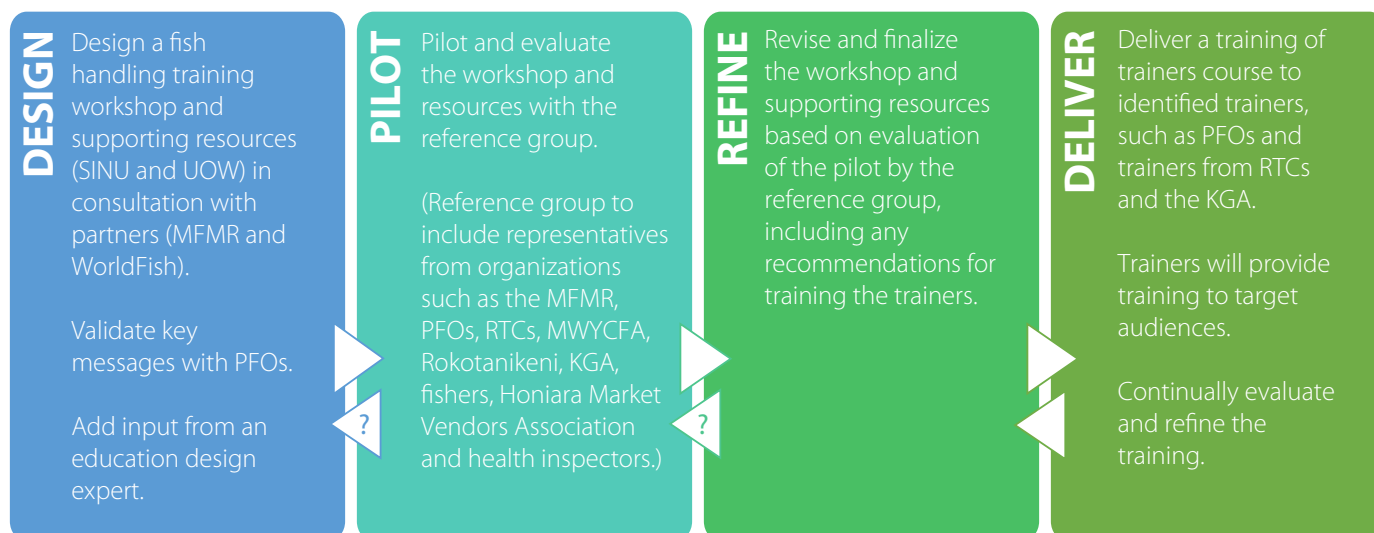


Figure 6. Development process for an initial set of resources for a training workshop on fish handling.

Feedback on the draft fish handling workshop and supporting resources:

Training structure and format

- Duration of training
- Duration of each session
- Balance of theory and practice
- Balance of trainer talking and participant discussion

Content

- Clear key messages
- Balance of science and nontechnical information
- Practical and feasible to implement
- Appropriate to local context
- Use of memory aids (e.g. song or dance)

Supporting resources (video, presentation, handouts)

- Usefulness
- Balance of visual aids/pictures and words
- Language
- Content and key messages

Relevance and appropriateness

- Target audience
- Likelihood of target audience applying new knowledge
- Gender awareness and inclusivity

Evaluation and recordkeeping guides

- Simple
- Relevant
- Feasible to administer in rural contexts

Feedback for future training of trainers:

Delivery

- Ability of trainer to engage participants
- Confidence of trainer
- Approachability of trainer

Trainer preparedness

- Level of confidence to deliver training
- Necessary background knowledge and skills
- Content and resources adaptable to trainers' different styles

Example questions

What were the key messages that you learned?

Does the training include adequate suggestions for how communities can implement new skills themselves, or does it create expectations for further assistance?

How appropriate is this training for

- fishers, both men and women, market oriented and subsistence
- market vendors, both women and men
- fish and chip businesses
- rural and urban consumers
- rural youths and youth entrepreneurs
- women's groups and the Mother's Union
- university students and school children
- PFOs and health inspectors?

Did you feel comfortable to ask questions?

What changes would you make if you provided this training?

How confident do you feel to teach this training in rural communities?

What additional background information or training would you need to increase your confidence?

Figure 7. Aspects to consider when evaluating the fish handling training workshop and supporting resources at the pilot.

5.2.4. Considerations for a training of trainers course

Evaluating the pilot, particularly the recommendations of experienced rural training providers such as RTCs and the KGA, will provide detailed requirements for a training of trainers course. Initial planning discussions identified several aspects to include in the course for the new fish handling module:

- content of the training module
- additional background knowledge for trainers to feel confident and answer possible questions
- tips and techniques on how to deliver training in a confident and engaging manner, including personal presentation, such as dress and conduct.

It is anticipated that a new cohort of skilled fish handling trainers will come from existing training providers and experienced practitioners in extension services, as well as local champions or innovators.

5.3. Develop an MFMR national fish handling strategy in 2023–2024

During 2023–2024, the MFMR intends to develop a national, multi-year strategy outlining priority actions to achieve the fish handling goals identified by PFOs in Figure 2. The identified value of such a strategy is that it supports deliberate planning, enables resourcing and aligns partner actions toward collective goals. The design of the strategy will be integrated with, and informed by, the design of fish handling resources described in Sections 4 and 5.



Photo credit: Wade Fairley/WorldFish

Freshly caught sardines in pots, ready to carry home.

Notes

- 1 The Fish Innovation project in Solomon Islands is a collaboration between the MFMR, WorldFish, the University of Wollongong and the University of Canberra. It is funded by the Australian Government through the Australian Centre for International Agricultural Research (ACIAR) project FIS/2019/124 and contributes to the CGIAR Initiative on Aquatic Foods.
- 2 The report authors are also aware of instances in the past where PFOs misused funding from the national government allocated for fish handling or other fisheries-related activities.
- 3 [MFMR] Ministry of Fisheries and Marine Resources. 2022. Community Based Resource Management Training Package. Orirana G and Kenilorea P, eds. Honiara, Solomon Islands: MFMR; Honiara, Solomon Islands: WorldFish.



About WorldFish

WorldFish is a leading international research organization working to transform aquatic food systems to reduce hunger, malnutrition and poverty. It collaborates with international, regional and national partners to co-develop and deliver scientific innovations, evidence for policy, and knowledge to enable equitable and inclusive impact for millions who depend on fish for their livelihoods. As a member of CGIAR, WorldFish contributes to building a food- and nutrition-secure future and restoring natural resources. Headquartered in Penang, Malaysia, with country offices across Africa, Asia and the Pacific, WorldFish strives to create resilient and inclusive food systems for shared prosperity.

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