

The importance of indigenous freshwater foods for rural women in Guadalcanal Province, Solomon Islands

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Background

Pacific Islanders are among the biggest consumers of aquatic foods – both animals and plants – in the world (Bell et al. 2009). On average, a Solomon Islander consumes 73 kg of aquatic food per year, and after roots and tubers, it is the most frequently consumed food group in the country (Farmery et al. 2020). Wild foods collected from environments such as forests and water bodies are increasingly being recognised as important food sources, especially in rural areas (Bogard et al. 2021). About 68% of all households in Solomon Islands catch fish or shellfish, and one-third of all households in urban areas are engaged in fishing activities (SINSO 2015). Indigenous food plants⁶, which support rural food and nutrition security, are found throughout the Solomon Islands, and are part of an exchange system that has evolved throughout the centuries (Ross 1978). This system, however, has been disrupted in recent decades through the importation of processed and unhealthy foods that cause devastating public health outcomes (Andrew et al. 2022). Underneath the contemporary driver of imported unhealthy foods is a strong

foundation of traditional foods and practices, which offer an opportunity for more resilient and healthy societies. For example, indigenous foods and practices were cornerstones for rural food security during the COVID-19 pandemic in Solomon Islands (Eriksson et al. 2020) and in other Pacific Island nations (Ferguson et al. 2022).

Innovating with traditional foods is increasingly viewed as a way to work towards positive changes in nutrition and move away from imported foods. Many aspects of rural food production, processing, marketing and preparation are traditionally the domain of women (Ross 1978). Women and girls play a crucial role in ensuring the sustainability of food for rural households and communities. This subsistence fish catch is vital to food security for families and rural communities, and is equally important for maternal and child nutritional health (Albert et al. 2020). Women, also play a dominant role by selling goods and organising local village markets, where they can sell fish and cooked food (WorldFish 2021). Women have a key role to play in the positive transformation of food systems for the health of people and the environment.

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⁶ Plant foods from the natural environment used in indigenous cultures prior to outside contact or for the purpose of this paper, food plants used by indigenous cultures over centuries.



Figure 1. Group photo of representatives from WorldFish, Ministry of Fisheries and Marine Resources, Ministry of Women, Youth, Children and Family Affairs, and the Guadalcanal Provincial Government during the opening ceremony. © Regina Lepping



Figure 2. Group photo of the participants. © Regina Lepping

Celebrating indigenous foods and traditional livelihoods is important for reminding societies to consume local foods and use cooking practices of the past. These foods, and the way they are prepared, are sources of culinary identity, which may counterbalance some of the more modern unhealthy eating habits and foods. To celebrate traditional foods and practices, WorldFish – in collaboration with the Guadalcanal Provincial Government and the Ghatapa Association⁷ – hosted an indigenous freshwater foods cooking competition (Fig. 1). The main objectives of the event, held on 19 October 2021, was to increase awareness and recognition of: 1) indigenous aquatic foods in the everyday diets of women, 2) the nutritional value of Indigenous foods, and 3) the role of rural women in community-based fisheries management.

The Women's Development Division (under the Guadalcanal Provincial Government) works closely with 360 women's groups that have been registered with the office. Of the 19 rural community women's groups targeted by the division, 4 are women's savings and credit clubs, and 15 are church women's groups (Women's Development Division, Guadalcanal Provincial Office unpublished data). The competition was part of the rural women's day programme for North Guadalcanal women and young girls. Groups that participated in the celebrations included Numbu Women's Fellowship, Numbu Savings Club, Kuara Women's Fellowship, Leivatu Savings Club, Selapungi Savings Club, Pitukoli Savings Club, Ligilavolaka family church and surrounding village dwellers (Fig. 2). The aquatic foods competition was held at Sinagha, located within the Ghaobata ward, in the North Guadalcanal region of Mbolomona. Guadalcanal Province has four main regions – Tasimauri, Tasimate, Mbolomona and Ghana (Wairiu 2007).

Importance of freshwater aquatic foods

The general image of island food systems is that they are dominated by aquatic foods from the ocean. The high islands of Melanesia, however, are also places of rich freshwater ecosystems. The freshwater ecosystem in the Solomon Islands includes rivers that are 30–40 km in length such as on Guadalcanal, and many upland streams on the other islands. Information on freshwater food resources in Solomon Islands is very limited. The earliest work that was recorded and published on fresh water and brackish fish was done by Gray in the mid-1970s and focused on Guadalcanal (Polhemus et al. 2008). Just like the ocean, freshwater ecosystems are an important source of aquatic foods that provide nutrition and livelihood opportunities for rural communities.

Women in inland areas harvest a range of freshwater aquatic foods consisting mainly of fish, shellfish and freshwater crustaceans from small streams and ponds. Very few of these practices have been documented, but the consumption of aquatic foods in the rural highlands is lower than that consumed on the coast, due to limited access (Bell et al. 2009). Access to rivers and streams for people living in the rural highlands can be difficult compared to those people living near the coasts because of the steep terrain. From the authors' own observations and upbringings, we know that fish and shellfish collected from freshwater systems are important in traditional cooking and food preparation.

There is some interest from the women's groups to start tilapia (a non-native fish species) ponds near their homes, with assistance from the Fisheries Division under the Guadalcanal

⁷ Ghatapa stands for Ghaobata, Tathimboko and Paripao, three wards within two constituencies, North Guadalcanal Constituency and North East Guadalcanal Constituency.



Figure 3. Woman wrapping fish in banana leaves before cooking on hot stones. © Regina Lepping



Figure 4. A woman cooking food inside a length of bamboo.
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Figure 5. Two women preparing a traditional oven for cooking.
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Provincial Government. This is in response to an interest in both starting livelihoods projects and having nearby access to food security. Ponds constructed near homes would be easier for women and their families. The projects are pending assessment from the Fisheries Division. This could be a good contributing source of additional aquatic food for inland households where access to aquatic foods is generally limited.

Aquatic foods and the links with tradition

Our event focused on celebrating the links between aquatic foods, nutrition, women and traditions. The different dishes that were prepared each have their own special meaning. The food, and the way it is traditionally prepared, is significant in cultural events such as marriages, settling disputes, and the giving of gifts. Different dishes were selected from different tribes and regions, each with different ways of preparation and cooking. Like many rural Solomon Island communities, the traditional ways of cooking in the Mbolomona and Tasimate regions are still used. Some of these include the *na umu*, which involves steaming and roasting root crops and vegetables on hot stones and banana leaves in an earth oven (Fujii 2014). In this area, food is cooked in bamboo as well. Figures 3, 4 and 5 show women preparing food using different traditional ways of cooking.

The groups put on an amazing display of cooking practices befitting of a celebration of indigenous foods. For example, the women of the Leivatu women's savings club prepared the *makoi ke'u* and *saunge* dish (freshwater shells mixed with coconut cream) which is a special dish prepared for chiefs during special occasions (Fig. 6). The Numbu women's fellowship group prepared *gura* which consists of river shells, taro and slippery cabbage (Fig. 7). The Numbu savings club prepared river shells in coconut cream with pepper and tomato (Fig. 8). A second group from the Leivatu women's savings club prepared *se* (lesser yam) and *raghoragho* (freshwater fish). *Pana* is mashed in coconut cream and the freshwater fish is wrapped in island cabbage and cooked in coconut cream. This is an important meal prepared for men after the mounting (preparation of *pana* and yams).

With limited access to fresh aquatic foods, other sources of modern products can be used as an alternative. For example, the Selapungi Savings club prepared slippery cabbage cooked with coconut cream in a bamboo with a tinned fish brand called 777 as an alternative to fresh fish – exemplifying that traditional can meet modern in positive ways. With the addition of rootcrop, this forms a well-balanced diet with the inclusion of all key food groups (Fig. 9).

Furthermore, the value is not restricted to the food itself, but also to the cooking utensils used to cook the meals. While many rural communities may use plastic plates and ceramic cups for eating, traditional cooking styles and the use of traditional cooling bowls are still adopted. The bowls mostly used by the women are called *popo*.

Indigenous foods and nutrition

There is an important link between indigenous foods and nutrition, which for a long time has been overlooked as a countervailing force to store-bought unhealthy foods – Indigenous foods are more nutritious compared to processed foods (Anderson et al. 2013). But with the increase in imported food such as rice and noodles, more women are preparing these imported foods which are often high in saturated fats, added sugar and salt (Andrew et al. 2022). Aquatic foods are important for the health of all, especially for mothers and children as they are good source of protein, essential fatty acids, and key micronutrients (Hicks et al. 2019). The inclusion of these foods will contribute to a more diverse diet and better nourishment. As our event made rural areas in Ghaobata ward have a lot of Indigenous foods and areas that are inland to catch freshwater fish or shellfish only for consumption (Fuji 2014). The cooking competition made this link apparent, and for a day it was deservedly celebrated.

This event, and others like it, can be important venues for discussions about what a positive food system transformation can look like, grounded in local nutritious foods. Celebrating the role of indigenous aquatic foods and sharing recipes is a fun and engaging way to mobilise a movement that supports positive change for people and planet. Advocacy materials, such as cookbooks (Duarte et al. 2020) and popular media (<https://www.pacificislandfoodrevolution.com/>) are important for helping shape this agenda.

Acknowledgements

This work was supported by the Australian government through ACIAR project FIS/2020/172, and contributes to the One CGIAR Resilient Aquatic Food System Initiative that supports positive food system transformation with aquatic foods. The authors of this paper would also like to acknowledge the Guadalcanal Provincial Government, Ministry of Women, Youth, Children and Family Affairs; the Ministry of Fisheries and Marine Resources; Regina Leping, Ghatapa Womens Association; Numbu Women's Fellowship; Numbu Savings Club; Kuara Women's Fellowship; Leivatu Savings Club; Selapungi Savings Club; Pitukoli Savings Club; Ligilavolaka family church; and the community at Sinagha.



Figure 6. Makoi ke'u and saunge (freshwater mussels cooked in coconut cream). ©Regina Lepping



Figure 7. Gura River shells (freshwater mussels) with taro and slippery cabbage. ©Regina Lepping



Figure 8. River shells (freshwater mussels) in coconut cream with pepper and tomato. ©Regina Lepping.



Figure 9. Presentation of the dish consisting of potato, tomato, pepper, leeks and fish. ©Chelcia Gomesse

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