

Understanding the links between gender, sustainability and food security in small-scale fisheries

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Sheridan Rabbitt is a PhD student at the University of Queensland exploring the links between gender, sustainability and food security in Solomon Islands. Her research concerns community-based management strategies to improve fisheries sustainability, focussing on the inclusion of women in management structures and processes. Her research interests span several fields, including aquaculture, wild capture fisheries management, and gender equity in fisheries.

Project background

Food security is one of the greatest challenges facing humanity. With rapid globalisation, and the world's population forecast to reach 9.7 billion by 2050, this challenge will only intensify over the coming decades. Developing nations disproportionately bear the brunt of food insecurity, a fact particularly evident in the Pacific Islands region. Globally, fish provides one-third of the population with over 15% of total animal protein intake, and is a vital source of micronutrients (Allison 2011; Golden et al. 2016). In food-insecure nations, fish can provide up to 50% of the total animal protein intake (Fisher et al. 2017; FAO 2016), and in Pacific Island nations where agricultural land is limited, this can be greater than 90% (Bell et al. 2009). The decline and collapse of fisheries is becoming increasingly common around the world, so given both the long list of threats to fisheries, and their importance in diets in the Pacific, it is critical that fisheries resources are well managed to achieve food security for future generations.

Small-scale fisheries (SSFs), which predominantly consist of artisanal and subsistence fisheries, contribute substantially to Pacific Islanders' livelihoods. SSFs are difficult to manage for a host of reasons. They are generally multi-species fisheries, which makes it hard to ascertain what levels of harvest are sustainable for different species. Disputes over tenure are common, and the number of different stakeholders in the fishery can also prove challenging. Arguably the biggest hurdle in managing SSFs though is that they are data-poor, and one of the more obvious gaps is the lack of gender-disaggregated data (FAO 2016; Harper et al. 2013).

Despite recent significant improvements, detailed information on how women are involved in, and contribute to, fisheries is still lacking. Current estimates indicate that women make up over half of total employment in the fisheries sector globally (FAO 2016; Weeratunge et al. 2010; World Bank 2012), and although they may be less involved in catching large finfish (typically reef fish), they are disproportionately represented in invertebrate gleaning,

and the fish processing and marketing sectors (Harper et al. 2013; Bennett 2005). Yet, they are poorly represented in decision-making and policy roles, particularly at the senior level (Lambeth et al. 2002). Women play a pivotal role in a number of areas intrinsically linked to food security, including health and nutrition, population dynamics, and poverty alleviation, and have unique knowledge about local ecosystems and natural resources owing to their role as primary caregivers and food growers (Harper et al. 2013). Sustainable resource management cannot be achieved without the inclusion of women in management and decision-making processes. This is particularly true for fisheries management, owing to the strong gender dichotomy in small-scale subsistence fisheries. It is thought that in the Pacific, women's fishing activities are more regular than men's and, thus, provide more stability to the diet; it is also likely that women's contributions are significantly underestimated (Harper et al. 2013; Matthews 1991). It is critical that the role women play in fisheries and their contribution to household diets are well understood, to be able to develop and implement successful resource management strategies that will ensure food security for generations to come.

Research objectives

This project aims at investigating food security concerns in the Pacific Islands region, specifically looking at the sustainability of marine small-scale fisheries (SSFs) in Solomon Islands. Working in coastal communities in Marovo Lagoon, in Solomon Islands' Western Province, we plan to develop broad recommendations that could be adopted by fisheries managers throughout the Pacific to assist in the management of SSFs for improved food security outcomes. The project has four main components. The first is to understand how women are involved in and contribute to fisheries. We have defined fisheries as the harvest of any marine product, including algae, invertebrates, finfish, and we include the fish processing and marketing sectors. We are investigating women's fishing behaviours by interviewing local women, and will evaluate the flow-on effects for food security.

The second component of the project involves a series of focus groups, where we seek to understand women's attitudes toward fisheries management and conservation decision-making processes within their villages. The focus groups address women's current levels of involvement in local decision-making bodies (conservation committees and ranger groups), how we can facilitate greater involvement of women, and the adequacy of current management actions.

In the third component, we will examine village attitudes toward the export of fishery products from Marovo Lagoon into fish markets in Honiara. Through household surveys, we will assess attitudes toward income generation through the trade, local resource depletion, and opinions on directions for future management actions.

Lastly, we have been studying women's diets over two years to assess the diversity and seasonal variation of protein sources as a measure of local communities' reliance on reef fish for protein. These data will also be used as a measure of dietary diversity within the communities, and consumption of different seafood types.

Ultimately, we will develop a series of policy guidelines to facilitate the inclusion of women's knowledge into fisheries management. This will assist in delivering greater gender equity in management policies and procedures, and should help improve food security in Solomon Islands and across the Pacific.

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