

# Food safety – an important addition to post-harvest fish processing training initiatives in Solomon Islands

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Food safety is an important practice in post-harvest handling of seafood because food that is not prepared properly can cause food-borne illnesses and poisoning. Safe food is important for good health and better nutrition (World Health Organization 2023).

Some of the post-harvest preservation methods used around the world for fish include chilling, freezing, smoking and drying (Speranza et al. 2021). Additionally, because women play a critical role in the fisheries value chain, they are often seen using traditional preservation methods such as baking in earth ovens, smoking and salting; methods that preserve fish for both consumption and for selling in local markets (Bako 2005; Vunisea 2014). These ancient cooking methods help preserve food for up to three days (Makini 2011). Alternative preservation methods can help improve economic returns and ensure freshness for a longer duration.

In Solomon Islands, promoting food safety and nutrition is aligned with the Ministry of Fisheries and Marine Resources' (MFMR) corporate plan goal 2.1 "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" (MFMR 2020). The Food and Agriculture Organization of the United Nations' (FAO) Adaptive Fisheries Management project (Canadapt 003<sup>4</sup>) is supporting MFMR's efforts to develop the capacity of local women's groups in the areas of food safety within coastal fisheries value chains. The project has a focus on commodities in which women play a large role: for example, smoked fish, a fish preservation method where both men and women participate in multiple roles (Atu and Kiyo in review). Here we report on food safety training conducted as an important addition to post-harvest processing in Honiara and Auki in Solomon Islands.

## Promoting food safety through the Island Food System in Transition Forum

An Island Food System in Transition Forum organised by WorldFish and Kastom Garden Association in Honiara provided an opportunity for the MFMR through the Canadapt 003 project to conduct food safety trainings for local women, men and youth. Representatives from rural communities were gathered at the Solomon Islands National University campus to display their agriculture and fisheries products for the forum. To contribute to hygienic food preparation and display, MFMR and FAO conducted a two-day training on food safety and post-harvest value addition for fish products from 31 May to 1 June 2023. In total, 16 participants attended the training (68% were women; two of whom were youth), including women involved in fish smoking from the Shortland Islands, WorldFish, MFMR fisheries officers, individual farmers, and school teachers.

A similar food safety and post-harvest value-adding training was also conducted in Auki, Malaita Province from 4 to 5 June 2023. This training session targeted representatives from the Auki market vendor association (existing collaborator for adaptive fisheries management project), and individual market vendors. The participants trained were 6 males, 15 females, and 2 female youth.

## Pre- and post-evaluation surveys to assess the effectiveness of training

A pre- and post-evaluation survey was conducted for both training workshops. During the pre-evaluation survey, 62% of participants mentioned that this was the first time they were attending a workshop on food safety and post-harvest handling. With this in mind, the food safety facilitator for



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<sup>4</sup> Funded by Global Affairs Canada and implemented by the Food and Agriculture Organization of the United Nations (FAO), the Strengthening Small Scale Fisheries in the Pacific (Canadapt 003) project (2021–2023) was designed to contribute to a long-term vision of improving the resilience of coastal communities in Fiji, Solomon Islands and Vanuatu. Through Canadapt 003, FAO has partnered with the national fisheries agencies in each country: the Fiji Ministry of Fisheries, the Solomon Islands Ministry of Fisheries and Marine Resources, and the Vanuatu Fisheries Department.



Figure 2. New value-added tuna products taught during the training: **A** one of the steps involved in preparing tuna samosa; **B** preparation of tuna sausages without using casings; and **C** shallow frying of tuna sausages.

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these training workshops (an FAO-food safety consultant) included demonstration sessions where participants received hands-on experience and practiced simple processing techniques such as marination and “cold smoking” (Fig. 1). Other new food processing techniques shared during the training include the preparation of tuna samosas (Fig. 2A) – which highlighted the reduction of wastage by using fish heads and bones – and production of tuna sausages without the use of machines and sausage casings (Fig. 2B and 2C).

All participants agreed that the training was relevant for their needs and that they can use the skills they learned to diversify their food products. For instance, in the post-survey comments, participants from both Honiara and Auki stated that the tuna burger was a new product that would add value to their income.

All recipes and preservation methods taught to participants were adapted from the post-harvest value-adding techniques of the FAO-FishFad project (FAO 2022) and were not developed specifically for this project. Participants, however, were encouraged to customise the recipes based on preference and the availability of local ingredients.

For future training needs, a training of trainers approach was used whereby the five MFMR national and provincial officers that attended the training sessions in Honiara and Auki were equipped with new food safety knowledge to complement the trainings they provide for rural fishers. We concur with the recommendation from Batalofo et al. (2023) regarding the need to evaluate such training sessions. A pre- and post-workshop evaluation survey for our training helped gauge expectations of participants and identify learning gaps for future MFMR planning.

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