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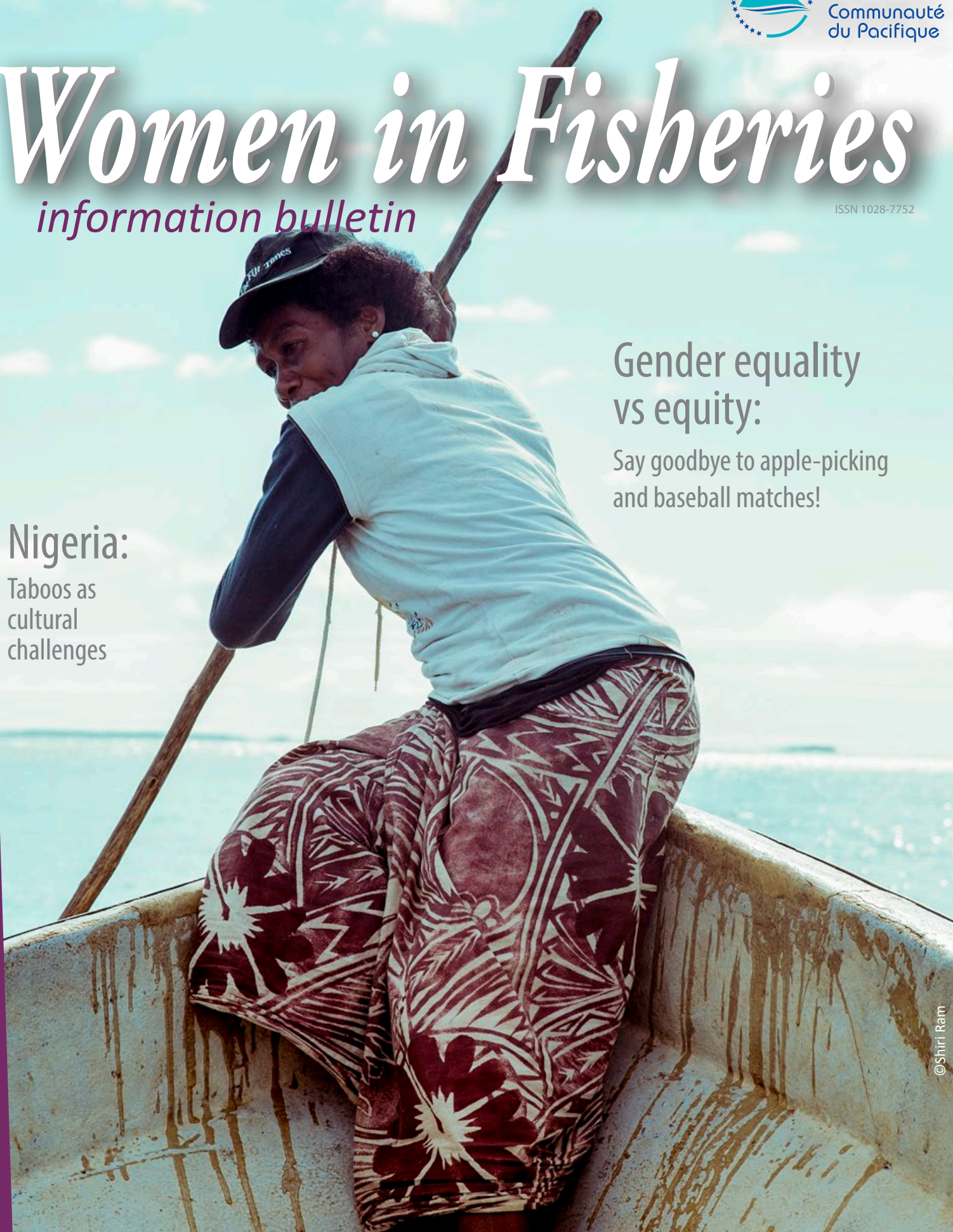
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Nigeria:

Taboos as
cultural
challenges

Gender equality vs equity:

Say goodbye to apple-picking
and baseball matches!



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Gender and tuna
industries in
the Pacific Islands

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Seagrass, culture, women and hard decisions: A case study from Kiribati

Rooti Tioti,¹ Owen Li² and Aurélie Delisle²

Introduction

Destructive fishing is a term mostly used to define activities that lead to overfishing and destruction of and/or damage to marine ecosystems and environments (Vitayakul et al. 1995). Much of the existing literature addressing destructive fishing describes modern fishing methods that involve the use of explosives, poison (e.g. cyanide), and modern fishing gear (e.g. trawl nets, manifolded gill nets, cast nets, or hauls) to augment traditional methods (Vitayakul et al. 1995; Pre-Sander and Erdmann 1998). Discussions on destructive fishing that occurs when using traditional methods, gear and materials tend to centre on techniques that involve the physical destruction of reef habitats and coastal or the use of traditional, plant-based poisons (Vitayakul et al. 1995; McManus 1997; Pre-Sander and Erdmann 1998). In this article, we present an instance where a traditional fishing method was deemed potentially destructive to the marine environment by Tokaman villagers on the island of Tabiteuea Meang in the Republic of Kiribati. This article focuses on explaining the use of the fishing method in working in Tokaman Village, how the method impacts the marine resources of the island, and the community's vision elicited during community consultation (conducted in Tokaman) by Kiribati's Ministry of Fisheries and Marine Resources Development Community Based Fisheries Management (CBFM) project in 2019 and 2020.

Tokaman Village

Tokaman Village is located close to the end of the northern part of Tabiteuea Meang Island (or North Tabiteuea, Fig. 1). Tokaman is known as one of the villages on Tabiteuea Meang to have a high density of seagrass in the lagoon – the only habitat in which *te auakeang* is practiced. The proximity of dense seagrass beds, which harbours many different kinds of fish and invertebrates that the community harvests for food, is part of the reason why *te auakeang* is among the most used traditional fishing methods on Tabiteuea Meang Island. The method is also efficient, and requires no modern technologies or materials.

Te auakeang fishing method

In Kiribati, *te auakeang* is mostly done by women on Tabiteuea Meang, an island known for its seagrass beds. The name *auakeang* is a combination of two words: *au* and *keang*. *Au* is a Kiribati root word for *auakeang*, which means 'to drag' and *keang* is the local name for seagrasses. Thus, *te auakeang* means 'dragging seagrasses'.

Materials used in *auakeang* are fashioned from the fronds of coconut trees. Approximately 15 fronds from a coconut tree are processed by removing the midrib section of the whole leaf and the midrib of each leaflet (Figs. 2–7). The cleaned leaves are then joined end to end, creating a barrier approximately 30 metres long.

The method requires a group of approximately 15 women. The barrier is carried by the women and is unfolded when they reach their fishing location over the seagrass bed. Each woman holds a section of the skirt while standing close together. The group then circles in a circle while the barrier is being moved toward the seagrass. Once the barrier is in place, the women then enter the fish within the woven barrier. Two or three women then enter the encircled area with a mat (locally known as *te paiti*) that is woven from coconut palm fronds, and scoop the trapped fish into a basket or bag (Figs. 8–10).



Figure 1: Tokaman management boundary.

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Editor's note

Most will agree that the global COVID-19 pandemic has impacted people all over the world, especially women and girls. While the Pacific remained vigilant throughout 2020, the knock-on effects on fisheries and aquaculture are starting to emerge and be better understood. Some countries such as Fiji, Solomon Islands, Tonga and Vanuatu, were also hit by category 5 Cyclone Harold, which forced people to manage a natural disaster in the midst of a pandemic. Farther afield, Mauritius dealt with a large and devastating oil spill during the COVID-19 pandemic, and in this edition of the *Women in Fisheries Information Bulletin* Josheena Naggea shares with us how these two disasters have impacted women gleaners and their families, an overlooked and neglected subgroup of Mauritian fishers.

While there have been some efforts to look at the impact of COVID-19 on fisheries and aquaculture, there is limited information available and many are still writing up their research. Dr Kate Barclay touches on this in her article on gender and tuna industries in the Pacific. I continue to encourage those who are doing work in these spaces to consider sharing their methods, approaches and findings so that others in the region and beyond can benefit. And do not forget to look at the impacts of COVID-19 through a gender lens!

Enjoy this 33rd issue of the Pacific Community's *Women in Fisheries Information Bulletin*, which includes 12 original articles from Cook Islands, Fiji, Kiribati, Papua New Guinea, Indonesia, Nigeria and Mauritius. We welcome a number of new lead authors to the bulletin from the Pacific and beyond – Ayodele Oloko, Josephine Kalsuak, Marama Tuivuna, Rooti Tioti, Josheena Naggea and Stuart Campbell. Happy International Women's Day!

Sangeeta Mangubhai

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Gender and tuna industries in the Pacific Islands

Kate Barclay¹

Introduction

Tuna fisheries are vitally important for Pacific Island countries, bringing in government revenue and jobs. Readers may wonder why it is important to think about gender in relation to tuna industries. Industrial fishing vessels are generally all-male environments, so is gender relevant? Onshore processing factories provide employment for many women, so perhaps the gender question is already solved with regard to processing? Gender is about women and men in all their diversities and about social expectations regarding male and female roles that shape people's lives. A gender lens reveals the impacts of social issues in port areas when seafarers take shore leave, and on families when men go away for long periods of time for tuna fishing work. A gender lens helps reveal opportunities and obstacles for women and men working in tuna processing and fisheries management, and directions for improving development benefits from these industries.

This paper draws on a review of published articles and technical reports on tuna industries in the Pacific as part of a project to expand the Pacific Handbook for Gender Equity and Social Inclusion for Coastal Fisheries and Aquaculture (Barclay et al. 2019). The literature on tuna industries in the Pacific shows that in some countries tuna fisheries provide hundreds of jobs for men on fishing vessels, and thousands of jobs for women on processing lines, as well as many jobs for men and women in administration, finance, quality control, service and supply businesses, engineering services, and in public sector tuna fisheries management and science (Barclay 2012; Barclay and Cartwright 2007; Gillett 2016; McClean et al. 2019). Women's roles in some areas have changed over time. Within tuna companies and government fisheries agencies, women have always worked in administrative jobs, but now are employed in technical roles and management, and even on fishing vessels. This paper looks at some of the positive and negative impacts arising from tuna industries in the Pacific Islands region.

Gender in tuna fishing

A gender lens helps reveal some of the social and economic impacts from industrial tuna fisheries. When men take up work on tuna fishing vessels, they are gone for long periods of time, and wives must pick up their absent husbands' responsibilities. From a social perspective, the families of seafarers struggle to keep their relationships intact, and there are higher rates of separation and divorce among these couples (Barclay 2008). In patriarchal societies in the Pacific, it may be difficult for female-headed households to claim their rights in community decision-making, especially with regard to land. Under poor leadership, fishing vessels with all-male crews can develop cultures that involve violence, bullying, substance abuse and unhealthy relationships with women.

The shore leave habits of tuna fishing crews, like that of other seafarers, can increase the risk of harm to crew, their families and surrounding communities. Currently, due to COVID-19

restrictions, crew members are not allowed to come ashore on leave. During the global COVID-19 crisis, international seafarers have also been unable to transfer through ports to go home for leave, so most have been onboard for many months or over a year, working long hours with few or no days off. Some welcome the fact of still having a job, but it is psychologically and physically very difficult (INFOFISH 2020). Shore leave often involves alcohol, drugs, gambling and sex, including with sex workers. Not all fishers want to "party", but it is considered normal, and because crew members live together in close quarters on vessels, it can be hard to escape, and there may be group pressure on colleagues to participate. Crew members who do not want to party need other places to go and other things to do, such as shopping malls, movie theatres and sports grounds. The ports where tuna landing or transshipments occurs in the Pacific Islands region, however, have limited recreational facilities.

Some Pacific Islanders are staunchly Christian and view sex out of wedlock and transactional sex as morally wrong. Selling sexual services is illegal in most places in the Pacific Islands. A complicating factor is that in some places, there is an historical precedent whereby visiting seafarers, usually men trading ceremonial valuables, were offered local women or adolescent girls for sexual purposes as part of cultures of hospitality and reciprocity (Crooke et al. 2016). Women and girls themselves, as well their families, expected material goods in return (Crook et al. 2016). In contemporary times, local men and women may be drawn to foreign fishing crews for access to alcohol and drugs. After initially befriending crew through drinking parties, young women may become involved in transactional sex, or they may continue partying with seafarers as friends (Vunisea 2006a).

The Republic of the Marshall Islands (RMI) is a major tuna transshipping hub, where fish are moved from fishing vessels to carrier vessels. Each year, thousands of seafarers from around Asia and the Pacific frequent the small atoll of Majuro, with a population of approximately 27,000 people. At sea, seafarers are isolated, confined and under strict rules.

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Industrial tuna fishing vessels tied up at the wharf in Noro, Solomon Islands. ©Kate Barclay

Once they arrive in port, they are approached by sex workers and offered alcohol. Sexually transmitted infections (STIs) are having a major impact on the reproductive health of both women and men in RMI (Vunisea 2006b; Crook et al. 2016).

The kinds of sexual liaisons that seafarers have in port tend to be quite risky, and crew may be under the influence of alcohol or other drugs. This means seafarers can be vectors for STIs, by bringing them from one port to another. There is a particular problem with HIV/AIDS. In some places, all or nearly all HIV/AIDS cases are linked to seafarers who have returned home and infected their wives.

Some seafarers prefer younger partners, believing they are less likely to have STIs. Women apprehended for engaging in sex work when returning from tuna fishing vessels in Kiribati and RMI in the early 2000s were between ages 14 and 26 (Vunisea 2006a, b). Children are more vulnerable to exploitation in these situations, and are less able to give true consent. The age of consent for sexual intercourse was recently raised from 16 to 18 years in Pohnpei State, Federated States of Micronesia as a result of advocacy work by a local civil society

organisation, in part to create a legal barrier against seafarers' having sex with children (Kaselehlle Press 2019).

The masculine seafaring culture in the tuna industry can lead to violence and poor treatment of women by some men, and the situation is worsened by substance abuse. Women having sex with visiting seafarers may be frowned upon by the rest of society, and so can be particularly vulnerable to gender-based violence. The criminalisation of sex work pushes it underground. Transactional sex already has a social stigma and when it is also illegal, it is driven further underground and makes people who are more vulnerable to rape and other violence less able to seek help from health services or the justice system if they are attacked (Vunisea 2006a, b). There are alternatives to criminalisation for addressing some of the gender equality and human rights problems that arise around transactional sex. In Fiji, there have been examples of successfully engaging with sex workers to empower them to protect themselves and help prevent the spread of STIs through a multi-stakeholder approach, including through church groups, youth groups, women's groups, elders' groups, and local level government groups (Arama and Associates 2000).

² The term "sex work" was coined in the 1970s as a term that sex workers preferred to the negative term "prostitute". The term "sex work" includes all genders, and highlights the fact that the activity is a form of employment. People whose relationships are on the friendship end of the spectrum, or who have little choice regarding their livelihood, may not identify as sex workers. People who feel they have no alternative may object to the term "sex worker" because it implies they choose this line of work (Crossette 2015).

The kinds of sexual arrangements between locals and visiting seafarers vary. Some are explicitly work, with the expectation that cash, fish or other goods will be paid for services.² On the other end of the spectrum, there are loose arrangements where locals are friends with crew members on fishing vessels who give them gifts. Some of these people enter into these relations of their own free will, and some people – who have little choice about it – enter through a lack of livelihood options, or coercion by family members. Power inequalities – between women and men, older and younger people, people with and without money – affect sexual relations in general, including with seafarers.

Care should be taken with the words we use to talk about these activities because of the stigma involved, and the stigma can pass on to children who are born from these relationships. Having a social stigma means that when problems happen, these people may be unwilling to seek help, or if they do seek help, they may be judged rather than given assistance. Women and girls interacting with seafarers are called shaming names such as *kabawaqa* in Fiji, *two kina meri* in Papua New Guinea, *dugong* in Solomon Islands, and *te korekoreas* in Kiribati (Sullivan et al. 2008).

Many large tuna fishing vessels transship their catches in Tarawa – Kiribati's capital – and crew members typically go ashore to purchase goods and services in town, including sex. Many people from Kiribati's outer islands come to Tarawa seeking work, or a different life in town, but not all of them find

work. Tarawa is overcrowded and has serious unemployment problems. According to the non-governmental women's organisation Aia Maea Ainen Kiribati, some families without employment in the Betio area have arrangements with Korean and Taiwanese fishing crews, whereby families make their daughters available for sex in exchange for fish, which the families eat or sell. Other children and young women may seek out crews independently on their own. Because so many of the seafarers seeking sex in port were Korean, these girls and women came to be called *te korekoreas* (Vunisea 2006a).

It should be noted that there are also many interactions with visiting seafarers that do not involve sex or substance abuse. When tuna fishing vessels are in port to offload the catch, many locals go out to the tuna boats in canoes or dinghies to sell fruit, vegetables, tobacco, soft drinks, and other items. One of the main objectives of locals is to receive "reject" fish from the tuna fishing vessels, which can then be sold in local markets or taken home to feed the family. This fish forms an important part of food systems in port areas where industrial tuna vessels transship, such as South Tarawa in Kiribati, and Honiara in Solomon Islands. Fish from the industrial vessels are sold direct in markets, or are cooked by some vendors and sold as fish and chips, curries or stews. Women are key players in the value chain, making livelihoods from the fish coming from industrial vessels (McClean et al. 2019).

Finally, it is possible that the convention of all-male tuna fishing crews may change. Pacific Islands leaders have

National Fisheries Development purse-seine vessel at Noro, Solomon Islands. ©Kate Barclay





Maintenance work on a purse-seine net in Noro, Solomon Islands. ©Kate Barclay

committed to encouraging the employment of more women in the maritime sector. In 2019, transport ministers from around the Pacific Islands region endorsed the “Regional Strategy for Pacific Women in Maritime 2020–2024”, which includes improving equal opportunity and safe working environments on vessels for women. In 2018, the National Fisheries Development, Ltd. – the only domestic-based fishing company in Solomon Islands – offered three women cadetships on tuna fishing vessels (IFC 2019). The Australian government – in partnership with Papua New Guinea (PNG) shipping companies – has supported cadetships for women to study at maritime colleges and train on vessels at sea, on a career path to become captains or chief engineers (Loop PNG 2019). The World Wide Fund for Nature – with funding from the New Zealand Ministry of Foreign Affairs and Trade – is training women fishing crews, as well as men, in sustainable fishing methods (WWF 2020).

Gender in tuna processing

Tuna processing factories in American Samoa, Fiji, Kiribati, PNG, RMI and Solomon Islands have long provided jobs for women in peri-urban or rural areas where cash-paid work for women is scarce. Cash-paid work helps women integrate themselves and their families into society by becoming eligible to use banks for savings or credit, by opening up new social networks beyond the family, and the learning opportunities

that paid work brings. Women earning money are better able to support their children’s educational needs and fulfil other social obligations that require financial contributions, such as funerals and church fundraising.

Several studies over the years have identified a range of gender issues in the tuna processing sector in the Pacific Islands region (Barclay et al. 2015; Sullivan et al. 2008; Tuara Demmke 2006). A key point is that for many Pacific Islanders, the shift to working for cash is a huge social and cultural change. Many tuna workers are the first generation in their family to have wage employment, and the social rules within the work place are very different from those of the village where they have lived previously. When women take up wage work, adjustments must be made with regard to family responsibilities.

High rates of staff turnover and absenteeism, which reduces productivity, is an ongoing issue in the tuna processing sector in the Pacific Islands (Tuara Demmke 2006; Barclay and Cartwright 2007; Barclay et al. 2015). The reasons behind high rates of turnover and absenteeism among women processors are heavily influenced by social expectations, in that women are responsible for domestic duties and childcare, even if they also work outside the home. Women experience high levels of violence in much of the Pacific Islands region, which contributes to absenteeism and low productivity.

Other factors include the fact that women are exhausted from working a “double shift” of paid work followed by “family work” when they get home (Emberson-Bain 1994; Tuara Demmke 2006; Sullivan et al. 2008).

Because women are often the primary caregivers for children, child care is very important for women who work outside the home and who have young children. Most child care in the Pacific is informal – it can be from women relatives who then share some of the cash income, or a domestic worker or “house girl”. Some places have formal child care centres. For women living away from family networks and earning a low income, it can be difficult to afford child care. A lack of affordable child care is a key factor causing women to leave work in tuna processing in Solomon Islands (Barclay et al. 2015).

Many tuna processing facilities in the Pacific Islands region are affected by the wider problem of poor housing in peri-urban areas. Overcrowding and a lack of clean water can cause health problems, which in turn increase absenteeism. Infrequent public transport can lengthen the working day by hours, and may be very expensive relative to wages. Public transport can also be unsafe for women in terms of sexual harassment or violence, especially for women finishing shifts late at night and travelling home in the dark.

The low wages paid to tuna processing workers also cause high turnover and absenteeism. Tuna processing work, like entry-level crew work on fishing vessels, pays very low wages. Some companies offer benefits that supplement wages, such as subsidised transport, opportunities for training, company credit schemes, superannuation or health insurance. The total package for most employees, however, is still low. In many countries, a minimum wage is set by the government, but this may not be enough to support a family with housing and education.

In PNG and Solomon Islands, women who have access to land for gardening or access to the sea to fish can make much more money selling food at markets than working in tuna factories. Many women start working at a tuna processing facility when they are young and wanting to try something different from village life. They typically then stop tuna work when they have children and want more flexibility in income opportunities. Women who remain working on processing lines do so because they prefer working for paid wages to village life, or because they lack farming land or their family situation means they cannot make a living from market activities (Campbell 2008; Barclay 2012; Havice and Reed 2012).

At the SolTuna factory in Solomon Islands, the management found that women ran out of money before the end of the pay cycle and were taking time off for market activities to raise money for food. Many of these women were the first generation in their family to live on a cash income, and so did not have experience in managing a household cash budget. Some wage earners also face demands from relatives to share their income. Financial literacy training has improved these women’s capacity to live on cash wages. Some started saving

for housing and other improvements in their lives. After implementing financial literacy training, absenteeism at SolTuna dropped from 18% to 12% (Pacific Women 2019).

In addition to the tuna cleaning lines where women have conventionally worked, tuna factories are able to employ women in non-traditional areas. For example, SolTuna had a scheme to train women in the maintenance and engineering department but were unable to recruit many women. The company had more success with training women in how to drive a forklift. Nako Fisheries in PNG’s Milne Bay Province has employed women in roles such as mechanics and electricians for many years (Kinch and Bagita 2003). Social perceptions about certain types of jobs being for women or for men tend to discourage people from seeking employment in non-traditional roles. If women (or men) take up work in non-traditional roles, pressures from family and workplace cultures may make women (or men) feel unwelcome, and can make it difficult to stay in these roles. One challenge for companies employing women in previously all-male areas is to factor in maternity leave and make arrangements that enable women to breastfeed their infants when they return to work. Lack of child care that is in close proximity to the workplace makes breastfeeding difficult (Barclay et al. 2015). Governments could take a role and use taxation revenue to support working mothers so that they can continue to breastfeed at childcare facilities that are near to tuna processing facilities.

In the tuna industry, women have conventionally been in lower paid and less senior roles than men (Barclay et al. 2015). This is not specific to tuna, nor to the Pacific Islands region. It occurs broadly across most societies globally. Deborah Telek is a senior manager in the South Seas Tuna Corporation processing company in Wewak, PNG (FFA 2019). Deborah started working in tuna with her father. One of the things she likes best about working in the fishing industry is the wide range of things she has to do and the variety of people that she interacts with, including different government agencies, service providers and staff. She also enjoys the opportunity to contribute to the future of the industry through international meetings such as the meetings of the Western and Central Pacific Fisheries Commission. The fact that Deborah has succeeded as a manager in a tuna company shows that it is possible for women to become senior managers, but the small number of women in such roles means there is still much work to do in making opportunities equal.

Gender in tuna fisheries management

Prior to the 1990s, fisheries management was predominantly the domain of men, with women mostly working in administrative roles. This has changed a lot in the Pacific Islands region over the last couple of decades. For example, the current Director General of the Pacific Islands Forum Fisheries Agency (FFA) is a woman, Dr Manumatavai Tupou-Rosen.³ While most senior roles such as permanent secretary within government fisheries agencies are still filled primarily by men, women have taken up fisheries management roles all

³ A profile of Dr Manumatavai Tupou-Rosen can be found at: <https://coastfish.spc.int/en/publications/bulletins/women-in-fisheries/504>



Industrial tuna fishing vessel at Noro, Solomon Islands. ©Kate Barclay

around the Pacific Islands region as well as in regional fisheries management and scientific organisations. For example, many women work in the competent authorities responsible for food safety in processed tuna exports.

Berry Muller, Chief Fisheries Officer for Oceanic Fisheries at the Marshall Islands Marine Resources Authority (MIMRA), studied marine science at college, and since joining MIMRA her career has progressed through many of the most important organisations for tuna fisheries management and science in the region (Forum Fisheries Agency 2019). Berry had a professional attachment with the Oceanic Fisheries Program of the Pacific Community, and has also been a member of the Technical and Compliance Committee of the Western and Central Pacific Fisheries Commission, and with FFA's Management Options Committee. She has worked alongside other women in fisheries, such as Lucy Joy from Vanuatu and Pamela Maru from Cook Islands, both of whom now also hold senior positions in their respective national fisheries agencies. Berry also gained valuable mentorship from men in fisheries management, such as MIMRA's Glen Joseph.

Improving gender equality and social inclusion in fisheries management and science means more than just increasing the numbers of women employed in various roles. It is about

changing the structures and cultures of organisations so that all forms of diversity are recognised, valued, accommodated and can improve the work of organisations. In the Pacific Islands region, gender mainstreaming is being carried out to improve gender equality in the public service sector and in regional organisations. Gender mainstreaming considers the impacts on women and men of any planned action, legislation, policy or programme in all areas and at all levels, as a normal part of public service work (see for example, Braun 2012).

FFA has a Gender Equity Framework that shows the kinds of things oceanic fisheries management organisations can do to promote gender equality: 1) commit to gender mainstreaming, including building capacity for gender awareness, and improving equal opportunity in recruitment processes; 2) measuring and monitoring progress towards improving gender equality and reporting on it regularly; 3) making a senior manager, the Director General of Corporate Services, responsible for improving gender equality within FFA; 4) committing to understanding and improving gender issues in fishing, processing, trading, management and anti-IUU (illegal, unreported and/or unregulated fishing) activities; and 5) encouraging gender analysis and sex disaggregated statistics for tuna industries.

Women have been less prominent in monitoring, control and surveillance (MCS) work than in other areas of fisheries management because MCS includes the role of onboard fisheries observer. Oceanic fisheries observers live and work on fishing vessels for weeks or months at a time. Only a small percentage of tuna fisheries observers in the Pacific Islands region are women. Rachael Luru from PNG has worked as an observer on tuna fishing vessels for many years (Pacific Community 2020). It is tough work, living aboard for weeks or months on tuna fishing vessels out at sea. Several fisheries observers have been beaten up, “disappeared”, or presumed murdered (HRAS 2020). It is particularly difficult for women because of the all-male environments where bathrooms and sleeping arrangements are shared and some male crew watch or touch women (or men) without their permission. Onboard cultures that allow violence and intrusion into personal space are based on ideas about how “strong” men should behave.

Promotion to higher management levels within MCS has often been dependent on having experience as an onboard observer. There are, however, non-observer roles that give valid experience for MCS, such as port monitoring, so the essential criteria for promotion are being expanded in some organisations with the result that more women are taking up MCS management roles. Recent intakes for the Certificate IV Fisheries Enforcement and Compliance Course, have included about one-third women participants (FCG ANZDEC 2018). It is likely that the work of onboard observers will be partially replaced by automated video surveillance on vessels in the future. Then, observer work would shift onshore, where the video transmission would be monitored; and would, perhaps, make for a safer work environment for both women and men.

Conclusion

Tuna industries have brought many opportunities to the Pacific, as well as some negative social impacts. Looking at gender relations in tuna industries helps illuminate how those negative impacts might be addressed, and reveals where benefits could be further improved. The health of crews, their families and communities near port areas could be improved through health and social services and a wider range of recreational activities for crew members. Training can assist low-income cannery workers to make the most of their pay, and enable women to move into traditionally male areas of work. Being the first women in all-male work areas can be difficult, so time will tell whether these initiatives succeed. Senior women working in tuna companies and fisheries management help provide role models for people imagining the possibilities of careers in this sector that is large and economically important in the Pacific.

Acknowledgements

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References

- Arama and Associates. 2000. Gender impacts related to development of commercial tuna fisheries. Suva, Fiji: Pacific Islands Forum Secretariat.
- Barclay K. 2012. Social impacts. In: Blomeyer and Sanz (publisher). Application of the system of derogation to the rules of origin of fisheries products in Papua New Guinea and Fiji. Brussels: European Parliament Directorate-General for Internal Policies. 254 p.
- Barclay, K. 2008. A Japanese Joint Venture in the Pacific: Foreign bodies in tinned tuna. London, United Kingdom: Routledge.
- Barclay K. and Cartwright I. 2007. Capturing wealth from tuna: Case studies from the Pacific. Canberra, Australia: Australian National University Press. 268 p.
- Barclay K., Leduc B., Mangubhai S. and Donato-Hunt C. (eds). 2019. Pacific handbook for gender equity and social inclusion in coastal fisheries and aquaculture. 80p. (Available at <https://coastfish.spc.int/en/component/content/article/494-gender-equity-and-social-inclusion-handbook>).
- Barclay K., Mauli S. and Payne A.M. 2015. In: Gleaner, fisher, processor, trader: Toward gender-equitable fisheries management in Solomon Islands. Krushelnytska, O. (ed). Sydney: World Bank. (Available at <http://documents.worldbank.org/curated/en/467721468187800125/pdf/98279-WP-P146728-Box385353B-PUBLIC-ACS.pdf>).
- Braun T. (ed). 2012. Stocktake of the gender mainstreaming capacity of Pacific Island governments – Solomon Islands. Noumea, New Caledonia: Secretariat of the Pacific Community. 38 p.
- Campbell H.F. 2008. The shadow-price of labour and employment benefits in a developing economy. Australian Economic Papers 47(4):311–319. (Also available at <https://doi.org/10.1111/j.1467-8454.2008.00351.x>).
- Crook T., Farran S. and Röell E. 2016. Understanding gender inequality actions in the Pacific: Ethnographic case studies and policy options. Luxembourg: European Commission. (Available at <https://doi.org/10.2841/896616>).
- Crossette B. 2015. Prostitution: A word that UN Women does not want to hear. PassBlue: Independent Coverage of the UN, 31 March 2015. (Available at <https://www.passblue.com/2015/03/31/prostitution-a-word-that-un-women-does-not-want-to-hear/>).

- Emberson-Bain A. 1994. Sustainable development or malignant growth? Perspectives of Pacific Island women. Suva, Fiji: Australian International Development Assistance Bureau. 290 p.
- FCG ANZDEC. 2018. Review of Certificate IV Fisheries Enforcement and Compliance Course, report for the Pacific Islands Forum Fisheries Agency. Auckland, New Zealand: FCG ANZDEC.
- FFA (Pacific Islands Forum Fisheries Agency). 2019. Manumatavai Tupou-Roosen leading the Pacific way. *Moana Voices* 2:1–32. (Available at <https://www.ffa.int/moanavoices>).
- Gillett R. 2016. Fisheries in the economies of Pacific Island countries and territories. Noumea, New Caledonia: Pacific Community, Forum Fisheries Agency, Australian Aid. (Available at: <https://fame.spc.int/en/component/content/article/237>).
- Havice E. and Reed K. 2012. Fishing for development? Tuna resource access and industrial change in Papua New Guinea. *Journal of Agrarian Change* 12(2–3):413–435. (Also available at <https://doi.org/10.1111/j.1471-0366.2011.00351.x>).
- HRAS (Human Rights At Sea) 2020. Fisheries observer deaths at sea, human rights and the role and responsibilities of fisheries organisations. Human Rights at Sea website. Retrieved 30 November 2020. <https://www.humanrightsatsea.org/2020/07/03/report-fisheries-observer-deaths-at-sea-human-rights-and-the-role-and-responsibilities-of-fisheries-organisations/>
- INFOFISH. 2020. InfoFish webinar on tuna fisheries in the Pacific amidst COVID-10 (25 November). Retrieved 30 November 2020. <http://infofish.org/Webinar/index.php/tuna-fisheries-in-the-pacific-amidst-covid-19>.
- IFC (International Finance Corporation). 2019. Investing in fisheries and people in Solomon Islands. International Finance Corporation (IFC, World Bank Group) website. Retrieved 30 November 2020. (Available at https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/investing+in+fisheries+and+people+in+solomon+islands/investing+in+fisheries+and+people+in+solomon+islands).
- Kaselehlle Press. 2019. Care Micronesia Foundation assists Pohnpei State to raise the age of consent to 18. Kaselehlle Press, Friday 17 May 2019. Retrieved 30 November 2020. http://www.kpress.info/index.php?option=com_content&view=article&id=1330:care-micronesia-foundation-assists-pohnpei-state-to-raise-the-age-of-consent-to-18&catid=8&Itemid=103.
- Kinch J. and Bagita J. 2003. Women in fisheries in Milne Bay Province, Papua New Guinea. *SPC Women in Fisheries Information Bulletin* 12:32–37.
- Loop PNG. 2019. Female maritime cadets aim high on high seas. Retrieved 30 November 2020. <https://www.looppng.com/png-news/female-maritime-cadets-aim-high-high-seas-87939>
- McClellan N., Barclay K., Fabinyi M., Adhuri D.S., Sulu R. and Indrabudi T. 2019. Assessing tuna fisheries governance for community wellbeing: Case studies from Indonesia and Solomon Islands. Sydney: University of Technology Sydney. Retrieved 30 November 2020. <https://www.uts.edu.au/about/faculty-arts-and-social-sciences/research/fass-research-projects/assessing-governance-tuna>
- Pacific Community. 2020. Rachael Luru, balancing being an at-sea observer and a mum. Pacific Community website. Retrieved 30 November 2020. <https://www.spc.int/updates/blog/2020/01/rachael-luru-balancing-being-an-at-sea-observer-and-a-mum>
- Pacific Women. 2019. Facing gender inequality head-on helps SolTuna succeed – Pacific women shaping Pacific development. Suva, Fiji: Pacific Women. Retrieved 30 November 2020. <https://pacificwomen.org/news/facing-gender-inequality-head-on-helps-soltuna-succeed>
- Sullivan N., Ram-Bidesi V., Diffey S. and Gillett R. 2008. Gender issues in tuna fisheries: Case studies in Papua New Guinea, Fiji and Kiribati. Honiara, Solomon Islands: Pacific Islands Forum Fisheries Agency, Pacific Islands Forum Secretariat, Secretariat of the Pacific Community.
- Tuara Demmke P. 2006. Gender issues in the Pacific Islands Tuna Industry (DEVFISH Project). Honiara, Solomon Islands: Pacific Islands Forum Fisheries Agency, Pacific Islands Forum Secretariat, Secretariat of the Pacific Community. Retrieved 30 November 2020. [https://www.ffa.int/system/files/Gender issues in P. I. Tuna Industries 1_0.pdf](https://www.ffa.int/system/files/Gender%20issues%20in%20P.I.%20Tuna%20Industries%201_0.pdf)
- Vunisea A. 2006a. Kiribati national tuna development and management Plan – Social and gender considerations. Noumea, New Caledonia: Secretariat of the Pacific Community. 30 p.
- Vunisea A. 2006b. Republic of the Marshall Islands national tuna development and management plan – Social and gender considerations. Noumea, New Caledonia: Secretariat of the Pacific Community. 31 p.
- WWF (World Wide Fund for Nature). 2020. Developing sustainable and responsible tuna longline fisheries in Fiji project. WWF website. Retrieved 18 January 2021. https://www.wwfpacific.org/what_we_do/offshore_fisheries/

Seagrass, culture, women and hard decisions: A case study from Kiribati

Rooti Tioti,¹ Owen Li² and Aurélie Delisle²

Introduction

*Destructive fishing is a term mostly used to define activities that lead to overfishing and destruction of and/or damage to marine ecosystems and environments (Veitayaki et al. 1995). Much of the existing literature addressing destructive fishing describes modern fishing methods that involve the use of explosives, poisons (e.g. cyanide), and modern fishing gear (e.g. trawl nets, monofilament gill nets, scuba or hookah) to augment traditional fishing methods (Veitayaki et al. 1995; Pet-Soede and Erdmann 1998). Discussions on destructive fishing that occurs when using traditional methods, gear and materials tend to centre on techniques that involve the physical destruction of reef habitat and corals, or the use of traditional, plant-based toxins (Veitayaki et al. 1995; McManus 1997; Pet-Soede and Erdmann 1998). In this article, we present an instance where a traditional fishing method was deemed potentially destructive to the marine environment by Tekaman villagers on the island of Tabiteuea Meang in the Republic of Kiribati. This article focuses on: explaining the use of the fishing method *te uaaakeang* in Tekaman Village; how the method impacts the marine resources of the island; and the community's views elicited during community consultations (conducted in Tekaman) by Kiribati's Ministry of Fisheries and Marine Resources Development Community Based Fisheries Management (CBFM) project in 2019 and 2020.*

Tekaman Village

Tekaman Village is located close to the end of the northern part of Tabiteuea Meang Island (or North Tabiteuea, Fig. 1). Tekaman is known as one of the villages on Tabiteuea Meang to have a high density of seagrass in the lagoon – the only habitat in which *te uaaakeang* is practiced. The proximity of dense seagrass beds, which harbour many different kinds of fish and invertebrates that the community harvests for food, is part of the reason why *te uaaakeang* is among the most used traditional fishing methods on Tabiteuea Meang Island. The method is also efficient, and requires no modern technologies or materials.

Te uaaakeang fishing method

In Kiribati, *te uaaakeang* is mostly done by women on Tabiteuea Meang, an island known for its seagrass beds. The name *uaakeang* is a combination of two words: *uaa* and *keang*. *Uaa* is a Kiribati root word for *uaakinna*, which means “to drag” and *keang* is the local name for seagrasses. Thus, *uaakeang* means: “dragging seagrasses”.

Materials used in *uaakeang* are fashioned from the fronds of coconut trees. Approximately 15 fronds from a coconut tree are processed by removing the midrib section of the whole leaf and the midrib of each leaflet (Figs. 2–7). The cleaned leaves are then joined end to end, creating a barrier approximately 30 metres long.

The method requires a group of approximately 15 women. The barrier is carried by the women and is unfolded when they reach their fishing location over the seagrass bed. Each woman holds a section of the skirt while standing close together. The group then encircles an area using the barrier before moving toward each other and closing the circle further, thereby trapping the fish within the woven barrier. Two or three women then enter the encircled area with a mat (locally known as *te inai*) that is woven from coconut palm fronds, and scoop the trapped fish into a basket or bag (Figs. 8–10).



Figure 1: Tekaman management boundary. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/AirbusDS, USDA, USGS, AeroGrid; IGN and the GIS User Community



Fig 2. Cleaned coconut leaves are torn from the rachis (main stem).



Fig 3. One coconut leaf ready for use.



Fig 4. Two cleaned coconut leaves attached with a string at one end.



Fig 5. Two cleaned coconut leaves connected to one another.



Fig 6. More coconut leaves are attached and the rolling of *te uakeang* starts.



Fig 7. *Te inai* fishing mat weaved from coconut materials.

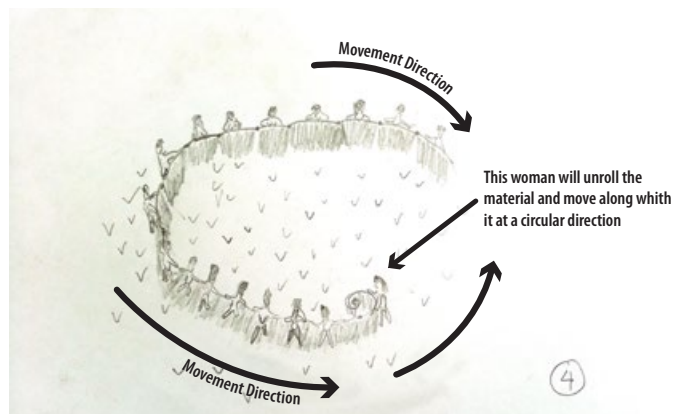


Figure 8. Step 1: Unrolling the *te uakeang* skirt.

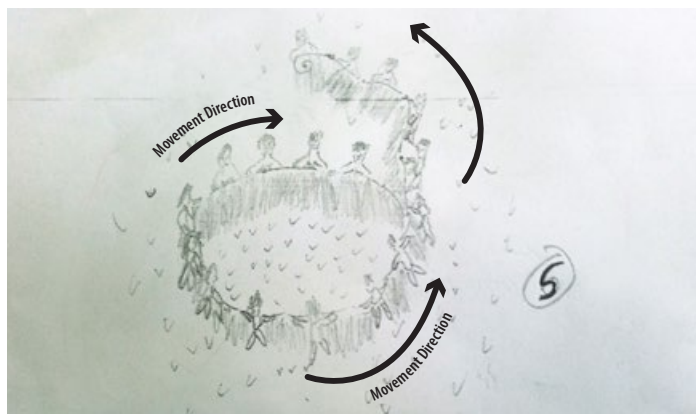


Figure 9. Step 2: Women moving closer together and closing the circle.

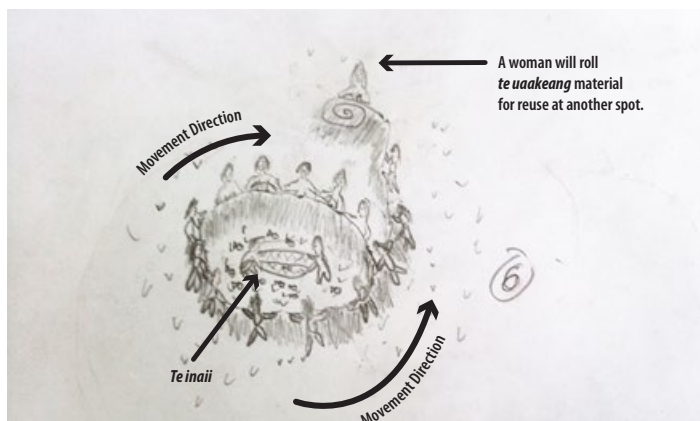


Figure 10. Step 3: Scooping the trapped fish with *te inai* and moving to another location.

Inclusion of women in the process

The village of Tekaman was visited by the Ministry of Fisheries and Marine Resources Development CBFM team under the recommendation of the Tabiteuea Meang Island Council, and the invitation made by the village itself to the CBFM project. The purpose of the visit was to develop the village's fisheries management plan, which addresses issues regarding the village's marine resources. The CBFM consultation process considered the value of gender equality and social inclusion throughout a series of meetings attended by men, women, elders and youth in the village where discussions were held (in separate groups) before a joint consultation in front of the whole community for the finalisation of the management plan. Because the cultural conventions surrounding community decision-making are hierarchical, and largely

driven by male clan heads, the representation of women was limited. Therefore, the CBFM team's first consultation under the village *mwaneaba* (Kiribati traditional meeting house) described the project objectives of inclusiveness, and made an effort to break down the barriers that cause women to be overlooked, owing to their status, by inviting them to contribute and work together as a social group. It was through the endorsement of this idea by the *mwaneaba* (also refers to the people making decisions under a village traditional house) that the CBFM team was able to invite women to participate in the community consultation. The involvement of women in this consultation was uplifting for the women of Tekaman who now felt they had a mechanism to speak and freely express their opinions, and contribute to decisions on fisheries management, rather than feeling that they needed to remain silent because of their status. The voices and arguments of the women of Tekaman were recorded by the team, and taken into account when the content for the village fisheries management plan was being finalised. The concerns and views of the women were, therefore, considered and integrated into the final village plan, and successfully informed decision-making regarding the *uaakeang* fishing method. The following sections provide details on the engagement process, points of view of different community groups, and the ultimate decision on the fishing method as a rule in the fisheries management plan.

Cultural and social impacts of *te uaakeang*

During the CBFM team's visit to the island in 2019 and 2020, the people in Tekaman Village were in conflict over their understanding of the impacts of this traditional fishing method. Some argued that *te uaakeang* was destructive to seagrass, and therefore needed to be banned. Others argued that the practice should be maintained because of its cultural importance and social contributions to the community of Tekaman.

I-Kiribati culture is changing with population growth and increased modernisation, and both are contributing factors to the disturbance of cultural ways of living and the associated methods of subsistence and sustainable living. Older members of the community were well aware of the damage that *te uaakeang* could cause, but felt the method was culturally important, and needed to be practised in a culturally appropriate way. An older woman (*unaine*) from the village stated that the use of *te uaakeang* in Tekaman might be one reason for the decline in seagrass cover in the lagoon. She continued by stating that the way people use *te uaakeang* nowadays is quite different to how it was used in the past, and that people today are abusing the method. Traditionally, women were more sensitive when walking on the seagrass. They also did not go fishing in big numbers. According to one of the oldest men (*unimwane*) from the village:

When using "te uaakeang" method, older generations tend to control the amount of fish harvested by repeating the method once or twice over a small area before turning back home. Additionally, the method is only used in times when needed such as during festivals or feasting events. Older generations knew that harvesting fish in large quantities especially, undersized fish can contribute to fish decline in the village lagoon.

The same respondent stated that the new generation is moving away from their cultural and community values, and becoming more individualistic. The interests of the individual were over-riding the interests of the community and "overfishing and ignorance to care for marine resources become part of a daily routine". He later added that, without our culture, our connection with the land and ocean will decline. As a consequence, parents and elders should have a sense of responsibility for ensuring cultural values are taught to the younger generations. The major argument here, was that *te uaakeang* is part of the community's culture, and it needs to be preserved because it is part of their story. People should, however, be more cautious and conscious when using this method as there will come a time when there is a need to use it.

Some community members also argued that *te uaakeang* is important to the social developments of women in the village. The gathering of women during their day of fishing was not only seen as important for feeding families, but also regarded as a day for women's fellowship and the sharing of stories. A woman in her late forties commented that instead of spending their day playing bingo, women were doing something important for their families. The argument here, was that the village needed to come up with a strategy for making this fishing method more sustainable and less destructive in order to avoid the loss of livelihood for women who rely on *te uaakeang* for that.

Environmental impacts and the final decision

In spite of suggestions made by elders and small groups of men and women from the village to preserve *te uaakeang*, the majority of the villagers of Tekaman decided to ban the method during the CBFM team's visit in May 2020. The main reason was that *te uaakeang* was too destructive, and it would be difficult to manage its use. In one statement from a woman who had been using this method for a long time:

...when using this method, one cannot tell the other [person] to manage their catch or to release undersized fish. Everyone is trying to collect as much as they [can] to feed their families for that day without thinking about tomorrow. Every woman in the fishing group expects to have enough share from every catch...

The same woman further stated that *te uaakeang* needed to be banned before it was too late to revive marine resources and save seagrass habitat in the village's lagoon.

The final decision to ban *te uaakeang* was made when the village's management plan was laid in front of the whole village to ensure a consensus was reached. Discussions continued about the banning of *te uaakeang*, with one strong argument made by women who had frequently used the method, stating that *te uaakeang* had been contributing to the declining health of seagrasses and fish populations in their lagoon. During the discussion, women later stated that the number of women using this method could exceed 15, which meant a greater number of people treading upon and damaging the seagrass. This argument was supported by an *unimwane* from Tekaman who said that "in every spot where

women carry out *te uakeang* fishing method, seagrasses would always be seen to be either squashed or uprooted”.

Moreover, *te uakeang* does not take into account the size limits of fish, the number of fish harvested or the impact on seagrass cover. The purpose of the method itself was deemed destructive because it aims to catch every fish trapped within the barrier, and damages seagrass beds in the process. According to a woman who had frequently used the method, the fish most commonly caught ranged between 5–10 centimetres in length. Throughout the discussion, many (mostly young people) were seen standing up, and supporting arguments citing the destructive nature of the method. The robust debate between parties that either supported or challenged *te uakeang* broadened the whole village’s understanding of the method’s impacts upon Tekaman’s marine resources. As a result, the village reached a consensus that the negative impacts of *te uakeang* currently out-weighed its benefits to the community, and should be banned until further discussion could be held on ways to properly monitor its use and impacts.

Conclusion

The CBFM team’s consultative approach enabled the people of Tekaman to have open and transparent conversations about the use of *te uakeang*, and helped the community reach a consensus regarding the technique. There were concerns that banning *te uakeang* could negatively impact the social lives of women in Tekaman Village, but the community could not see how the use of the method could be managed sustainably at present. On an island where equality is the basis of the traditional culture, the method was banned for the benefit of everyone in the village. As was seen through the consultation by the CBFM team, the whole village came to realise the importance of managing the marine resources for their people. With a new perspective, the village has agreed to reset their agenda to focus more on conserving their marine resources, particularly for the recovery of seagrasses, in order to enable fish population to regenerate. Although *te uakeang* may not seem destructive to outsiders, the process allowed the village to discuss the technique’s pros and cons during the drafting of the village management plan (among other decisions). The process also allowed for the decision to be based on input from the primary users (i.e. women) of the technique. During the implementation of the community rules, discussion between the community and the CBFM team will continue to be held about *te uakeang* to find ways to monitor its use and its impact, which could lead to a lift of the ban. However, those women who are no longer able to presently use *te uakeang* will be supported to explore more sustainable fishing activities such as net fishing using appropriately sized mesh, and gleaning. These new fishing methods are expected to be socially and environmentally friendly at the same time.

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References

- McManus J.W. 1997. Tropical marine fisheries and the future of coral reefs: A brief review with emphasis on Southeast Asia. *Coral Reefs* 16(1):S121–S127.
- Pet-Soede L. and Erdmann M. 1998. An overview and comparison of destructive fishing practices in Indonesia. *SPC Live Reef Fish Information Bulletin* 4:28–36.
- Veitayaki J., Ram-Bidesi V., Matthews E., Gibson L. and Vuki V. 1995. Overview of destructive fishing practices in the Pacific Islands region. Secretariat of the Pacific Regional Environment Programme, Reports and Studies Series no. 93.



A summary of key issues from the Cook Islands gender and fisheries assessment

Natalie Makhoul¹

Background

In October 2019, the Pacific Community (SPC) – through a collaboration between its Division of Fisheries, Aquaculture and Marine Ecosystems, and Social Development Programme – conducted a gender assessment of the fisheries sector in the Cook Islands. This assessment was funded by the European Union and the Government of Sweden through the Pacific-European Union Marine Partnership (PEUMP) programme and by New Zealand through the “Improving fisheries food security and sustainable livelihoods for Pacific Island communities” programme.

The assessment was conducted in order to support the Cook Islands Ministry of Marine Resources (MMR) and other government line ministries to strengthen their institutional capacity to:

- integrate a gender and social inclusion perspective into internal and external operations;
- respond to and identify gendered needs of various marine resource stakeholders;
- provide a strong evidence base of key issues that concern women and men differently; and
- adopt a gender-sensitive approach into MMR’s key areas of work.

The gender and fisheries assessment is the first comprehensive gender-focused analysis of the coastal fisheries sector in the Cook Islands. It analyses the fisheries sector with regards to gender roles, aiming at an increased understanding of who is doing what, who is accessing and using which resources or equipment, and who is occupying which fisheries spaces, and targeting which species. In-depth case studies of three selected islands – Rarotonga, Aitutaki and Mangaia – were conducted. The case studies identified cultural influences on gendered roles in the fisheries sector, as well as changes and reasons for these changes, while also pointing out island-specific particularities. Key areas of investigations also included gendered roles with regards to fishing for a living, and challenges and opportunities for improved economic benefits for women and men from fishing and pearl farming, including value-added operations. In addition, the assessment provided an institutional analysis of MMR and its overarching policy framework with regards to integrating gender perspectives.

Methodology

The assessment was informed by an extensive literature review and field visits to Rarotonga, Aitutaki and Mangaia. Additional information on gender-related issues was gathered by a separate SPC team during field visits to Rakahanga and Manihiki islands, and this information was used to inform the overall gender analysis. Interviews and focus group discussions were conducted with identified stakeholders with support from the Cook Islands government and fisheries extension officers. The survey methodology was developed by SPC’s Social Development Programme, and includes a gender mainstreaming capacity assessment as well as a field visit questionnaire. This follows a consistent structure that allows comparative studies of gender and fisheries assessments in Pacific Island countries, with a view to identifying regional gender and fisheries development needs, gaps and trends.

The importance of the fisheries sector

The Cook Islands fisheries sector is a significant source of economic and dietary needs for the country. In the outer islands, fish and seafood consumption is 62.2% while in urban Rarotonga it accounts for 37.8% (Cook Islands Government 2016). The demand for fish and other marine resources continues to exceed local availability demands because of the growing tourism sector and decreasing household participation in fishing activities (only 18% as per HIES, 2016). The growth of the fisheries sector and its contributions to people’s livelihoods faces obstacles from the following:

1. Small population that is scattered over large distances does not allow for an economy of scale.
2. High out-migration resulting in the de-population of outer islands, specifically those age groups that are typically engaged in fishing activities.
3. Lack of connecting infrastructure, which has resulted in constrained market access for marine resources and value-added products from these resources.

Gender roles across the fisheries sector

In the Cook Islands, gleaning is mainly carried out by women, while men target pelagic species in deeper waters. Gleaning is done during low tide and within prescribed confines but generally in shallow water along the inner reef, beaches and lagoon. Women often go in pairs or in small groups to forage

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Woman gleaning from shallow reef flats around Mangaia Island. ©Tuaronga Matepi - MMR Cook Islands

for crustaceans, clams, sea cucumbers, urchins, octopus and small fish species. Collective gleaning is also considered an enjoyable activity for some women who use the time for socialising, networking or simply as leisure time. In the outer islands, where a subsistence lifestyle remains strong, more women own or have access to simple paddle canoes that they use to fish in the calm lagoon, reef flats and inside the fringing reef. Compared to men, women use very basic “fishing” equipment, which includes buckets, metal spoons, knives, screw drivers, bamboo sticks or occasionally home-made scoop nets. The lack of female ownership of motorised boats and limited access to such vessels contributes to having a small number of women engaged in pelagic fishing. Women’s traditional roles and responsibilities in the home (e.g. child care), or in supplementary income-generating or subsistence activities (e.g. sewing, producing natural oils, handicrafts), and gardening impede their involvement in what is both time- and labour-intensive work. Local customs and traditions continue to play a role in the acceptance of women’s engagement in deep-sea fishing, and this can vary from island to island.

Traditional practices in the past that influenced the gendered use of marine spaces

The gendered use of different marine environments is well illustrated in historical practices where the cord of a male child was cast into the sea. This was done to ensure that the child would develop into an expert fisher and sailor by identifying ocean waters outside the fringing reef as men’s sphere. In contrast, the cord of a female child was cast into the lagoon, thus allocating this space to women (Buck 1932).

Fishing is regarded as a community affair and accompanied by traditional practices that are gender specific. For example, men dominate in fish harvesting and fish filleting, while women are involved in food preparation, cleaning, cooking, value adding, marketing and selling, and act as the primary decision-makers regarding the distribution of excess catch among community members.

It is common for young children to accompany their mothers, aunts or grandmothers during fishing activities. This is often the first source of traditional fishing and broader environmental knowledge that gets passed on to the next generation.

Economic activities from fishing are often undertaken through a husband and wife partnership. For example, the husband catches and supplies the fish, while the wife manages their small- to medium-sized business, such as a market stall or serves as a wholesaler to hotels or restaurants.

Women are responsible for preparing traditional (as well as non-traditional) seafood dishes for home consumption, cultural and social functions, or fundraising activities. A growing number of women operate catering businesses that serve local fish and other seafood-based dishes. Others sell raw products and/or add value to their seafood through processing methods such as cooking, fermentation and marination. Added flavours such as lemon and grated

services. Boat ownership by gender has not been documented, although men appear to be the main boat owners. However, it was not unlikely between spouses to have a shared or joint boat ownership.

Fish and seafood consumption has decreased over time in the Cook Islands. The main reasons include high prices for fish, the deterioration of lagoon quality associated with a high risk of ciguatera poisoning, water quality concerns from human and pig effluent, and changes towards more modern lifestyles that influence food consumption trends (Pinca et al. 2007). In addition, the progressively growing tourism-based industry in Rarotonga has created more pressure and competition between community members fishing for subsistence purposes while the demand for fish and seafood

CASE STUDY

A family-based fish business in Rarotonga run by an outer islands couple

A married couple in their 40+ from the outer islands has been living in Rarotonga for more than 10 years. The wife reports on their small-scale fish business:

My husband goes out fishing almost every night targeting red snapper, flying fish and tuna. Sometimes we get fresh fish from the outer islands to sell it in Rarotonga, mainly parrotfish or mullets. In return our family in Palmerston sends their shopping order for mainly food items from Rarotonga. It is a give and take. Fishing is our main source of income, but I also do some planting with my daughter. My husband supports our planting activities. We sell some of the vegetables and fruits but it is more for us to eat – we are a big family and more relatives have moved to Rarotonga to make a better living and they often stay with us. I sometimes go and fish myself to support my husband. I would collect shellfish to sell. I usually sell the whole fish but sometimes I also sell filleted fish along the roadside. We would only sell tuna filleted because there is demand for it and I can get a better price. The flying fish we don’t clean it – just sell it as it is. My husband usually fillets the tuna – only the big and long tuna – and I am responsible for warping, packing and selling. We advertise our fish on Facebook, especially if we have filleted tuna. I don’t sell at the main market, just along the roadside. I prefer that because I can be more flexible, and I don’t have to compete with others. The main market is only on Sunday, but we sell almost daily. There are also too many people selling at the market and people know each other and support their own family/relatives. We had to get a new outboard motor when it was broken. We saved money and bought a new outboard motor from New Zealand. We were able to pay it off from our fishing business, we can pay all our bills, our petrol and our daily expenses. If the fish supply is constant, we can make a good income from our fish. We can make NZD 700 from fish in a week and if we have a good week, we can even make NZD 1000 in a week.

We eat fish almost every day. We live off the fish off-cuts from our business and we often give some of the off-cuts away to family and friends when it is plentiful.



A woman gleaning on a reef flat in the Cook Islands. ©Tuaronga Matepi - MMR Cook Islands

for restaurants and hotels is continuously growing. The increase in the number of restaurants, snack bars, hotels and food stalls has opened additional markets for women fish vendors who sell directly to the eateries. Women are the main fish vendors at Rarotonga's central market, selling their husbands', partners' or sons' catches. Fish is mainly sold on Sundays, either fresh, cooked or packaged for take away, or as direct serves. Women also sell their own harvest, mainly invertebrates, which they turn into local dishes that are considered a delicacy. Some women also sell fresh fish or filleted fish along roadsides in township areas so as to sell the fish straight on the spot at any time of the day when the catch is fresh, in order to avoid competition at the main Sunday market. More women have been observed selling fish as a supplementary livelihood activity. Although Rarotonga's population is less dependent on marine resources than people from the outer islands, family fishing businesses still provide a vital supplementary livelihood option in light of the high cost of living in Rarotonga. In some rather rare cases, it can be the only income source for families who have less options in accessing formal labour markets.

The above case study illustrates how fishing for a living is still a lucrative livelihood option. The case study demonstrates how the success of a fishing business relies on joint labour between couples and, more broadly, family support. Tasks are clearly gender specific: deep-sea fishing is undertaken by the husband, while selling is the wife's responsibility. However, fish filleting is done by the husband despite this usually being a woman's post-harvest activity. Women concentrate on packaging and selling, and managing finances. Being resourceful, such as using fish off-cuts, and gardening, is a contributing factor to the success of a family business. The wife's additional harvest from gleaning and the sale of fish from the outer islands, are additional means to overcome irregularities in fish supply chains.

coconut are main ingredients for the preparation of traditional delicacy foods. Some of the traditional seafood dishes are considered rare delicacies because of limited resources, seasonal availability, and fewer women gleaning for these delicacies (e.g. invertebrates). These delicacies are much sought after and more women are selling them at local markets or directly to relatives or friends. These foods are prepared by women using women's invertebrate catches, in particular turban snails, great worm-shells, mature gonads of the sea cucumbers, or giant clam meat.

Food preservation – using local methods such as salting, bottling, drying, smoking or multi-stage heating in a traditional earth oven – is also part of women's responsibilities, although this tradition is now rarely practised because it is time-consuming and physically taxing process and has been replaced by refrigeration. Only in some of the northern islands do women still preserve food such as smoking fish or making jerky, sometimes with added flavours. Not surprisingly, smoked or dried fish are both popular, yet rarely available, particularly amongst the local population in Rarotonga. When it is available, it is shared freely among family, or is quickly sold within family networks or through pre-orders, mostly before reaching markets.

Island-specific gender analysis of the coastal fisheries sector

Rarotonga

Women in Rarotonga mainly glean for sea cucumbers, giant clams and other shellfish, tube-like worm-shells, sea urchins, octopus and crustaceans. Deep-sea fishing is almost exclusively done by men. Reef fish are avoided by both women and men because of the high incidences of ciguatera in these species. More people in Rarotonga own or have access to boats due to better infrastructure there (e.g. jetties, roads, maintenance services), more capital and better maintenance

In Rarotonga, changes towards more urban or sophisticated lifestyles and time constraints are the main reasons why fewer women undertake gleaning activities and post-harvest-related activities, including the preparation of local delicacies. Despite the reported decrease in the number of women fishing, there has been contradictory observations suggesting that there is still a significant number of women who undertake fishing activities, albeit more on an *ad hoc* basis, and spending less time fishing.

Aitutaki

Many women on Aitutaki fish, and most women see fishing as a key subsistence activity to supplement other income sources that, on their own, would not afford them a decent standard of living. On average, women reported that they went out fishing twice a week, while some said more often; a few said they fish only occasionally. Those women went fishing more than twice a week highlighted that they are not involved in communal or church groups because their priority was to fish and garden in order to support their family. Contrary to this, women who are active and engaged in community affairs mentioned time constraints as barriers to undertake more fishing activities. Another time constraint is child care, mainly reported by women over 40 years of age who highlighted the high expectations of their grandparents' generation – mainly grandmothers – to look after their grandchildren. Additional income sources most common to women on Aitutaki are planting, formal employment within the hospitality or tourism sector, catering businesses, handicraft making, and traditional oil production. Formal employment jobs in the public sector are limited and fewer women appeared to have accessed these jobs than men. Women reported to be involved in most types of fishing such as reef gleaning during low tide, rod or line fishing, or netting in the lagoon using canoes. The least popular fishing methods for women were spear fishing and deep-sea fishing, which are typically done by men. Most of the catch by women is for home consumption, and only occasionally do women sell their catch to restaurants or at the main market, despite the growing demand for fish by the tourism industry and local market. Women also cast for reef fish, mentioning that parrotfish were the most sought-after reef fish – both for home consumption and for commercial purposes.

Most of the women who are well known fishers on the island are older women, many of whom are single, widowed, divorced, separated or their partners or husbands live overseas for work. This results in many female-headed households. About 60% of the female fishers interviewed were heads of households or lived within a female-headed household; almost 50% of these female fishers were over 60 years of age, with some showing signs of age-related disabilities. Due to high out-migration of the working-age segment of the population, women have had to take on more responsibilities. Nowadays, a significant number of women access and own their own boats, although none had a motorised boat (at the time of the study) and only a few women fished beyond the reef. Some mentioned the poor condition of their canoes and described them as “run down, old, leaking – but still doing the job”.

The example below illustrates the importance of fishing for a living for elderly, female-headed households in terms of their livelihoods, financial independence and for food security. Out-migration has placed greater pressure on women to provide for their families, and it is quite acceptable for women to continue fishing as they get older. Most women have their own boats and fishing gear and have learned to be independent, with little reliance on traditional support networks, remittances or seeking men's support. Undertaking multiple and diverse livelihood activities (e.g. gardening, handicrafts, natural oil production and sewing) is another common factor that enables women to have an adequate and sustainable income, and sometimes opportunities for additional cash on an “as need” basis. Again, livelihood diversification is a resilience-strengthening factor if time burdens for women and men are not stretched. The younger generation is understandably more active and eager to explore economically (more) lucrative income-generating activities in the fisheries sector. Younger fisherwomen are more likely to sell fish, explore additional markets, and invest in small businesses.

Mangaia

Limited formal employment opportunities, a high out-migration rate, and extraordinarily high prices for imported foods and goods make the Mangaia community highly dependent on its marine resources for subsistence (Pinca et al. 2007). These socioeconomic challenges demand a high degree of self-sufficiency in obtaining food across all population groups. As a result of demographic changes, Mangaia has a high proportion of elderly people (21.4% of the population was over 60 years of age, compared with 7.8% on Rarotonga in the 2011 census) and other community groups more exposed to hardship such as persons living with a disability and other health concerns. Women on Mangaia are well known for their gleaning activities. Women of all age groups undertake gleaning for a wide variety of invertebrates. Invertebrates are primarily caught for subsistence but there is a growing number of women who sell their harvest at the main market. They also prepare local delicacies and sell these in small containers that cost between NZD 10 and NZD 25,¹ depending on the size. Women's harvests from gleaning are very popular and are usually the first produce to be sold out at the market. Some of the women sell their raw harvest, or containers with local delicacies, in Rarotonga through family contacts. Men are mainly deep-sea fishers but also undertake reef fishing. A popular reef fish that can be found in the lagoon and is caught by men is the lowfin drummer. Flying fish is another sought-after species by men and young boys. Spearfishing is a common method used by many men, especially younger men. Only women undertake deep-sea fishing, and they typically have access to motorised boats because their husbands or partners own them, or they have access to community boats.

As with Aitutaki, many women over 60 still reef glean in order to supplement their pension. However, more women of all ages and across social groups were found to reef glean on Mangaia than on Aitutaki where women fisher groups appeared to be less diverse. This underlines the higher reliance

¹ Equivalent to USD 7 and 10 and AUD 9 and 14



Young boys showing their catch after a *rau'i* opening. ©Tuaronga Matepi - MMR Cook Islands

on marine resources across community groups on Mangaia. Interestingly, women fishers on Mangaia do not (or rarely) fish in the lagoon, mainly because of the island's geology and bathymetry. Mangaia is a raised coral atoll that has a rough and shallow outer fringing reef that makes sea access to the already small lagoon very difficult. For this reason, women primarily glean, net fish or walk along the reef with spears to catch fish.

Recommendations

The gender and fisheries assessment provides recommendations to assist MMR and its stakeholders with progressing a gender-integrative approach to their work. The recommendations also provide guidance for the PEUMP programme and its partners to identify activities, areas or types of support that are most likely to address inequalities, and allow more equal benefits and participation of women, men and marginalised groups. The recommendations cover seven key areas:

1. Financial literacy, business skills and boat master training for women fishers operating businesses.
2. Exploring value-adding processes of marine resources (e.g. trochus, pearl shells, other shells), including investment in various processing steps.
3. Maintaining and formalising career pathways and youth empowerment initiatives.
4. Promoting tourism-related sustainable marine businesses in Rarotonga and Aitutaki.
5. Mangaia-specific recommendation: enabling more inclusive platforms for decision-making on coastal

fisheries management, and providing active support to women to access MMR's small grant scheme for a collective application.

6. Ensuring MMR's small grants scheme includes gender-sensitive and other socioeconomic considerations for hardship, and improved reporting on gender, including sex-disaggregated data.
7. Exploring and developing export markets for the pearl industry while investing in strategic marketing and branding strategy for women with retail training needs.

This is only a brief list of recommendations because the gender and fisheries assessment has yet to be finalised in close liaison with MMR.

References

- Buck P. 1932. *Ethnology of Manihiki and Rakahanga*. Bernice P. Bishop Museum Bulletin No. 99. Honolulu: Bernice P. Bishop Museum. 238 p.
- Government of the Cook Islands. 2016. *Household, Income and Expenditure Survey*. Rarotonga: Cook Islands Government.
- Government of the Cook Islands. 2011. *Cook Islands Census Report*. Rarotonga: Cook Islands Government.
- Pinca S., Awira R., Kronen M., Chapman L., Lasi F., Pakoa K., Boblin P., Friedman K., Magron F. and Tardy E. 2009. *Cook Islands country report: Profiles and results from survey work at Aitutaki, Palmerston, Mangaia and Rarotonga (February and October 2007)*. Noumea, New Caledonia: Secretariat of the Pacific Community.

How is gender included in small-scale fisheries management and development?

Exploring approaches, barriers and opportunities in Melanesia

Sangeeta Mangubhai¹ and Sarah Lawless²

Fisheries, like other economic sectors, is not immune to gender inequality, and women tend to experience the brunt of inequality as undervalued and under-represented fisheries actors within small-scale fisheries (SSF) management and development. Different approaches to address gender inequality, particularly women's marginalisation in the fisheries sector, are gaining momentum. We undertook a study to gain a more comprehensive understanding of these efforts, including the gender approaches employed and the barriers and opportunities for fisheries organisations in Melanesia. This article is a short summary of our open access scientific paper published in the journal Marine Policy.³

Introduction

Small-scale fisheries (SSFs) are critical to the provision of food and nutrition security and the livelihoods of coastal communities worldwide (World Bank 2012). Like other sectors, the SSF fisheries sector is not gender neutral or immune to gender inequality (Harper et al. 2020). Women make up an estimated 47% of workers (56 million women) in the SSF sector, operating along fisheries value chains worldwide (World Bank 2012), and contribute to around half of the annual coastal fisheries catch in the Pacific (Harper et al. 2013). Despite women's substantial involvement along fisheries value chains, their contributions are often overlooked, undervalued and under-reported (Harper and Kleiber 2019).

Efforts to address gender inequality, however, particularly women's marginalisation in the fisheries sector, are gaining momentum. This attention is evidenced by increased gender research undertaken in the sector (e.g. Mangubhai et al. 2017; SPC 2018a, b, c), and the growing number of articles in the Pacific Community's (SPC) *Women in Fisheries Information Bulletin*. Financial investments toward gender outcomes are also increasing, including the launch of the EUR 45 million Pacific-European Union Marine Partnership programme, which has established a unit to integrate gender and broader human rights-based approaches to support the sustainable management and development of fisheries. In terms of guidance, the "Pacific Handbook for Gender Equity and Social Inclusion in Coastal Fisheries and Aquaculture" was launched by SPC to assist managers and practitioners include gender and broader human rights-based approaches into their sectors and is being used to train and sensitise regional organisations (Barclay et al. 2019).

Despite these various research efforts, investments and guidance, little is understood about the gender approaches being applied, including barriers faced by fisheries organisations that are tasked with promoting equality. Our study sought to understand how *gender inclusion* was being applied in SSF by fisheries organisations. This level of analysis is crucial to ascertain a benchmark for gender in practice, but also to identify opportunities for achieving improved social and fisheries outcomes.

Methods

Our study was conducted in Fiji, Solomon Islands and Vanuatu, between August 2018 and February 2019. We conducted 68 interviews with key informants working in SSFs to document gender inclusion approaches applied within projects, programmes and organisations. Our investigation also sought to understand both perceived and actual capacity for gender inclusion, and the main barriers to gender inclusive practices. Key informants were representatives of government ministries or authorities, local and international non-governmental organisations, and regional organisations and global agencies working on SSFs regionally, in at least one of the three study countries (Table 1). To obtain gender balance in the sampling design, we selected a female and a male informant to interview from each organisation where possible (in total 39 women, 29 men interviewed). We conducted 40 interviews with both authors present, recorded independently in writing, and jointly scribed into Microsoft Excel. The remaining 28 interviews were conducted with one author present.

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³ <https://www.sciencedirect.com/science/article/pii/S0308597X20309337>

Table 1. Gender capacity and access to expertise (experts, organisations) and training over the last 12 months for fisheries organisations and practitioners.

Reach approaches are defined as those that explicitly focus on women's participation in activities or projects (e.g. attendance at meetings, workshops or training).

Benefit approaches provide specific benefits to women (e.g. access to resources) to increase their wellbeing, such as improved food security or income generation.

Empower approaches aim to increase or strengthen the ability of women to make their own strategic life choices (e.g. related to the use of income), and to exercise those choices.

Transform approaches aim to challenge underlying gender norms (both visible and invisible), structures and power dynamics that create and reinforce inequalities.

Type	Respondents		Gender training	Gender capacity ranking		
	#Women	#Men		Very Poor, Poor	Good/Poor	Very Good, Good
Fiji						
Experts	4	3	14%	0%	100%	0%
Government	4	2	0%	17%	33%	50%
Local NGO	4	1	40%	0%	20%	80%
International NGO	5	3	38%	17%	17%	67%
Solomon Islands						
Experts	2	0	0%	50%	50%	0%
Government	3	1	75%	0%	25%	75%
International NGO	3	4	50%	0%	16%	84%
Vanuatu						
Experts	2	1	0%	0%	50%	50%
Government	2	3	20%	20%	0%	80%
Local NGO	2	1	33%	0%	33%	67%
International NGO	1	1	50%	0%	50%	50%
Regional organisations	3	8	27%	0%	36%	64%
Global agencies	4	1	80%	20%	20%	60%

This approach reduced biases in interpretation, and allowed for cross-checking and validation of responses by two independent researchers where possible.

During the interviews we asked respondents to describe the specific approaches used by their organisation to include gender within SSFs management and development projects and programmes. To assess the extent these approaches were aligned with gender best practice, we applied a framework designed for community-based agricultural projects in order

to determine whether gender inclusion approaches were likely to “reach”, “benefit”, or “empower” women's lives (Fig. 1, Theis and Meinzen-Dick 2016; Johnson et al. 2018). We selected this framework because it reflects current thinking on gender inclusion and its successful application in the agricultural sector. It is important to note that these approaches are not linear or sequential; instead, they should be viewed as approaches that, in combination, play an important role in the inclusion and integration of gender into practice.

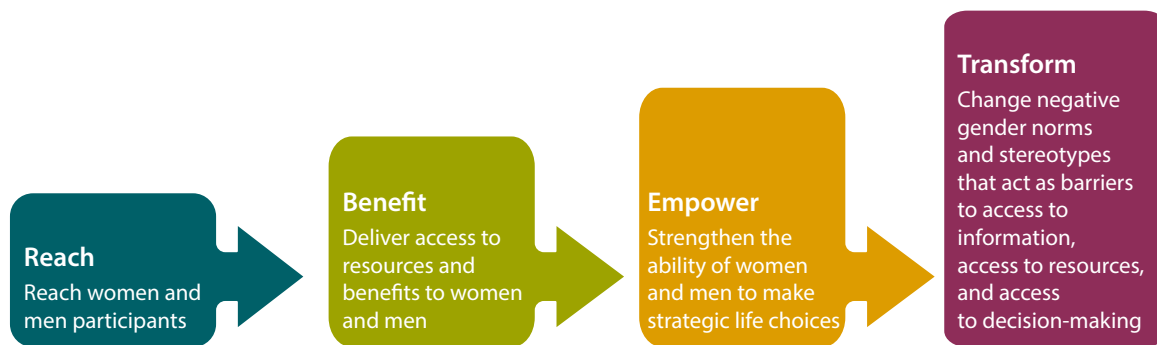


Figure 1. Strategies used in communities. Source: Kleiber et al. (2019), adapted from Johnson et al. (2017) and Theis and Meinen-Dick (2016)

Results

Gender inclusion approaches

Overall, respondents described 21 different approaches that were used to implement SSFs projects and programmes in coastal communities in the three countries (Table 2). Based on the descriptions, we classified each according to four types of gender approaches (**Reach**, **Benefit**, **Empower** or **Transform**), and then aggregated these approaches into 11 broader categories: 1) community

consultation practice (R1-R6); 2) female leadership (R7-R8); 3) training (R9); 4) presence on committees (R10-R11); 5) gender assessments (R12); 6) learning networks (R13); 7) tradition and culture (R14); 8) women's projects (R15-R16, B1-B2); 9) funding (B3); 10) shared decision-making (E1); and 11) gender norm transformation (T1).

Fishing in Bua Province, Fiji. ©Shiri Ram



Table 2. Approaches used to include gender into small-scale fisheries management, categorized according to four types of outcomes: Reach (R), Benefit (B), Empower (E), Transform (T). Some approaches have been categorized under two gender outcomes based on the description provided by respondents. n=number of respondents who listed an approach.

Broad categories of approaches	n	Code	Specific approaches
Community consultation practice	8	R1	Using participatory community resource management processes (e.g. resource mapping) that try to be as inclusive as possible during planning phases.
	10	R2	Using a community-based adaptive management approach that specifically integrates the viewpoints, perspectives and recommendations of all members of the community, including women, into the final plan.
	28	R3	Efforts to increase the number of women at community meetings or workshops. This includes working through traditional male hierarchies to get the support of leaders to allow more women to participate, or paying special attention to times when women are available.
	20	R4	Making an effort to get their inputs or perspectives of women in community workshops.
	16	R5	Holding separate focal group discussions with women to enable them to speak more freely.
	10	R6	Using female facilitators for workshop settings and for separate focal group discussions.
Female leadership	6	R7	Engaging with women leaders and champions to lead engagement efforts with women, or serve as a focal point for capturing women's perspectives.
	2	R8	Using women as community focal points for projects.
Training	15	R9	Providing specific training opportunities targeted at women.
Presence on committees	14	R10	Increasing women's numerical representation on committees (e.g. resource management) and associations (e.g. fishers, seafood vendors).
	3	R11	Creating or strengthening women's committees to address livelihoods, fisheries or broader natural resource management issues.
Gender assessments	18	R12	Undertaking site-level gender assessments, socioeconomic surveys of women in the fisheries sector, and includes working with women to collect fisheries data.
Learning networks	3	R13	Supporting cross-learning between women through site exchange visits, or the hosting of national or subnational forums for women.
Tradition and cultures	2	R14	Fostering or using traditional approaches that are more inclusive of women, or provide a mechanism for women to input into decision-making.
Women's projects	19	R15, B1	Developing livelihood projects specifically targeted at women to ensure there are clear benefits to them. These projects focus on upgrading skills or access to markets, or providing alternatives to reduce fishing pressure.
	8	R16, B2	Developing projects that target fisheries that women dominate in, or are traditionally seen as "women's fisheries".
Funding	8	B3	Creating mechanisms for women to access funds for livelihoods (fishing, non-fishing) through granting or loan mechanisms.
Shared decision-making	2	E1	Fostering women-men partnerships and collective or shared decision-making, where women's perspectives shape outcomes.
Gender norm transformation	2	T1	Developing programs that specifically aim to change the attitudes and behaviour of men towards women, within social and cultural contexts.



We found 16 different approaches to reach women, three to benefit women, one to empower women, and one to transform gender norms (Table 2). Numerically, reach approaches were listed more frequently by respondents (n=135, 68%), followed by benefit (n=55, 28%), empower (n=6, 3%) and transform (n=2, 1%). There was a large skew towards community consultation practice, particularly efforts to increase the number of women at community meetings and workshops, in order to get the viewpoints or perspectives of women, or to hold separate focal group discussions to enable women to speak more freely (Fig. 1, Table 2). Only two respondents described “empower” approaches used to foster working partnerships between men and women to encourage decisions to be made jointly or collectively. “Transform” approaches to change the attitudes and behaviours of men were described by two respondents in Fiji. One specifically worked to change male attitudes toward women, for instance, encouraging men to recognise the significance of women’s roles as natural resource stewards and become champions for the inclusion of women in natural resource decisions at the community level, and the other sought to work with men to address gender-based violence in Suva.

After reflecting on the approaches used, we asked respondents to rate their organisation’s capacity to include gender in their programmes or policies along a five-point Likert scale (i.e. Very Poor, Poor, Neither Good or Poor, Good, Very Good), and provide a justification or explanation for their ranking. Despite gender inclusion approaches trending toward the “reach” end of the spectrum, the majority of respondents (62.7%) perceived their organisation’s capacity for gender inclusion as “Good” or “Very Good” (Table 1). With the exception of experts in Solomon Islands, less than 20% of respondents gave themselves a “Poor” or “Very Poor” ranking. A respondent from the Solomon Islands government explained her high ranking: “All the women staff can inform their own work plans.” In contrast, a respondent from the Fiji government explained that he gave a low ranking because “No expertise. No demand. No drive for gender. No consequences if [gender] is not included. Not in people’s KPIs [key performance indicators].” A respondent from a global agency explained: “Policy and [on] paper is a 5 [Very Good], and implementation is a 2 [Poor].”

Gender barriers

We asked respondents to list up to three main barriers their organisation faced when it came to including gender in their organisational practice and SSF projects and programmes. We then identified 28 barriers and aggregated these into eight distinct categories (listed from highest to lowest ranking, based on the frequency of responses): 1) gender capacity (i.e. of individuals, of organisations, and access to capacity externally); 2) institutional culture, including individual values and biases; 3) inadequate human or financial resources; 4) poor gender institutionalisation; 5) culture and traditions; 6) gender norms at the community level; 7) insufficient data or evidence; and 8) incoherence of gender in legislation and policy.

Capacity for gender inclusion was reported as the largest barrier overall (85.3% of respondents). A respondent from an international NGO in Solomon Islands reported there are “not enough staff for what we want to do. We need a gender focal point for our office working on this full time, not just me trying to fit this into my role”. Limited gender capacity was expressed in reference to individual respondents themselves and their organisations, citing issues with access to external gender expertise. Nearly two-thirds of respondents (64.7%) reported that they had no opportunities to build their gender capacity over the past 12 months. Government staff in Solomon Islands had greater opportunity, with 75% reporting receiving gender training in the last 12w’s work”. One woman in government complained that men used safety, physical strength or menstrual cycles as reasons why women were not suited to scuba diving. Women’s abilities to attain senior leadership positions were reported as particularly challenging within government institutions, which are male-dominated across the three countries. A respondent from an international organisation reported: “It is hard to institute any changes [within own organisation]. Women at the senior level are left out of decision-making.” Interestingly, some women found it was older women with more traditional views on women’s roles in community and society that were “bullying” or creating barriers to women’s leadership in their respective countries.

Inadequate human or financial resources was ranked high by respondents. This was highlighted by respondents working in NGOs who lamented that much of the gender-related funding in the Pacific is geared towards addressing domestic violence issues, and was not accessible to fisheries programmes or organisations. More than half of respondents (52.9%) reported that gender was poorly institutionalised within their organisations. Specifically, respondents referred to the lack of processes in place to mainstream gender (particularly within fisheries ministries), inadequate gender-specific budget allocation, lack of women in leadership positions, and the responsibility for gender inclusion resting with a few unqualified and junior individuals. Respondents working in fisheries ministries reported that their superiors and colleagues saw gender as the work of the Ministry of Women. Many stated culture and traditions (38.2% of respondents) and/or gender norms (32.4% of respondents) within communities were strong barriers to discussing and addressing gender equity in SSF management and development.

Discussion

With increasing efforts to meaningfully and appropriately address gender inequalities within SSF, there is a growing need to evaluate the ways in which organisations approach gender. The approaches and tools used by organisations can have a profound influence and impact on outcomes, including gender equality in the SSF sector. Our analysis finds that SSF organisations operating in Melanesia approach gender inclusion in diverse ways. Although well-intentioned, these approaches are restricted by various



Women's focus group discussion, Solomon Islands. ©Sarah Lawless

barriers, which mean that current efforts may not be appropriate for adequately addressing inequalities in SSF.

We found the majority of approaches used by SSF organisations in Fiji, Solomon Islands and Vanuatu were targeted toward women, and rarely considered men or gender relations. Gender inclusion approaches were designed to reach women, but few women benefited from them, and almost none empowered women or used a transformative approach to address the root causes of gender inequality in the sector. For example, "reach" approaches featured strongly in community consultation practices, where increasing the number of women at meetings was a key strategy used and an indicator of success. Reliance on this approach, however, is unhelpful as inviting more women does not necessary result in equal participation, especially if cultural norms or different communication styles prevent women from speaking out, or being in the same room as certain male members of their family (Cornwall 2003; Dyer 2018).

The predominate focus on women through "reach" approaches is consistent with other studies where the conflation of gender with women occurs systemically in global, regional and national policy instruments being used in the Pacific (Lawless et al. 2021). Managers and practitioners mistakenly

position women as inherently vulnerable and inferior to men, rather than contextualised in gendered environments (e.g. household, community, society) where their vulnerability is an outcome of oppressive and exploitative norms, power relations, structures and processes (Sultana 2014). This is problematic as it excludes men in the conceptualisation of gender, fails to recognise men as part of the problem, or provide them the opportunity to be part of the solution. Consequently, they can in fact become "blockers" of much needed change (Lombardo and Meier 2008).

The focus on reach approaches likely stems from managers' and practitioners' (and their organisations') hesitancy and concerns that if they advocate for gender equality too strongly, too quickly or incorrectly within coastal communities, they may do more harm (e.g. increase gender-based violence, further reduce women's rights) or be asked to leave. While these concerns are valid, much progress has been made toward progressing gender transformative change (i.e. those that seek to challenge unequal and harmful structures and norms that underpin gender inequalities), that account for these sensitivities (e.g. Hillenbrand 2015).

Respondents reported that the lack of capacity to include gender by individuals, fisheries organisations, and across the

A woman with dark hair, wearing a white long-sleeved shirt and a patterned sarong, is rowing a small boat on the ocean. She is wearing a dark cap and has a wooden oar in her hands. The background shows a blue sky with clouds and the ocean.

Gender equity in coastal fisheries will ensure everyone benefits fairly.



Women fishers in Fiji are increasingly using boats to go fishing. ©Shiri Ram

SSF sector more broadly, stemmed from: 1) receiving little to no training (including at senior level); 2) having poor access to gender experts; and 3) lacking practical tools to guide them. Despite low capacity (as evidenced by the predominant reach approaches used), the majority of fisheries managers and practitioners ranked their internal organisational capacity for gender inclusion as high. This is problematic because it reinforces approaches that are, at best, tokenistic (Lawless et al. 2021), and at worst may be reinforcing or widening inequalities in the SSF sector, particularly for women. Our findings suggest that the bar for including gender in SSF management and development is currently set very low, with no benchmark for what is acceptable practice, and

further emphasises the need to build the capacity of fisheries managers and practitioners in gender-inclusive best practices.

We found gender inclusion was limited by institutional culture, including individual values and biases. This manifests in a number of ways, including the type of work assigned to female versus male staff, the predominant selection of women for gender training, and inherent male biases in appointments into senior leadership positions. This is consistent with other research that has shown institutions gendered with gender norms, beliefs and practices woven into the political fabric of organisational environments, further reinforced by organisational actors embedded within

them; in many cases, gender inequalities are upheld by institutional culture (Waylen 2014). Despite the investments by regional and global organisations to assist national governments with gender audits and assessments (e.g. SPC 2018a, b, c) and national policies in place to address gender inequality (Government of Fiji 2014; Government of Vanuatu 2015; Government of Solomon Islands 2016), gender was only weakly institutionalised within government and was recognised across organisations (especially by regional and global organisations) as a major barrier.

These findings suggest two important areas for investment to improve gender inclusion in the SSF sector - capacity and institutional culture. First, the number and diversity of organisations in Melanesia and the wider Pacific with a long history of working on gender provides a unique opportunity to build networks and partnerships to build capacity for gender inclusion in the SSF sector. Managers and practitioners in the Pacific have access to global agencies (e.g. UN Women), regional organisations (e.g. SPC) and international development organisations (e.g. Oxfam, Care International), with decades of gender and development expertise, as well as Pacific context-specific tools and materials that can be applied to the SSF sector (e.g. Barclay et al. 2019). Each country has a ministry mandated to oversee the implementation of national gender equality policies, and to support and promote the mainstreaming of gender into all sectors, including fisheries. Stronger collaborations and cross-sectoral learning with gender development organisations is perhaps one of the greatest untapped opportunities to build gender capacity in fisheries managers and practitioners, and benefit from decades of knowledge gained and lessons learned.

The second area of investment to improve gender inclusion relates to the organisational culture of fisheries organisations. Overcoming barriers related to institutional culture requires a systematic change to existing institutions and institutional practices, which go beyond recruiting more women, toolkits and checklist approaches. This may mean taking steps to remove outdated practices and legitimise new ones (Elgström, 2000), while challenging “institutional defenders who benefit from the organisations status quo” (Cold-Ravnkilde et al. 2018). Rather than gender equality being seen as a global principle enforced in a top-down manner, spaces need to be created for organisations and individuals to contest and negotiate what gender means in SSF practice, identifying gender advocates and resisters, and redefining organisational motivations, missions and values (Ferguson 2015; Lawless et al. 2020).

Conclusion

The approaches used by organisations working in SSF emphasise that the sector is very much in its infancy when it comes to addressing gender equality. Future efforts need to focus on addressing capacity gaps (e.g. the development of guidelines, tools and training programmes), which may involve connecting to existing gender and development networks, organisations and gender experts throughout the region. Gender inclusion in SSF management and

development, however, is unlikely to be achieved without explicit shifts in institutional culture (especially at senior levels), strategy and systematic efforts to implement meaningful gender approaches with effective accountability mechanisms in place. Such a step can assist the transition from gender inclusive approaches being “new” to the “norm”, while setting a benchmark for what is acceptable practice.

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References

- Barclay K., Leduc B., Mangubhai S. and Donato-Hunt C. 2019. Pacific handbook for gender equity and social inclusion in coastal fisheries and aquaculture. Noumea, New Caledonia: the Pacific Community. 20 p.
- Cold-Ravnkilde S.M., Engberg-Pedersen L. and Fejerskov A.M. 2018. Global norms and heterogeneous development organisations: Introduction to special issue on New Actors, Old Donors and Gender Equality Norms in International Development Cooperation. *Progress in Development Studies* 18(2):1–18.
- Cornwall A. 2003. Whose voices? Whose choices? Reflections on gender and participatory development. *World Development* 31(8):1325–1342.
- Dyer M. 2018. Transforming communicative spaces: The rhythm of gender in meetings in rural Solomon Islands. *Ecology and Society* 23(1): article 17. (Also available at <https://doi.org/10.5751/ES-09866-230117>).
- Elgström O. 2000. Norm negotiations. The construction of new norms regarding gender and development in EU foreign aid policy. *Journal of European Public Policy* 7(3):457–476.
- Ferguson L. 2015. This is our gender person: The messy business of working as a gender expert in international development. *International Feminist Journal of Politics* 17(3):380–397.
- Government of Fiji. 2014. Fiji National Gender Policy. Suva, Fiji: Ministry for Social Welfare, Women and Poverty Alleviation. 37 p.
- Government of Vanuatu. 2015. National Gender Equality Policy 2015–2019. Port Vila, Vanuatu: Government of Vanuatu. 20 p.

- Government of Solomon Islands. 2016. National Gender Equality and Women's Development Policy 2016–2020. Honiara, Solomon Islands. Ministry for Women, Youth, Children and Family Affairs, Honiara. 27 p.
- Harper S. and Kleiber D. 2019. Illuminating gender dimensions of hidden harvests. *SPC Women in Fisheries Information Bulletin* 30:53–55.
- Harper S., Adshade M., Lam V.W.Y., Pauly D. and Sumaila R. 2020. Valuing invisible catches: Estimating the global contribution by women to small-scale marine capture fisheries production. *PLoS ONE* 15(3):e0228912.
- Harper S., Zeller D., Hauzer M., Pauly S. and Sumaila U.R. 2013. Women and fisheries: Contribution to food security and local economies. *Marine Policy* 39(1):56–63.
- Hillenbrand E., Karim N., Mohanraj P. and Wu D. 2015. Measuring gender transformative change: A review of literature and promising practices. Working Paper, CARE USA. 58 p.
- Johnson N., Balagamwala M., Pinktaff C., Theis S., Meinzen-Dick R. and Quisumbing S. 2018. How do agricultural development projects empower women? Linking strategies with expected outcomes, *Journal of Gender, Agriculture and Food Security* 3(2):1-19.
- Kleiber et al. 2019. Gender-inclusive facilitation for community-based marine resource management. An addendum to “Community-based marine resource management in Solomon Islands: A facilitators guide” and other guides for CBRM. Penang, Malaysia: CGIAR Research Program on Fish Agri-Food Systems. Program Brief: FISH-2019-08.
- Lawless S., Cohen P., Mangubhai S., Kleiber D. and Morrison T. 2021. Gender equality is diluted in commitments made to small-scale fisheries. *World Development* 123: article 104287.
- Lawless S., Song A.M., Cohen P.J. and Morrison T.H. 2020. Rights, equity and justice: A diagnostic for social meta-norm diffusion in environmental governance. *Earth System Governance* 6: article 100050.
- Lombardo E. and Meier P. 2008. Framing gender equality in the European Union political discourse. *Social Politics* 15(1):101–129.
- Mangubhai S., Fox M. and Nand Y. 2017. Value chain analysis of the wild caught mud crab fishery in Fiji. Report No. 03/17. Suva, Fiji: Wildlife Conservation Society. 100 p.
- SPC (Pacific Community). 2018a. Gender and fisheries in Fiji. Summary of key issues. Noumea, New Caledonia: the Pacific Community. 10 p.
- SPC (Pacific Community). 2018b. Gender and fisheries in Vanuatu. Summary of key issues. Noumea, New Caledonia: the Pacific Community.
- SPC (Pacific Community). 2018c. Gender analysis of the fisheries sector - Solomon Islands. Noumea, New Caledonia: the Pacific Community.
- Sultana F. 2014. Gendering climate change: Geographic insights. *The Professional Geographer* 66(3):372–381.
- Theis S. and Meinzen-Dick R. 2016. Reach, benefit or empower: Clarifying gender strategies of development projects. Washington, DC: International Food Policy Research Institute. (Available at www.ifpri.org/blog/reach-benefit-or-empower-clarifying-genderstrategiesdevelopment-projects).
- Waylen G. 2014. Informal institutions, institutional change, and gender equality. *Political Research Quarterly* 67(1):212–223.
- World Bank 2012. Hidden harvest: The global contribution of capture fisheries. Washington, DC: The World Bank, Economic and Sector Work.

An overview of I-Kiribati women in fisheries

Ioanna Gotschall¹

Introduction

The livelihoods and food security of Kiribati's people, or I-Kiribati, depend significantly on marine resources due to the limited amount of arable land. All men and women in Kiribati participate in fishing activities, whether it is aquaculture, gleaning, harvesting, hook-and-line fishing, gillnetting, spearing, trapping, diving or deep-sea boat fishing (MFMRD 2020; MFMRD and SPC 2019). Marine resources sustain the diets of I-Kiribati and increasingly provide income to communities with few other available economic opportunities (Tekanene 2005, 2006; Lambeth et al. 2006). Although the Kiribati Constitution guarantees rights to women, it supports a cultural practice that distances women from decision-making processes such as village, island and government councils (GoK 2009; UN Women 2020). Women's lack of representation in local governments (only 10 out of 332 Island Councilors are women) is important because under the Local Government Act of 1984 (Kiribati National Statistics Office 2016), Island Councils control nearshore resources within three nautical miles, which are the primary fishing grounds of women (MFMRD 2020). Consequently, women's fisheries have historically been excluded in local government discussions and in overall national policies.

I-Kiribati women support their families with their fishing activities, and should receive institutional recognition and support for doing so (Fay-Sauni and Sauni 2005; Tekanene 2006; MFMRD and SPC 2019). An inability to participate in community decision-making, and underrepresentation in coastal fishery activities increases poverty among women and worsens associated vulnerabilities such as unemployment, domestic violence, and food insecurity for I-Kiribati families (Dekens 2017; Kronen and Vunisea 2007; UN Women 2020). The Government of Kiribati (GoK), the United Nations (UN) and the Pacific Community (SPC) acknowledge that the underrepresentation of women in traditional local government hierarchies has contributed to the dramatic decline of coastal fishery stocks such as the bivalve arc shell *Anadara holoserica* (*te bun*) (Fay-Sauni and Sauni 2005; Gillett 2016; Gillett and Tauati 2018; GoK 2014). Lack of representation of women *Anadara* fishers on the Tarawa Urban Council has allowed the devaluation of coastal resources such as the arc shell, and has further enabled coastal pollution and overexploitation (Fay-Sauni and Sauni 2005). It is critical that women's fishing grounds and activities are considered in every coastal development project, especially projects in urban South Tarawa. Such projects must first work

within cultural norms to give women freedom of choice (empowerment) in the economy, within their families, and society while also ensuring local support and the implementation of community-based fisheries management (CBFM). Of course, cultural norms must evolve in order to accommodate women's important roles in coastal fisheries. Valuing the organisms that women traditionally harvest is an important initial step for increasing women's esteem and status in their families, villages and local governments.

This paper discusses two projects that attempt to address poverty reduction through recommended income-generating activities (IGAs) among I-Kiribati women: the UN Women's "Women Economic Empowerment" (WEE) programme, and the Pacific Regional Oceanscape Program (PROP). These projects signify notable progress towards gender equity in Kiribati, specifically by recognising women's roles in the economy and in promoting food security for their families. The WEE Feasibility Study, however, excludes women's marine-based activities from income-generating activity (IGA) recommendations (Caulfield 2018). This is an important omission because WEE continues to influence Kiribati policy. PROP does



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a better job of highlighting women's role in fisheries but reflects the national prioritisation of women's involvement in offshore fisheries development. This paper discusses how these reports omit women's role in fisheries and how future reports should attempt to work within cultural contexts to promote and support gender equality in Kiribati.

Women's economic empowerment thus far: Recognising women in fisheries

The WEE programme is a valuable step toward addressing vulnerability to poverty among women, especially in Kiribati (Swanepoel et al. 2020). Through its Markets for Change (M4C) project, UN Women and the Government of Australia aim to alleviate the economic and resulting social disparity between men and women in the marketplace (Caulfield 2018; UN Women 2020). WEE also aims to identify and develop sustainable economic opportunities among women in Pacific Island countries, specifically in marketplaces. The WEE Feasibility Study (Caulfield 2018) for Kiribati identified viable IGAs and made recommendations that worked within Kiribati's cultural context. Recommended IGAs followed gender norms for women such as sewing, cooking, baking, gardening and food processing, in an effort to develop women's freedom of choice in society and the economy (Caulfield 2018). A recommendation that does not directly target women in fisheries, but may apply, includes developing revolving funds for women's collaborative business ventures and financing.

Group members may take turns receiving, for instance, all the profits from a week's worth of produced goods (e.g. sewn garments). This common group financing method is practiced throughout Kiribati and the Pacific among families and friends and proves promising for women in fisheries. WEE hopes to address food insecurity and vulnerability to poverty by supporting culturally appropriate women's IGAs but neglects to mention women's fishing activities anywhere in the Feasibility Study (Caulfield 2018). Instead, Caulfield focuses on relatively home-based IGAs and women's secondary role in post-harvest activities and finfish sales. A lack of coastal fisheries data and reporting of women's marine-based activities may be responsible for the omission of marine-based IGAs from Caulfield's (2018) recommendations. Nonetheless, it is an important omission because WEE heavily influences Kiribati's gender-related policy. Reviewing and updating the WEE Feasibility Study to include women's marine-based activities in IGA recommendations will likely be mirrored in national policies and development goals.

Recommendations in the WEE Feasibility Study (Caulfield 2018) are referenced in the following policies: Kiribati National Gender Equality and Women's Development 2019–2022 (GEWD), the Kiribati 20-Year Vision (KV20), and the Kiribati National Fisheries Plan 2013–2025 (KNFP). The listed policies take steps in the right direction for women's economic empowerment but do not address women in fisheries (e.g. GEWD), nor work with the participation barriers that women face in fisheries (e.g.



A woman selling tuna. ©Johann Bell



A woman selling bonefish at a roadside stall. ©Johann Bell

the KV20 and KNFP). Mention of women or gender in either the KV20 and KNFP is in the context of offshore fisheries development (either prostitution or fish market facilities) (GoK 2014, 2016), but both set the stage for the most promising policy to date: Kiribati National Coastal Fisheries Roadmap 2019–2036. For example, the KV20 phrases gender as a “cross-cutting issue” that simultaneously poses competition from other cross-cutting priorities over already scarce resources and capacity (Dekens 2017), and sets up the networks for the multi-sectoral communication and coordination. Similarly, although the KNFP focused on women in relation to offshore fisheries, it established pilot projects that have informed the recent Kiribati National Coastal Fisheries Roadmap.

By definition, gender mainstreaming requires multi-sectoral cooperation in order to ensure equal opportunity, representation and benefits for all levels of society. Viable solutions posed under the cross-cutting issues of the KV20 and KNFP include ensuring gender issues are addressed in CBFM processes, and ensuring equal access to micro-financing opportunities. CBFM has crucially provided a communication platform for local council members and government officials, wherein traditional meeting etiquettes of the *maneaba* way are integrated to lessen the tension and intimidation factor that local representatives feel during formal briefings with government officials (Uriam 2016). Although *maneaba* (meeting house) directly translates to “land of men”, CBFM is redefining *maneaba* etiquette to include women. Consequently, CBFM is helping to evolve the structures of local governments through direct contact with senior ministry officials (where women and men are

more equally represented). During CBFM pilot projects, I-Kiribati communities identified women’s target species, including arc shells (*Anadara* spp. *te bun*), cockles (*Strombus* spp. *te nouo*), and peanut worms (*Sipunculus* spp. *te ibo*) as important marine species in need of community management (Awira et al. 2004; Delisle et al. 2016). Although such invertebrates have been identified in past surveys (Awira et al. 2004; Kiareti et al. 2015), CBFM has allowed communities to express the need for management of such invertebrates and associated habitats.

The Kiribati National Coastal Fisheries Roadmap is a direct result of, and is informed by, CBFM activities (MFMRD and SPC 2019). The Roadmap takes the next step to mainstream gender in fisheries by identifying women in its first key priority for coastal fisheries development. It was developed to support the KNFP and reflects efforts in the region under the Noumea Strategy to empower and support Pacific Island women in coastal fisheries. The 17-year strategy acknowledges the lack of support for women’s fishing activities and attempts to lay out a framework for encouraging sustainable community-based coastal fisheries management plans that benefit both men and women. Significantly, this is the first policy to enlist the cooperation of all Kiribati ministries, but specifically, the Ministry of Women, Youth, Sports and Social Affairs (MWYSSA) and MFMRD. The Roadmap generally suggests developing new and gender-inclusive fisheries cooperatives and activities but lacks specificity regarding women’s fisheries. Every development action promotes gender-awareness training but there is no mention of the invertebrate species that women exploit, such as bivalves, conches or peanut worms. Given the historical

omission of women's marine-based activities, it is especially important to prioritise women's fishing activities in fisheries development projects.

Pacific Islands Regional Oceanscape Program

The Pacific Islands Regional Oceanscape Program (PROP) is a six-year initiative implemented by MFMRD and funded by the Australian Center for International Agricultural Research (ACIAR). The project incorporates the goals of KNFP and KV20. It identifies women's role in shore-based fishing activities, processing, and marketing but only focuses on developing market infrastructure (e.g. bathrooms) and defining gender-based violence requirements in construction (MFMRD 2020). PROP's stakeholder engagement plan recognises women as valuable stakeholders and incorporates women's institutions such as MWYSSA for employment and legislative developments in fisheries; however, MWYSSA's Women Development Division is not mentioned anywhere in the final disclosure document. Under capacity-building activities, PROP requires gender-equitable training and capacity-building programmes, inclusive consultation and implementation of the project, and emphasises the need to increase women's participation in decision-making

platforms such as village and island councils. PROP has considerable potential for women's economic empowerment, with a few minor revisions. For instance, PROP follows sex-disaggregated survey techniques also practiced by CBFM to ensure inclusivity in project consultation and implementation (Delisle et al 2016). Separate consultations for men and women ensure that "sociocultural norms" such as the *unimwane* (elder men) structure of meetings do not stifle women's participation. However, there is still no mention of developing coastal resources that women exploit (e.g. arc shells, cockles, peanut worms, spiny oyster, and others).

Analysis

Traditional governing systems (e.g. *unimwane* associations and village councils) that distance women from decision-making also need to evolve to accommodate women's important role in coastal fisheries, otherwise, they will continue to hinder women's empowerment. Sex-disaggregated survey techniques employed by CBFM and the Kiribati National Coastal Fisheries Roadmap are slowly, but surely, highlighting women's concerns in fisheries and dismantling the local governing structures that impede women's empowerment. Currently, working with *unimwane* associations and village



Recording the amount of shellfish from gleaning efforts. ©K. Pakoa

councils means establishing at least one elected representative for women in each island council (Uriam and Delisle 2014). In the long run, recognising women's importance in coastal fisheries and their communities will elevate their status in their families and increase their participation in village and island councils in turn. Developing culturally acceptable fisheries activities for women will ensure support from the cultural framework that, to this day, inhibits women's participation in male-dominated fishery sectors. Including women's fishing activities under fisheries development goals will expand the concept of "fishing" beyond men's domain. Working within segregated norms is an initial step that ensures minimal backlash from a fiercely traditional nation like Kiribati. Granted, urbanisation has aided in dismantling gender roles (Thomas 2001, 2014; MFMRD 2020), however, urbanisation is limited to half the population. Ignoring inshore resources that feed women and their families will continue to disenfranchise half the population of women living in Kiribati's outer islands, and who are more dependent on subsistence (Molai et al. 2019). Within national and international efforts to empower women it is essential to emphasise women's role in securing food for their families. Instead of just integrating women into male-dominated fishing activities, working with traditionally gendered fishing roles to gradually transform women's position in fisheries is worth considering. Development goals of the National Kiribati Coastal Fisheries Roadmap and PROP can do a better job of employing women's traditional knowledge in gleaning and farming as well as women's vast social circles in order to build women's esteem in fisheries.

Currently, seaweed farming initiatives funded by ACIAR have begun emphasising I-Kiribati women in project implementation. Swanepoel et al. (2020) and Butcher et al. (2020) propose diversifying I-Kiribati diets with edible, native and commercial seaweeds such as sea-grapes (*Caulerpa* spp.) and red seaweed (*Kappaphycus* spp. and *Acanthophora* spp.). Seaweed farming, and other such initiatives, can serve as a starting point for expanding cultural and institutional support for developing other women's fishing activities like gleaning (Butcher et al. 2019; Swanepoel et al. 2020). The same tactics and frameworks used by CBFM projects and ACIAR seaweed initiatives can be employed to develop fisheries that are more accessible to women. For instance, seaweed requires a plot to farm, whereas mollusc fisheries require minimal tools, upkeep and ownership of a marine environment. Diversifying women's fishing activities will help more I-Kiribati families cope with the consequences of globalisation and climate change.

Although Caulfield (2018) and the Government of Kiribati (2019) recognise that domestic duties and child-rearing obligations impede women's IGAs, neither present alternatives that could alleviate such burdens (i.e. mechanisation or childcare services). Basic institutional infrastructure for women is championed, yet there are no initiatives for childcare or to mechanise mundane and time-consuming activities such as washing clothes or collecting firewood (GoK 2019). Of course, Kiribati's physical isolation hinders access to cheap modern technology. Striving to incorporate

technologies (besides fishing gear) that will enable women to transition into a working economy is important as Kiribati continues developing its basic infrastructure. Overall, the WEE Feasibility Study (Caulfield 2018) overlooks the opportunity to develop the only way most women have traditionally supplemented their family diets and income – through inshore fisheries activities. Because WEE affects so much of Kiribati's national policy, updating the Feasibility Study to include women's marine-based activities would improve gender-inclusive national fisheries policies.

National policy and international ideology have successfully brought the concept of gender equality, equity and empowerment to the forefront of discussion forums. Policies (i.e. KV20 and KNFP) and projects (i.e. WEE and PROP) commonly do not mention IGAs that currently serve to empower women and enhance food security for their families, such as inshore invertebrate gleaning and mariculture. Although initially incomplete, KV20 and KNFP laid the groundwork for CBFM projects and the gender-inclusive fisheries policies of the Kiribati National Coastal Fisheries Roadmap. However, there is still a need to evolve entrenched ideologies that keep women from participating in male-dominated, marine-based activities such as offshore fishing. For example, PROP mentions men's dominance in fishing activities without an explanation as to why women are under-represented. This type of rhetoric perpetuates the idea that fishing is not "women's work". PROP needs to prioritise women's fisheries activities (specifically invertebrate gleaning and seaweed farming) instead of solely developing women's participation in offshore fisheries. Although the Roadmap offers more emphasis on women and gender-mainstreaming in coastal fisheries, it does not identify women's fisheries. Given the historical omission of women's marine-based activities (e.g. invertebrate gleaning), it is recommended that women's target species and fishing activities are specified, if not prioritised. This will ensure cultural cohesion with project goals and a higher rate of accomplishing local food security.

References

- Awira R., Friedman K., Sauni S., Kronen M., Pinca S., Chapman L. and Magron F. 2004. Kiribati Country Report: Profiles and results from survey work at Abaiang, Abemama, and Kiritimati. Noumea, New Caledonia: Secretariat of the Pacific Community Coastal Fisheries Programme, Pacific Regional Oceanic and Coastal Fisheries Development Programme (PROCFish). (Available at <http://purl.org/spc/digilib/doc/fuv6m>).
- Butcher H., Burkhart S., Paul N., Tiitii U., Tamuera K., Eria T. and Swanepoel L. 2020. Role of Seaweed in Diets of Samoa and Kiribati: Exploring Key Motivators for Consumption. Sustainability 12: 7356. (Also available at <https://doi.org/10.3390/su12187356>).

- Caulfield T. 2018. Women's economic empowerment feasibility study, Kiribati. Prepared for: Pacific Women Shaping Pacific Development. UN Women.
- Dekens J. 2017. Strengthening gender considerations in the Kiribati National Adaptation Plan (NAP) Process. NAP Global Network. International Institute for Sustainable Development.
- Delisle A., Namakin B., Uriam T., Campbell B. and Hanich Q. 2016. Participatory diagnosis of coastal fisheries for North Tarawa and Butaritari island communities in the Republic of Kiribati. Penang, Malaysia: WorldFish. Program Report: 2016–24.
- Fay-Sauni L. and Sauni S. 2005. Women and the Anadara fishery: A case study in South Tarawa, Kiribati. p. 65–80. In: Novaczek I., Mitchell J. and Veitayaki J. (eds). *Pacific voices: Equity and sustainability in Pacific Islands fisheries*. Institute of Pacific Studies, Suva: Fiji: University of the South Pacific.
- Gillett R. 2016. *Fisheries in the economies of Pacific Island countries and territories*, second edition. Noumea, New Caledonia: Secretariat of the Pacific Community.
- Gillett R. and Tauati M.I. 2018. Fisheries of the Pacific Islands – Regional and national information. Food and Agriculture Organization Fisheries and Aquaculture Technical Paper No. 625. Apia, Samoa: FAO. (Also available at <http://www.fao.org/3/I9297EN/i9297en.pdf>).
- GoK (Government of Kiribati). 2009. Constitution of Kiribati. Tarawa, Kiribati: Government of Kiribati.
- GoK. 2014. Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management. Government of Kiribati.
- GoK. 2016. Kiribati 20-year Vision, 2016–2036. Government of Kiribati.
- GoK. 2019. National Policy on Gender Equality and Women's Development, 2019–2022. Government of Kiribati.
- Kiareti A., Beiateuea T., Liu R., Teema T. and Moore B. 2015. Monitoring the vulnerability and adaptation of coastal fisheries to climate change, Abemama Atoll, Kiribati. Coastal Fisheries Programme, Secretariat of the Pacific Community. Kiribati Ministry of Fisheries and Marine Resource Development, Assessment Report No.2. 10–11/2013.
- Kiribati National Statistics Office. 2016. 2015 Population and Housing Census (vol. 1). Bairiki Tarawa, Kiribati: National Statistics Office, Government of Kiribati.
- Kronen M. and Vunisea A. 2007. Women never hunt... but fish: Highlighting equality for women in policy formulation and strategic planning in the coastal fisheries sector in Pacific Island countries. SPC Women In Fisheries Information Bulletin 17:3–15.
- Lambeth L., Hanchard B., Aslin H., Fay-Sauni L., Tuara P., Des Rochers K. and Vunisea A. 2006. An overview of the involvement of women in fisheries activities in Oceania. p. 127–142. In: Choo P., Hall S.J. and William M.J. (eds). *Global Symposium on Gender in Fisheries: Seventh Asian Fisheries Forum*, 1–2 December 2004, Penang Malaysia. WorldFish Center. Penang, Malaysia.
- MFMRD (Ministry of Fisheries and Marine Resources Development) and the Pacific Community (SPC). 2019. Kiribati National Coastal Fisheries Roadmap (2019–2036). Noumea, New Caledonia: Pacific Community.
- MFMRD. 2020. Pacific Islands Regional Oceanscape Program (PROP) – Environmental and Social Management Framework. Government of Kiribati, the World Bank. (Available at documents1.worldbank.org).
- Molai C., Bosserelle P., Kinch J., Shedrawi G. and Halford A. 2019. Creel surveys increase understanding of fisher patterns across three atolls in Kiribati. SPC Fisheries Newsletter 160:55–64.
- Swanepoel L., Tioti T., Eria T., Tamuera K., Tiitii U., Larson S. and Paul N. 2020. Supporting women's participation in developing a seaweed supply chain in Kiribati for health and nutrition. *Foods* 9(4): 382. (Also available at <https://doi.org/10.3390/foods9040382>).
- Tekanene M. 2005. Selling fish in Tarawa, Kiribati. p. 167–185. In: Novaczek I., Mitchell J. and Vietayaki J. (eds). *Pacific voices: Equity and sustainability in Pacific island fisheries*. Suva, Fiji: Institute of Pacific Studies Publications, University of the South.
- Tekanene M. 2006. The women fish traders of Tarawa, Kiribati. p. 115–120. In Choo P., Hall S.J., William M.J. and Penang W.C. (eds). *Global Symposium on Gender and Fisheries: Seventh Asian Fisheries Forum*, 1–2 December 2004, Penang, Malaysia, WorldFish Center.
- Thomas F.R. 2001. Mollusk habitats and fisheries in Kiribati: An assessment from the Gilbert Islands. *Pacific Science* 55(1):77–97.
- Thomas F.R. 2014. Shellfish gathering and conservation on low coral islands: Kiribati Perspectives. *The Journal of Island and Coastal Archaeology* 9:2:203–218.
- UN Women. 2020. Kiribati. Asia and the Pacific. <https://asiapacific.unwomen.org/en/countries/fiji/co/kiribati>
- Uriam T. 2016. Stakeholders of the Kiribati community-based fisheries management project gather to discuss lessons learned and way forward. SPC Fisheries Newsletter 149:19–21.
- Uriam T. and Delisle A. 2014. Community-based fisheries management project in Kiribati: First steps. SPC Fisheries Newsletter 144:22–23.



Women octopus fishers in Indonesia. ©Januar Sena

Gender-inclusive financial literacy strategies: Unlocking the value of small-scale fishing communities

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Abstract

Gender-inclusive financial assistance programmes assist with empowering coastal communities and their financial resilience by enabling equitable decision-making roles within households and communities. This can involve building knowledge and capacity in using the tools needed to manage household and business finances, and making access to financial services available. In this article, we describe a programme in Southeast Sulawesi Province in Indonesia, that works with coastal communities to improve the financial literacy of fishers, fish traders and fish processors who largely operate in the informal economy. The approach aims at increasing: 1) savings habits, 2) financial planning skills, 3) knowledge, and 4) access to financial services and social protections. Gender outcomes are incorporated within each of the programme components of financial literacy,

establishing savings institutions and improving small business enterprises. The strategies also provide knowledge of the benefits and challenges of the various pathways to integration with the formal economy. Gender inclusion in the financial reform of fishing communities also legitimises and fosters the adoption of village co-management bodies that have been allocated access rights over their small-scale fisheries, which are currently being established in over 200 fishing villages in Southeast Sulawesi Province.

Introduction

Human wellbeing in coastal areas is closely coupled with primary productivity from small-scale fisheries and agriculture (Lawless et al. 2019). Sustained progress and improvements in natural resource management (Cinner et al.

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2012) requires that this production be beneficial to coastal livelihoods through the generation of income and food security (Nielsen et al. 2013), thus driving improvements to wellbeing (Vijaya et al. 2014). A lack of sustainable financing and economic reforms within small-scale fishing communities that recognises gender use and empowerment over assets and natural resources (Mangubhai and Lawless 2021), hampers long-lasting and comprehensive reforms in natural resource management. Of critical importance is that without gender and socially inclusive financial and economic strategies, newly formed sustainable fishing regulations are unlikely to be accepted (Wierderkehr et al. 2019).

As financial products, services and markets are becoming more sophisticated, diverse and available in remote coastal areas, being equipped with the knowledge and skills to use and access financial tools and products is essential for individuals to efficiently capture and build the wealth they gain from natural resources (Kimiyaaghalam and Meysam 2015). Financial literacy is the knowledge of financial concepts, the capacity to manage personal finances, the skills in making financial decisions, and the confidence in future financial planning (Remund 2010).

Within coastal households in Indonesia, both women and men have primary decision-making roles in different components of financial planning for their households and businesses. Accounting for the financial conditions under which both women and men can access and control resources, is a key feature of empowering rural economies (Okali and Bellwood-Howard 2017; Danielson et al. 2018). Many gender-inclusive strategies or approaches in small-scale fisheries reach women but are not designed to benefit, empower or transform their lives (Mangubhai and Lawless 2021). Distance and geography can also limit access to financing, as many services are based in large towns and cities that are remote from coastal communities. To optimise financial decision-making, gender-transformative approaches address underlying gender norms and relations that can serve as barriers to gender inclusion. They can improve household and business financial literacy and skills in the use household cash flows, business management and other financial tools. In this way, the decision-making needs of both women and men can be met, and thereby shift gendered patterns so that they address fair division in labour and improved access and control over assets and resources in communities (Elmhirst and Resurrección 2009; Danielson et al. 2018).

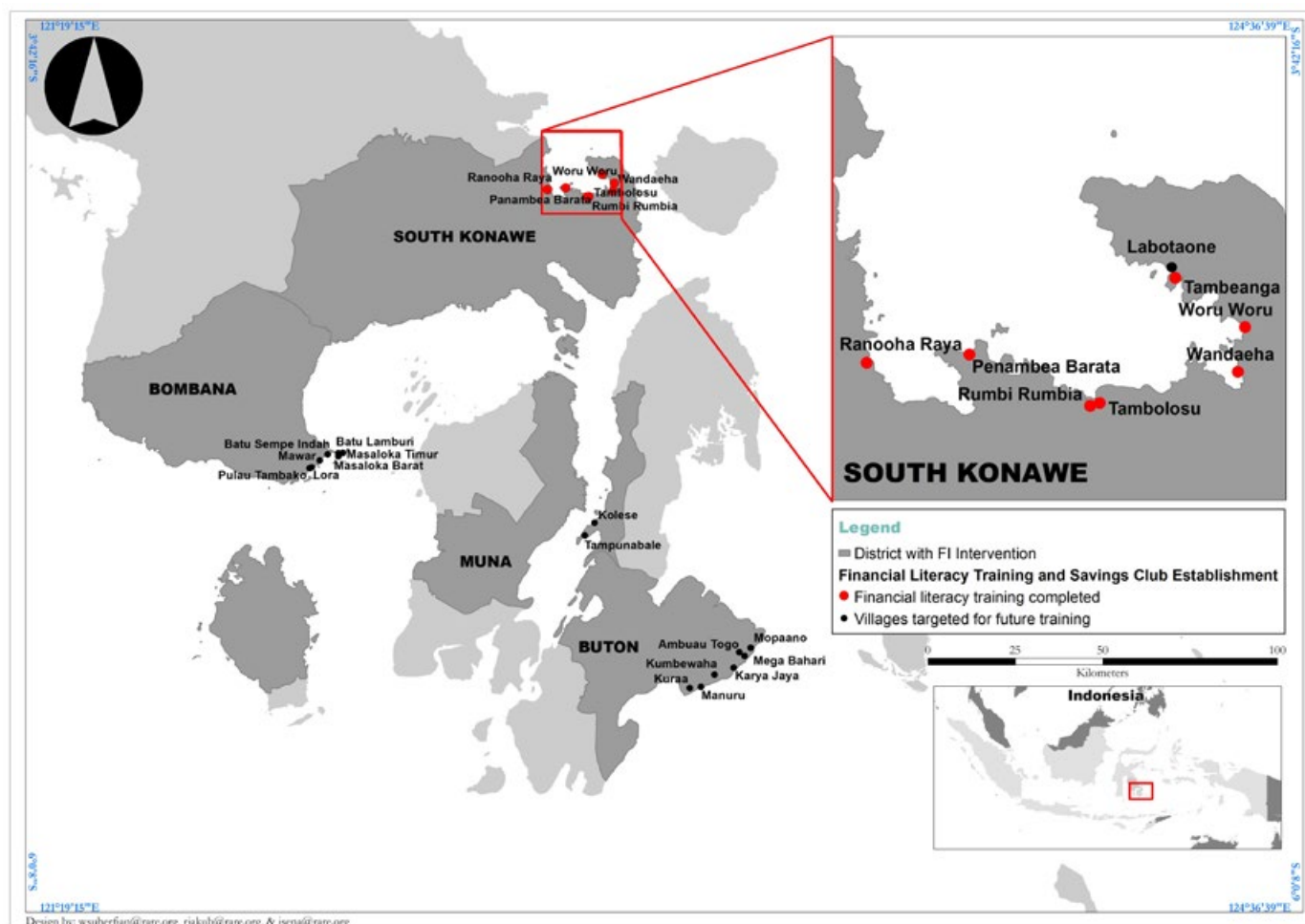


Figure 1. Location of villages from four districts in Southeast Sulawesi Province, Indonesia that are involved in and adopting financial inclusion training and strategies.



Women fish traders selling fresh and processed (dried, salted, smoked) fish in a market in Southeast Sulawesi Province, Indonesia. ©Januar Sena

In Indonesia, law No. 7 of 2016 concerning the “Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers” provides the legal basis for empowering fishing communities, in theory removing barriers to improvements in financial literacy, capacity and development for women and men (Azza et al. 2019). Access to various informal and formal financial institutions, including banks and microcredit can build financial literacy, and reduce dependence on high-interest, long-term loans. Government systems such as the national fisher registration system (*kartu pelaku usaha perikanan dan laut* or *kusuka*) allows fishers and fish workers to access government emergency and life insurance benefits, and subsidies for fuel and other needs (Azza et al. 2019). Many fishers and small fisheries-related businesses in Indonesia, however, still have low and irregular income and poor access to infrastructure and knowledge of financial tools and services that may not suit their seasonal fishing patterns (Azza et al. 2019). For example, from a survey of 6007 households across Southeast Sulawesi Province, 23% of households had access to formal financial services such as banks, while 5% accessed informal microfinance services such as cooperatives and credit unions, and 6% accessed other informal loans (unpublished data).

The desire, however, for households to enter into formal economies is often related to the development of larger businesses, building upon social support networks, improving economic conditions and social protections (Becker 2004). The new omnibus bill in Indonesia intends to deregulate the many laws related to business activities across the country. By minimising the number of licenses and permits, the bill

aims to reduce barriers that obstruct investment growth in Indonesia (Sembiring et al. 2020). For small enterprises in fishing communities, this means that access to a formal business identity, through obtaining a business identity number (*nomor identitas bagi sebuah perusahaan*), will be streamlined, deleting many of the administrative and financial requirements needed to enter the formal economy (Sembiring et al. 2020).

In Southeast Sulawesi Province, more than 40,000 small-scale fishers and fish workers reside in 947 coastal fishing villages. Households practice fishing and buy and trade in live, fresh and processed fish (Campbell et al. 2020). With the purpose of empowering coastal communities in Southeast Sulawesi Province to manage their fisheries sustainably, we describe here an approach to improve the financial literacy of fishers, fish traders and fish processors who largely operate within the informal economy. The approach will help to increase savings habits, financial planning skills, knowledge and access to financial services and social protections. Gender outcomes are explicitly acknowledged for each of the programme components, which include training in financial literacy, establishing village savings and loan associations, and assisting village business enterprises. These economic initiatives can also provide knowledge of the benefits and challenges of the various pathways to integration with the formal economy. In addition, these strategies help legitimise village-based co-management bodies of small-scale fisheries, which are now being established throughout Southeast Sulawesi Province.

Methods

Location

Gender-inclusive financial strategies have been initiated in four districts and 23 villages in Southeast Sulawesi Province. Financial literacy training and the establishment of savings clubs have taken place in the villages of South Konawe District (Fig. 1).

Targets and outcomes for financial inclusion strategies

A schematic of interventions by the gender-inclusive financial resilience programme and the barriers to financial inclusion it attempts to address is shown in Figure 2. The targets and outcomes proposed for this gender-inclusive financial resilience programme include: 1) 50% of registered fishers and their household spouses in the geographical area have received training and adopted new behaviors, including improved understanding of financial management and financial services available; improved access to and use of (digital) financial services and products to improve their family well-being; 2) 30% of women in the identified villages in four districts have increased financial literacy and decision-making power for their family finances and household enterprises; 3) establishment of a minimum of 20 savings clubs in 20 villages, with approximately 225 to 300 members (90% women), representing more than 80% of coastal villages within four districts (Fig. 1); 4) 250 households within the fishing communities benefit from value chain improvements, thereby strengthening the role of women in decision-making; and 5) women are actively participating in 20 village-based fisheries management bodies.

Small-scale fisheries value chains

To better understand specific community needs related to fishing enterprises, as well as the gaps in financial inclusion and the needs and opportunities for investing in gender equity, we conducted a value chain analysis of small-scale fisheries at selected villages within four districts in Southeast Sulawesi Province. In total, eight focus group discussions were conducted (between December 2019 and January 2020) with 67 fish buyers and processors (39 women, 28 men) from six villages: Panambea Barata, Labotaone and Wandaeha (South Konawe District); Lora (Bombana District); Karya (Buton District); and Kolese (Muna District) (Fig. 1). Key informant interviews were conducted with 36 fish buyers and processors (26 women, 10 men) across these six villages to gain fine-scale information on the species they trade, including volumes, seasonality, prices, revenues and cash flows of their business operations.

Selection of village communities for financial inclusion strategies

We examined sex-disaggregated data on household access to financial services and participation in fishing, fish processing and trading (Fig. 4), collected from 6007 households in 11 districts of Southeast Sulawesi (Rare, unpublished data) in order to identify 4 districts and 23 villages, that were suitable to pilot financial inclusion interventions with community households. Households for inclusion in the training were identified using a registration database for fishers and fish workers. The database, developed by government partners and Rare, is based on their interaction with the Ourfish app, an android-based application used by fish traders to record purchase records of fish at the first point of sale,

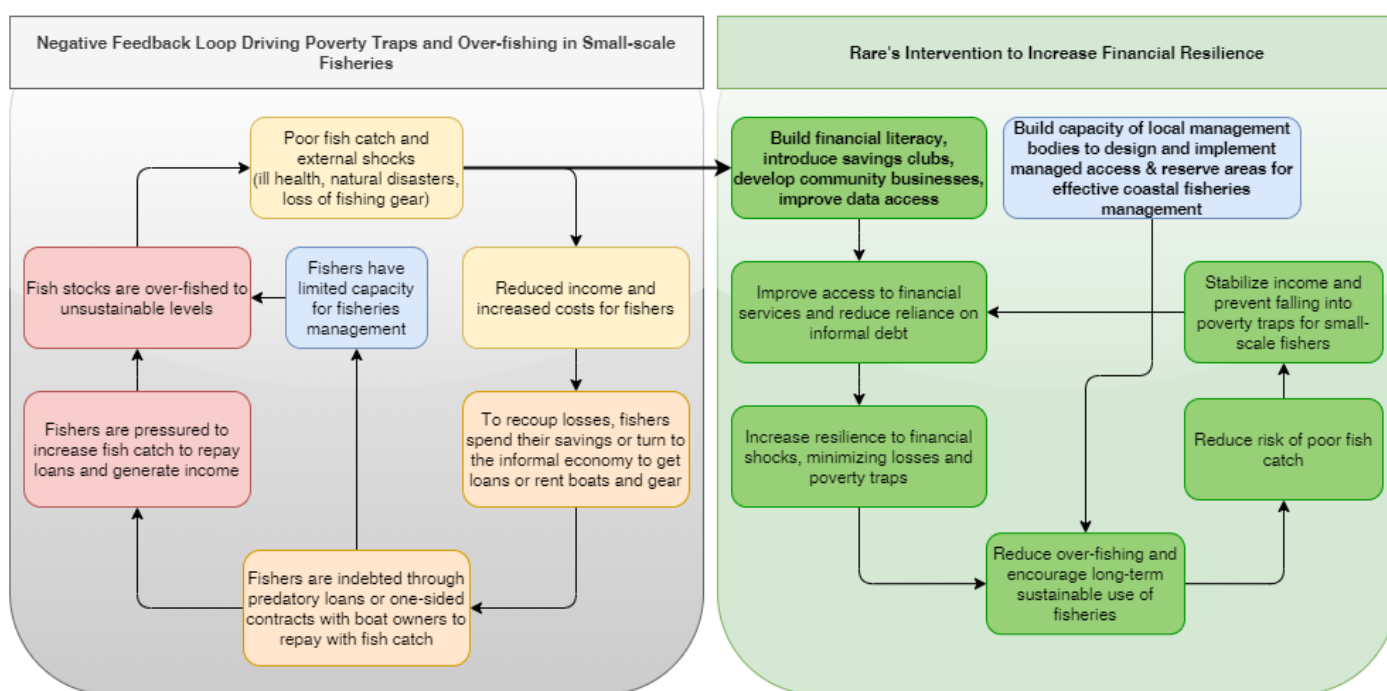


Figure 2. Barriers to financial inclusion and resilience, and interventions to address these issues.

from community-based fishers. The financial and catch data recorded can assist fishers and fish traders with their financial accounting. Catch data can also be used by village fisheries management bodies to monitor fisheries health. Following this, we initiated a process of invitation where both women and men heads of households were invited to participate. Including both women and men helps to capture the financial decision-making in households.

Financial literacy training

Within each village, groups of households who live in close proximity to each other were selected into each financial literacy training groups. Each group consisted of five couples (husband and wife) and also single men and women, for a total of 10–12 participants per training group (Fig. 6). Training was conducted over three days with three training modules, using mobile phone and SMS technologies. A local coordinator from each village facilitated the training with Rare staff, who conducted the training remotely.

Household revenues from fisheries-related practices

To understand the income households gain from fisheries practices, participants from financial literacy training from the villages of Ranoocha Raya, Tambeanga, Tambolosu, Wandaeha and Woru-Woru (Laonti Sub-district, South Konawe District) (Fig. 1), provided data on their gross income, expenses and net income. We provided a simple analysis of the three revenue metrics across the five villages, with data sex-disaggregated for gross income.

Results

Small-scale fisheries value chains

The main groups of fish and invertebrates caught and traded fresh and processed include groupers, mackerels, snappers, rabbitfishes, trevallies, breams, fusiliers, mud crabs and shrimp. Fish are caught at village landing sites and enter various supply chains. During peak fishing seasons where there is a high supply of fish, the majority are sold in markets in the villages and district, and some are transported to the provincial capital for trade. Some high-value species are sold to national and international markets. During peak periods of fresh fish supply, prices received by village fishers and traders for fresh fish may decline, and many households salt, dry or smoke the oversupply to preserve the fish for future household consumption. Other households have a fish processing business year-round, where fresh fish is bought from local fish traders and fishers, and the processed products are sold to local households, local markets and provincial city markets as both edible products and souvenirs (Fig. 3).

Financial literacy training modules and content

To date, financial literacy training has been conducted with 151 people (76 women, 75 men) from 86 households in 7 villages (Panambea Barata, Roomi Ranoocha Raya, Rumbi Rumbia, Tambeanga, Tambolosu, Wandaeha and Woru-Woru) in Moramo and Laonti subdistricts of South Konawe (Fig. 1).

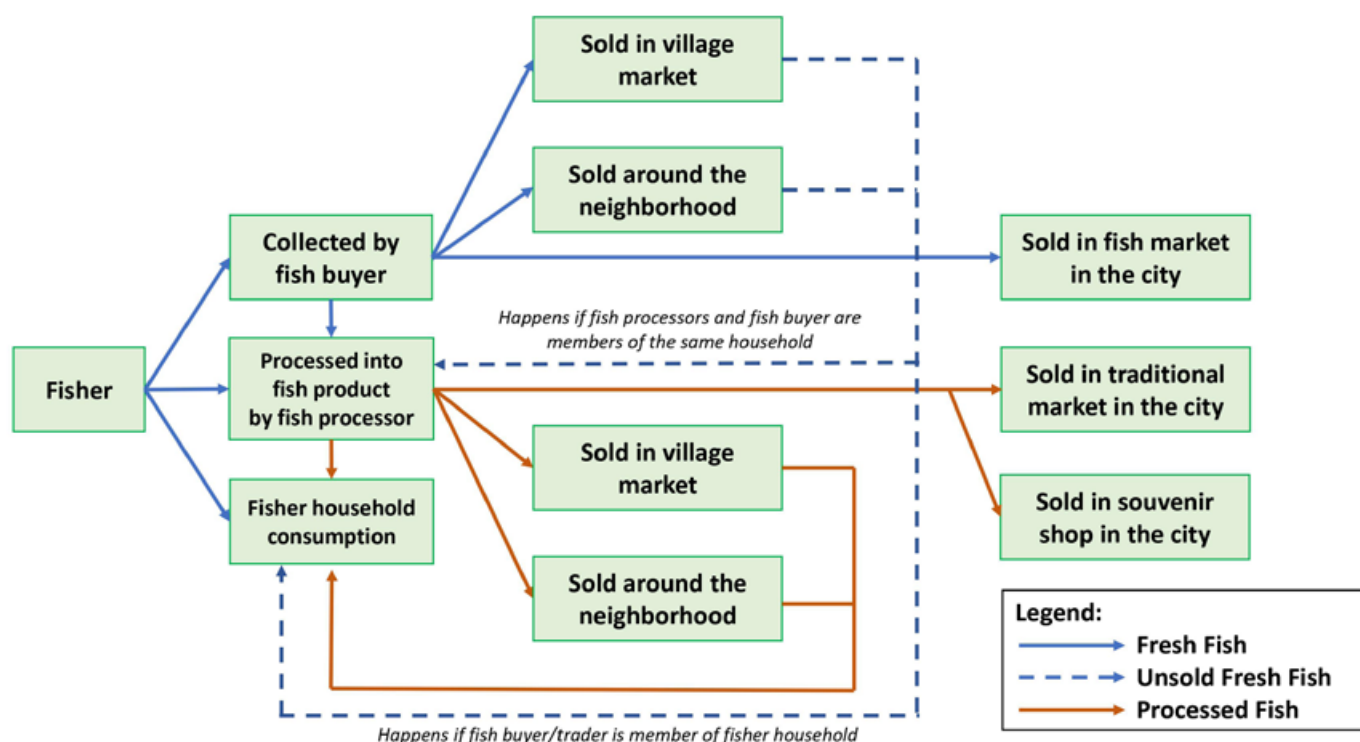


Figure 3. Small-scale fisheries value chains in Southeast Sulawesi Province, Indonesia.



Octopus trader in Southeast Sulawesi Province in Indonesia, using the Ourfish app to record her purchased catch. ©Januar Sena



Participants undertaking financial literacy training in Southeast Sulawesi Province in Indonesia using training modules. ©Udin

Three training modules have been delivered on: 1) concepts of financial literacy; 2) calculations of various household revenue streams; and 3) household finances, savings and

loans and village saving and loan associations. A fourth module with a focus on training microhousehold businesses or enterprises was initiated in December 2020 (Table 1).

Table 1. List of financial literacy modules and description of training content.

Training Module	Training Content
Concepts of financial literacy, income and expenditure (Module 1)	<ul style="list-style-type: none"> Financial literacy: Importance of financial literacy, its linkage with resilience, and fisheries management Financial institutions, financial services available Income: What is income, who can contribute to household income, steps to calculate your weekly income Expenses: What are expenses, essential and unessential expenses, prioritising expenses and decision-making related to expenses, steps to calculate expenses
Calculation of weekly family income and expenses (Module 2)	<ul style="list-style-type: none"> Tools and methods available to calculate household income and expenses Tools and methods used to prioritize household expenses
Household expenditure, savings and loans (Module 3a)	<ul style="list-style-type: none"> Concepts of expenses, revenue, profits and losses Savings concepts, types and uses Financing products available Financing products to cover losses Prioritising financing products to service household and business needs How to avoid and breakout from high interest, long-term loans Functions, establishment and operations of village savings clubs
Establishing a savings and loan group (Module 3b)	<ul style="list-style-type: none"> Calculation of income and expenses Concepts of profit, savings, cash reserves and assets such as property, livestock, gold, fishing gears, boats. Concepts of loss and selling of assets, mortgage assets, reduction in non-priority expenses Overview savings club concepts Participants are interested in joining savings club as a forum for learning financial management Savings assist family households to manage their finances and small fishing and processing businesses more effectively Savings and credit facility; nine-month savings cycles Social funds (e.g. communal capital, infrastructure, livelihood projects) Emergency funds
Business training with targeted household enterprises (Module 4)	<ul style="list-style-type: none"> Value adding, hygiene, quality control, product diversification Access to finance from local banks including e-platforms Access to finance from informal finance institutions, including co-operatives, credit unions, village-owned enterprises Ourfish app as a financial planning and monitoring tool Digital money transfers, digital supply and sale platforms Formalisation of business, including benefits and barriers, financial identity, legal processes, capital needs Government training and support programmes



Household revenues from fisheries

Weekly household gross income, expenses and net income revealed that, on average, weekly gross income ranged from USD 25 to USD 70 per week, while net incomes per household were less than USD 25 per week. For some households in Tambeaga and Tombolosu, net income was negative based on their fishing-related revenues (Fig. 4). On average, across all villages, the gross weekly income for men (USD 28) from fishing-related revenues, was higher than for women (USD 20) (Fig. 5).

Village savings and loan associations (savings clubs)

Following the initial training in financial literacy, trainees determined if they had a group of people who would like to establish village savings and loan association (VSLA) or savings club. These groups consisted of 10–25 people who save together and take small loans from those savings for about nine months, after which accumulated savings and profits are shared among the members, according to the amount each member saved. Savings clubs hold biweekly meetings. Resources and assistance are being provided to

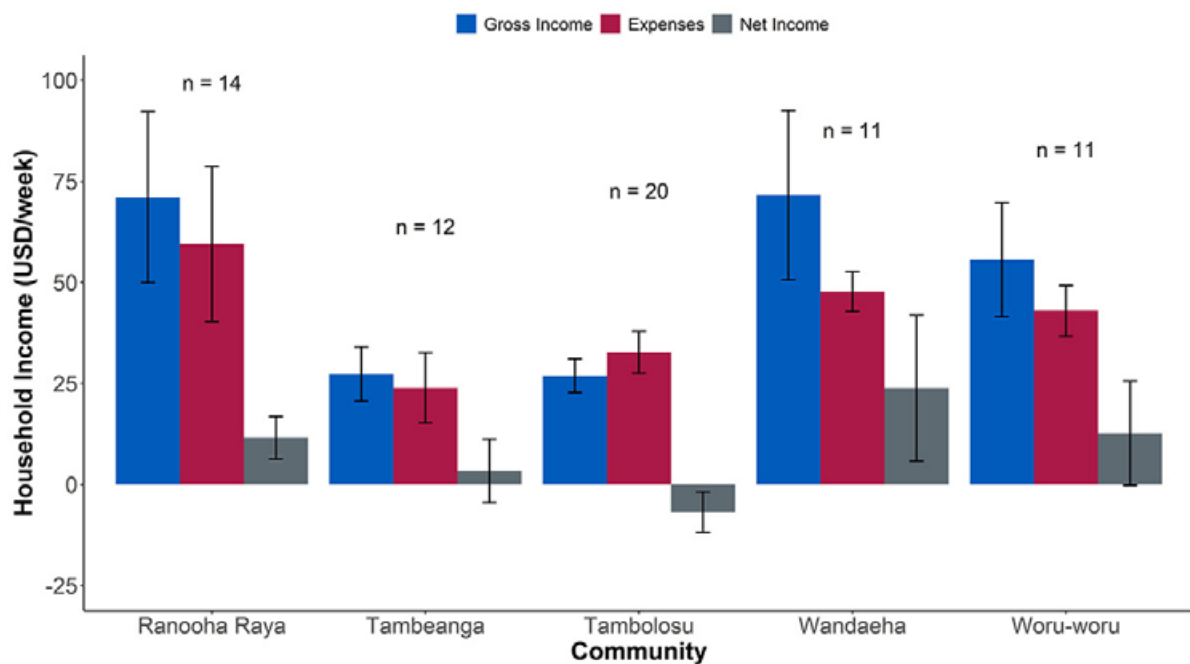


Figure 4. Weekly household gross income, expenses and net income (mean \pm SE) from fisheries for five villages in Laonti subdistrict, South Konawe District, Southeast Sulawesi Province, Indonesia.

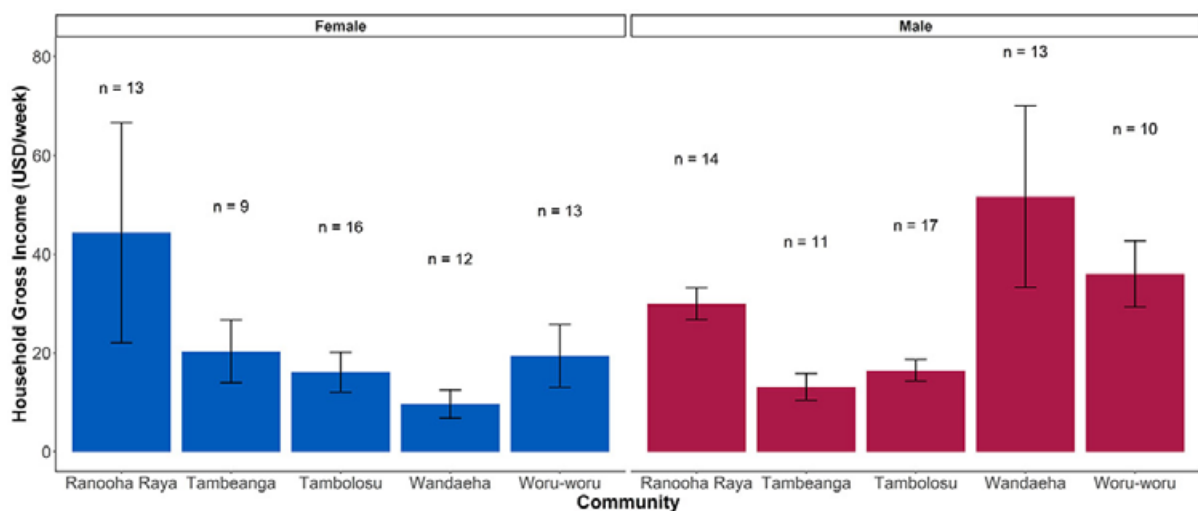


Figure 5. Weekly household gross income by gender (mean \pm SE) from fisheries for five villages in Laonti subdistrict, South Konawe District, Southeast Sulawesi Province, Indonesia.



First savings club established in Laonti subdistrict, South Konawe District, Southeast Sulawesi Province, Indonesia. ©Udin

groups to formally establish their savings clubs, and support ongoing operations, including share purchasing, short-term loans (~three months) and payment schemes. At the end of a cycle of 9–12 months, savings and profits are to be shared based on each member's contribution, and a new cycle can then resume. A social fund and an emergency fund also cover agreed-on collective community activities (e.g. joint livelihood projects, fisheries management projects) and emergency assistance for households in need. To date, five savings clubs have been established, one each in the villages of Labotaone, Tameanga, Tambolosu, Rumbi-Rumbia and Wandaeha in Laonti subdistrict, in South Konawe District.

Discussion

The gender-inclusive approaches to improving household financial management applied here attempt to empower coastal communities by building on existing decision-making roles within households, ensuring the tools to manage financial dealings are available, and enabling active participation in village fisheries management bodies. Allowing women and their spouses, and women and men without spouses, to self-select and participate in training, was a preferred strategy of all participants from all villages. Women and men from the same household often manage different financial components of the household, with general household finances and the separate fisheries-related businesses they manage. By working together, we found this built a joint knowledge of the savings behaviour and financial tools required for their households, and could assist with joint decision-making for both household and business finances at the household level (Lawless et al. 2019).

The extremely low weekly revenue of households who participated in financial literacy training, with women earning about 30% less than men, highlights the need for building financial literacy in an ongoing manner, thus ensuring that households are equipped with the tools to effectively manage their finances, whether from fishing, trading or processing. Empowering women, while noting that existing social norms may differ across and within villages, may not necessarily involve increasing their income relative to men. Yet in the appropriate social contexts, the ability of women to negotiate and be independent with their own household and business incomes (Lawless et al. 2019) can lead to positive outcomes for gender inclusion in financial management, empowerment processes and management of natural resources (CGIAR 2020).

Further work may be required to ensure access various financial services and digital technologies, which can help with managing household finances and businesses. The negative net income of some of the fishing households, while likely to be supplemented by other income streams, is consistent with studies elsewhere, where daily incomes of fishing households are financially disadvantaged compared with those who have other income sources (Kronen et al. 2010). These low household income flows of fishing households in Southeast Sulawesi Province, is, therefore, likely to be a key factor driving support by women for the establishment of village savings clubs.

Currently, the five savings clubs established in each of the five villages have been established by women. Compared with men, we found that women often have had more recent experience and familiarity with village-based savings funding

groups. For example, we found that *arisan*, a rotating savings and credit association, had once existed in some villages, but often they were defunct or did not provide sufficient savings for individual livelihood needs or for community requirements related to the fisheries sector (e.g. providing fishing gear for women's groups). In the fishing villages where financial literacy training took place, formal and informal credit institutions such as bank branches and cooperatives do exist, yet they can be geographically dispersed and not easily accessed by all villagers. Access to financing from some microfinance institutions, of up to IDR 25 million (USD 1760) per household is available. Yet knowledge and other barriers exist, with only a small percentage of households (12%) in these villages having formal savings accounts in banks, 2% having insurance and 0.4% having access to microfinance through credit unions or cooperatives (Rare, unpublished data).

Therefore, savings clubs can often be a bridging institutional framework where fishing communities, often remote and lacking knowledge of financial services, can develop the habits and practices of sound account-based financial management (Narasimhan and Matthews 2014).

As the savings clubs build liquidity and the safety of the cash may become a problem, these informal institutions may be best served by opening bank accounts to deposit excess cash to ensure its safety and security (Narasimhan and Matthews 2014). Over time, savings clubs may evolve into other institutions such as a microcredit facility or cooperative, creating linkages with formal financial services, markets and support from government and the private sector.

Nonetheless, for many households, communities and small enterprises that have small cash turnovers, the tax implications and complexity of financial regulations and procedures, can be barriers to accessing formal financing (de Beer et al. 2013). Many households and village enterprises that have low-income flows may still desire undocumented income. Through the community lens, informality can create a sense of independence, where access to labour is flexible, providing a competitive advantage in pricing of products below formal market prices (de Beer et al. 2013). Until access to financial services and their benefits are perceived in a positive way, and the advantages of technology-based mobile banking and digital trading platforms manifest, a savings club culture can offer convenient financial access in a cost-effective manner, improve skills in the practices of modern financing (Narasimhan and Matthews 2014), and build financial resilience in communities to deal with external macroeconomic shocks.

Conclusion

In developing new pathways for enhancing small-scale fishery economies, households and communities seem willing to embrace gender-inclusive financial strategies, which can help legitimise their co-management of fisheries resources (McDonald et al. 2020). Legal mandating of village governance bodies that represent the entire fishing community, also increases trust between local governments and communities, as principles of representation, participation and transparency are applied to local governance. Building financial literacy promotes recognition of women's roles in the fisheries sector, challenges some gender norms and stereotypes that women do not fish, and highlights their roles in pre-harvest and post-harvest activities.

The gender-inclusive programme described here has only recently been initiated over the past year. We recognise that improvements in capacity building, institutional learning and the application of financial tools and services for fishing communities is required in order for financial empowerment to be achieved. Savings clubs and dedicated leadership roles and spaces for women to actively participate in fisheries management bodies can provide opportunities for women to have meaningful decision-making and financial agency in households and community governance (Lawless et al. 2019). Monitoring of the steps, processes, benefits and outcomes that gender inclusion delivers for households and communities will include tracking how income from fisheries is building the wellbeing of households, and how the agency of women in financial resources and planning is improving. Through this we can understand the social norms that are enabling, and those that are barriers, to gender-inclusive strategies.

As advances in both economic and social reforms are fast-tracked by the rapid uptake of new technologies, and the replication of these approaches is implemented through fishing villages, we believe that communities with gender-inclusive approaches are best equipped to capture, retain and build value from their small-scale fisheries. The work described here has provided some insights into the pathways that some fishing communities are taking in Indonesia.

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References

- Azza A., Darman E. and Eriyanti F. 2019. Factors that influence partnerships in empowering marine and fisheries businessmen. *Advances in Social Science, Education and Humanities Research* 458:447–456. (Also available at: <https://download.atlantispress.com/article/125942849.pdf>).
- Becker K.F. 2004. Fact-finding study. The informal economy: Stockholm. Sida Department for Infrastructure and Economic Co-operation. 76 p. (Available at: [<https://www.sida.se/contentassets/ff689029b9a5479eb-c8688bbe521600e/13925.pdf>]).
- Campbell S.J., Jakub R., Valdivia A., Setiawan H., Setiawan A., Cox C., Kiyo A., Darman, Djafar L., de la Rosa E., Suherfian W., Yuliani A., Kushardanto H., Muawanah U., Rukma A., Alimi T. and Box S. 2020. Immediate impact of COVID-19 across tropical small-scale fishing communities. *Ocean and Coastal Management* (in press).
- CGIAR. 2020. Generic catchphrase or global commitment: What is women's empowerment? CGIAR Gender Platform Newsletter November–December 2020, issue 3. (Available at: <https://gender.cgiar.org/generic-catchphrase-or-global-commitment-what-is-womens-empowerment/>).
- Cinner J.E., McClanahan T.R., MacNeil M.A., Graham N.A.J., Daw T.M., Mukminin A., Feary D.A., Rabearisoa A.L., Wamukota A., Jiddawi N., Campbell S.J., Baird A.H., Januchowski-Hartley F.A., Hamed S., Lahari R., Morove T. and Kuange J. 2012. Comanagement of coral reef social-ecological systems. *Proceedings of the National Academy of Sciences* 109:5219–22.
- Danielsen K., Wong F.F., McLachlin D. and Sarapura S. 2018. Typologies of change: Gender integration in agriculture and food security research. Amsterdam: Royal Tropical Institute (KIT). 57 p.
- de Beer J., Fu K. and Wunsch-Vincent S. 2013. The informal economy, innovation and intellectual property – Concepts, metrics and policy considerations. Economic Research Working Paper No. 10. World Intellectual Property Organization. 75 p. (Available at: <https://www.wipo.int/publications/en/details.jsp?id=3954&plang=EN>).
- Elmhirst R. and Resurrección B.P. 2009. Gender, environment and natural resource management: New dimensions, new debates. p. 3–20. In: Resurrección B.P. and Elmhirst R. (eds). *Gender and natural resource management: Livelihoods, mobility and interventions*. Abingdon, England: Earthscan.
- Kimiyaqhalam F. and Meysam S. 2015. Review papers on definition of financial literacy and its measurement. *SEGi Review* 8:1985–5672.
- Kronen M., Vunisea A., Magron F. and McArdle B. 2010. Socio-economic drivers and indicators for artisanal coastal fisheries in Pacific island countries and territories and their use for fisheries management strategies. *Marine Policy* 34:1135–1143.
- Lawless S., Cohen P., Siota F., Orirana G., Doyle K. and McDougall C. 2019. Gender norms and relations: Implications for agency in coastal livelihoods. *Maritime Studies* 18:347–358. (Also available at <https://doi.org/10.1007/s40152-019-00147-0>).
- Mangubhai S. and Lawless S. 2021. Exploring gender inclusion in small-scale fisheries management and development in Melanesia. *Marine Policy* 123: article 104287.
- McDonald G., Wilson M., Ver'issimo D., Twohey R., Clemence M., Apistar D., Box S., Butler P., Cadiz F.C., Campbell S.J., Cox C., Effron M., Gaines S., Jakub R., Mancao R.H., Rojas P.T., Tirona R.S. and Vianna G. 2020. Catalyzing sustainable fisheries management through behavior change interventions. *Conservation Biology* 34:1176–1189.
- Narasimhan K. and Matthews B. 2014. Savings clubs in the Solomon Islands. A summary of findings. Pacific Financial Inclusion Programme. 4 p. (Available at <http://www.pfip.org/wp-content/uploads/2016/08/PFIP-focus%E2%80%A2December-Issue-FINALWEB-1.pdf>).
- Nielsen Ø.J., Rayamajhi, S., Uberhuaga P., Meilby H. and Smith-Hall C. 2013. Quantifying rural livelihood strategies in developing countries using an activity choice approach. *Agricultural Economics* 44(1):57–71.
- Okali C. and Bellwood-Howard I. 2017. Editorial. *Agriculture for Development* 32:2–6.
- Remund D.L. 2010. Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs* 44(2):276–295.
- Sembiring R., Fatimah I. and Widyaningsih G.A. 2020. Indonesia's omnibus bill on job creation: A setback for environmental law? *Chinese Journal of Environmental Law* 4:97–109.
- Vijaya R.M., Lahoti R. and Swaminathan H. 2014. Moving from the household to the individual: Multidimensional poverty analysis. *World Development* 59:70–81.
- Wiederkeher C., Berghöfer A. and Otsuki K. 2019. Ostrom's governance principles and sustainable financing of fish reserves. *Human Ecology* 47:1–13.

Taboos as cultural challenges encountered by women fisherfolk in some coastal fishing communities in Nigeria

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Nowadays, our local traditions and cultural beliefs are being ignored and regarded as obsolete because of civilization.

Fishing, fish processing and marketing are some of the most important economic activities that women fisherfolk do in Nigeria. Women's engagement in fishing activities, however, are enormously affected and influenced by local taboos and traditional beliefs. Extant cultural taboos and patriarchy institutions strongly reinforce gendered norms and relations in small-scale fishing communities of developing countries. Despite Western civilization's influence, reverence in value systems and beliefs in traditional spirituality have continued to sustain prevalent cultural taboos. Therefore, the context and roles of cultural taboos as gender issues in fishing communities need to be sufficiently understood, researched and documented before any relevant economic empowerment programme or project is initiated.

Taboos are unwritten rules based on cultural norms that are transmitted from generation to generation through socialisation, and which regulate the way people interact with the world around them by prohibiting certain activities or actions by considering them dangerous or sacred. In traditional fishing societies, the observance of taboos in the context of local fishing communities are used to: 1) maintain subsistence fishing pressure within sustainable production; 2) conserve nature and maintain ecosystem balance; and 3) protect fish stocks. Inevitably, these taboos are also used as cultural adaptations by fishers to avert unchangeable risks or dangers associated with fishing in a hostile natural environment such as the sea. However, local taboos in fishing communities are often gendered. It is imperative to note that highly gendered divisions of labour and prevalent gender relations are influenced by prevailing tradition and cultural taboos, rather than by biological limitations. Patriarchy is also a very strong force that complements traditional beliefs, value systems and customs shared by both men and women in communities where influences of secularism, globalisation and modernisation are not fully embraced. Patriarchal traditions and gender relations have been institutionalised over time and remain deeply embedded in the social fabric of some African societies. Local taboos affect and influence women fisherfolk perceptions that certain activities and natural phenomena are controlled by traditional deities or spirits. This insinuates the way their environment is being controlled and governed. In turn, this exerts a potent influence on local women fisherfolks' socioeconomic activities, and for these reasons, women tend to concentrate on the postharvest pursuits.

This article illustrates some of the cultural taboos that shape the activities of women fisherfolk in certain parts of Nigeria. The narrative here focuses on the role and influence of a water deity in the lives of women fisherfolk. Despite their diverse ethnic origins and vulnerabilities, women fisherfolk are increasingly proactive in confronting these daunting challenges. Some of the challenges encountered are outlined below. Among the Ilaje and Egun fisherfolk occupying the country's Atlantic coastline, the sea goddess, Malokun is a water deity highly revered for her supernatural power to give wealth and inflict punishment on individuals who violate or abandon local, traditional sociocultural beliefs or taboos. Very prominent among the taboos against Ilajes women fisherfolk, is the prohibition of sex before commencing fishing activities. This is traditionally attributed to the sacredness and unblemished nature of the sea goddess and the strong belief that having sexual intercourse angers her. This taboo is strictly adhered to in order to avoid misfortune during fishing. In some rare situations, the few fisherwomen who came in direct contact with the sea goddess while fishing revealed that she is very beautiful and spotless. The majority of the fisherwomen, therefore, purify themselves by bathing before they go fishing to avoid infuriating the goddess. A women fisherfolk nursing a baby of less than three months is also prohibited from fishing. It is believed that a time frame of 90 days is required for absolute purification and cleansing of the woman after giving birth. This is strictly adhered to in order to avoid the untimely death of the child and the mother. Egun women are culturally prohibited from fishing. They are active, however, in the post-harvest sector where they process and sell fish. If an Egun woman violates these fishing ethics, she experiences severe calamity, which is believed to be caused by the sea goddess. She might also be killed and buried near the extensive coastline. This scenario is mainly attributed to a popular traditional taboo that a woman cannot be an occupant of a fishing boat because she could desecrate the sea and pollute Malokun with her menstrual blood. This is regarded as a taboo because such women are perceived as being unpurified.

Furthermore, it is forbidden for fisherwomen to carry or possess charms in fishing boats. A situation where the violator refuses to own up to carrying a charm but then throws the polluted item away, may result in the boat capsizing and causing death. If, however, deaths are averted, poverty, calamity and sickness will be experienced. Malokun also prohibits eating coconut before fishing. A considerable majority of the Egun fisherwomen also believes that Malokun is the local sea goddess of social justice; this is attributed to the reporting of defaulters and debtors to her. According to traditional beliefs, defaulters or debtors will lose property, become lunatics or die if their outstanding debt is unpaid. To

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avert these unfavourable consequences, debtors are strongly warned before reporting to the sea goddess. Debtors instantly appease the sea goddess after paying the debt. If the debtors persistently refuse to yield to warnings, they face unpalatable consequences. Religious beliefs also play a factor. Muslim fisherwomen are forbidden to venture into the sea but are allowed to fish the whole day while fishing in inland waters because of family responsibilities, socioengagements and domestic chores.

Most women fisherfolk in coastal parts of Nigeria are limited by these taboos, which restrict them to artisanal fishing activities in lagoons, creeks and rivers. Their exclusion from fishing at sea is institutionalised in gender norms and traditions. Women's predominance in the post-harvest sector is acceptable due to the perception that such activities are an extension of their gendered roles in the domestic domain. Although it may also be plausible to explain that fishing is a very difficult activity because it requires perseverance and muscular strength, it is cultural taboos and patriarchal systems that determine and reinforce the gendered norms in fishing communities.

References

- Mafimisebi T.E., Famoofo T.A. and Mafimisebi O.E. 2016. Awareness and utilization of indigenous knowledge systems in artisanal and coastal fishing in south-west, Nigeria. *EC Agriculture* 3.2 (2016):614–632.
- Udong E. 2011. The quest for sustainable livelihood: Women fish traders in Ibaka, Niger Delta, Nigeria. Ph.D. Thesis, Wegeningen University.
- Udong E., Niehof A. and Van Tilburg A. 2010. The livelihood strategies of women fish traders in adapting to cultural and institutional constraints in Ibaka, Nigeria. *MAST* 9(2):65–93.



Interview with women fisherfolk. ©Ayodele Oloko



Women fisherfolk in action. ©Ayodele Oloko



Interviewing a fish processor. ©Ayodele Oloko

Inequity in unregistered women's fisheries in Mauritius following an oil spill

Josheena Naggea,¹ Emilie Wiehe² and Sandy Monroe³

Background

As the world was dealing with COVID-19, Mauritius faced an unprecedented ecological disaster on 25 July 2020. Mauritius, a small island nation of 1.3 million people, located 500 miles off the east coast of Madagascar in the Indian Ocean, was caught off-guard when the Japanese-owned, Panama-flagged vessel, the MV *Wakashio*, wrecked on the coral reef of Pointe D'Esny. Two weeks later, the vessel began leaking oil into the crystal blue lagoon. A staggering 1000 tonnes of fuel oil polluted 27 square kilometres of the island's southeast coast, home to artisanal fishing villages and nature reserves, including two Ramsar sites: the Blue Bay Marine Park and the Pointe D'Esny Wetlands. The combination of these two disasters – COVID-19 and the oil spill – disproportionately affected coastal communities employed in the fisheries and tourism sectors. In this article, we focus on the compounded impacts of COVID-19 and the oil spill on women gleaners and their families, an overlooked and neglected subgroup of Mauritian fishers.

Immediately after the oil spill, when we visited some of the impacted artisanal fishing villages in August 2020, we spoke with women gleaners who depended on the sea directly and indirectly. They shared the severity of their families' suffering when we attended several community meetings to understand how coastal communities could be better supported to cope with this ecological disaster. We were already working in the region on our respective projects, but these were our first long-term interactions with the women from the impacted villages. Despite years of experience along this coast, we had not met many of these women until the oil spill. They were there the whole time, just invisible.

Gleaning in Mauritius

Mauritius has four primary types of fisheries: 1) artisanal, 2) sport, 3) banks and 4) tuna. Artisanal fishing provides employment and livelihood to about 2200 registered fishers and their families in Mauritius (Lalljee et al. 2018). Along the southeast coastline of the island, where 12 village council areas were impacted by the oil spill, there are 630 registered fishers (draft UNDP report). Additionally, hundreds of people fish for subsistence and are not formally recognised through any registration process. Women tend to be largely unregistered artisanal fishers, focused on gleaning activities. Only 35 female fishers are registered in Mauritius as per the

list of registered fishers for 2019. Out of the 35, more than half operate in the area impacted by the oil spill.

Gleaning, which falls under artisanal fishing, is mostly considered as an open access activity. For example, the Fisheries and Marine Resources Act (2006) specifies numerous shellfish that can be collected. The regulation is specific to shellfish such as tek tek (*Donax* spp.), mangouak (*Isognomon* spp.), betay (*Trachycardium* spp., *Gafrarium* spp., *Asaphis* spp., *Tellina* spp.), bigorneau (*Littorina* spp.) and gono gono (*Pleuroploca trapezium*). Although permits are technically required to sell any marine products, gleaning typically happens at such a small, localised scale that it is not currently regulated by the Mauritian government.

Impact on women gleaners of southeast Mauritius

Villagers' livelihoods had already been impacted by COVID-19, and the oil spill constituted a new, crippling hurdle because the primary resource – fisheries – was impacted. Disaster response was slow to help affected families. Immediately after the oil spill, crowdfunding through local non-governmental organisations (NGOs) was the main source of support for these families, especially fishing families who were not officially registered, and therefore not officially recognised by the government. For some context, registered fishers were eligible for a monthly compensation of MUR 10,200 (USD 256). As of November 2020, unregistered fishers – who fish both for subsistence and commercial purposes – failed to receive that support. Without registration, they were not eligible for any compensation, resulting in greater debt. They have been relying heavily on NGOs and local associations to provide them with food packs, but these often fall short of their families' needs.

As in other places in the world, the role of women in fisheries and conservation policies in Mauritius is often overlooked, even when best efforts for participation are undertaken (Trimble and Johnson 2013; Santos 2015; Harper et al. 2013; 2017; Kleiber et al. 2015; Mangubhai and Lawless 2020). Women fishers either fish for subsistence, to sell to restaurants, or to help their husbands in their artisanal fishing businesses. In Mauritius, the work undertaken by female community leaders like Sandy (one of the article's authors) is essential. She has met with more than 100 women gleaners, but her support alone is not enough to help these women.

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The shoreline in southeast Mauritius a few days after the oil spill. ©Brady Goorappa



Community meeting with fishers from Anse Jonchee, Mauritius on 2 September 2020. ©Vasisht Seetapah

Some women required less support. Stefanie, 34 years old, used to help her husband fish using fish traps in Vieux Grand Port. Stefanie has previously attempted to become a registered fisher. After much difficulty and paperwork, she was able to prove her link to artisanal fisheries to the authorities (in large part due to her familial connections with male-registered fishers) and obtained the same compensation. “This is not the case for many other women fishers who before the spill brought additional income to their families,” Stefanie said. “They fish first to feed their families and then sell any surplus to locals.”

Before the spill, Sylvie, 45 years old from the village of Bambous Virieux, was involved in gleaning activities using a hand trowel as the main equipment to collect clams. She would occasionally use a hand spear to fish for octopus as well. The surplus used to bring her and her friends some additional income but now, due to the oil spill, they have to tap into their savings for family meals and other expenses they had previously covered with fishing revenue.

Food insecurity: We conducted community meetings in five of the main villages impacted by the oil spill, speaking to 40 women in small groups, in addition to conducting individual interviews. Many women expressed how this loss of subsistence fishing has also resulted in a change in their families’ diet. They now consume less seafood, and spend much more money buying food from shops, and have turned to backyard gardening to sustain their families. Food insecurity also prevents children from attending school because they do not always have lunch to bring. In many families, the spouses had been involved in informal jobs such as construction or fishing, but the low levels of economic activity due to COVID-19 have made their economic circumstances even more dire. We

were, however, inspired by the fact that many were ready to start over again with initiatives such as community eco-farms, for the wellbeing of their families, with much optimism. Their resilience, responsiveness and adaptability when faced with this disaster was heartening. Unfortunately, it will likely be a long journey before they can start to be self-reliant and live comfortably again.

Financial loss: Unregistered women fishers cannot expect any financial support as they are not officially recognised as fishers. Sylvie told us, “Actually, there has never been a process to recognise gleaners officially – those who fish by foot. Even if we register a complaint now for support, it won’t work because we don’t have that legal recognition. For generations here, people have been fishing using the methods we use. It is part of our traditions. It was never prohibited or monitored.” About the surplus that they sell, she further highlights: “We would not even have to go far to sell. People would approach us to see if we had anything to sell. A small bowl of our catch can be sold at MUR 50 (USD 1.16). I know a friend who lost her job and who would manage her household expenses by selling at least three bowls a day. It made a difference”. As such, registration acts not only as legitimization but constitutes recognition at cultural and economic levels.

Emotional loss: Sylvie described the oil spill impact as a feeling of deep personal loss – not being able to go out at sea. At low tide, she used to go out to collect shellfish with her friends. “When I look at the sea now at low tide, I’m sad, thinking we could have gotten a meal out of a day gleaning with my friends today. I feel helpless”. As Mauritians, it is also this loss in generational knowledge and way of life that we are mourning with the inhabitants along the affected coastline of Mauritius.

Gender and cultural importance of gleaning

When everyone in the household depends on marine resources for a living, the lack of attention to women in fisheries can have significant impacts not only on women but also on children and the family. Fishing is far more than just income; it has often been described as a “way of life”, one that has important cultural dimensions that go beyond income or even subsistence (Trimble and Johnson 2013; Santos 2015; Grantham et al, 2020).

The gendered nature of fishing activities in families, where men fish at sea and women either collect shellfish or are responsible for shelling shrimp, is a common occurrence globally (Harper et al. 2020). These gendered divisions between partners are presented as synergistic, and are transmitted from one generation to the next. Similarly, in Mauritius, women may perform differentiated roles in fisheries, opting for activities that do not require them to be out at sea for extended periods of time in order to juggle multiple domestic roles, including caring for children and/or elderly members of their family (Ferrant et al. 2014). Instead, many women rely on tides for gleaning, or collaborating with

kin on the use of boats to collect particular species such as asdarm (*Pinnidae* spp.).

Many of these activities are learned through generational transmission and are often village or area specific (Ram-Bidesi 2015). In Mauritius, preferred shells and species on the southeast coast are not necessarily the same on other parts of the island. Individuals learn specific gleaning and fishing techniques according to the species they catch. With the oil spill affecting a stretch of the island where artisanal fishing was the main activity, and no other major sources of employment are available, multiple communities are left in an impoverished state with limited opportunities.

The cultural importance of gleaning and its practice as a means of subsistence does not suggest an entirely romanticised view of these livelihoods. These gendered roles also highlight the challenges faced by women who engage in fishing, as many lack access to physical capital such as boats to conduct fishing methods that generate more revenue.

There may also be cultural barriers for women themselves to come forward as fishers. As Kleiber et al. (2015) have found

Fisherwoman catching octopus on Rodrigues Island, Mauritius. ©Josheena Naggea





Octopus drying on Rodrigues Island, Mauritius. ©Josheena Naggea

in their review of case studies on women in fisheries, women were more likely to downplay their fishing activity, as they were considered a poverty-related activity associated with shame. The oil spill and lack of recognition has therefore added adversity to an already vulnerable group.

Women fishers on neighbouring Rodrigues Island

Although there are social safety nets for registered fishers in Mauritius, such as a daily compensation when the weather is not conducive for fishing, artisanal fisheries is largely undervalued from a policy perspective and even more from a research perspective. With that in mind, the role of women in fisheries value chains is even more undervalued on the island of Mauritius. While they face their own unique challenges, women on the neighbouring semi-autonomous island of Rodrigues (also part of the Republic of Mauritius) who are involved in gleaning activities, mainly octopus fishing, are considered a main pillar of the economy. Around 32% of the registered fishers are women, which gives them more legitimacy to contribute to participatory discussions about fisheries, and to be compensated rightfully as and when needed. By contrast, gleaning in Mauritius is an invisible profession, as are the people involved in such activities.

On Rodrigues, the reefs are shallower and enable gleaning at low tide with greater ease. Even with limited resources, women are able to access fisheries relatively easily and are highly involved in creating value-added products, such as dried and pickled octopus, which are then exported to

Mauritius. Rodrigues takes extreme pride in its artisanal fishery heritage, and women fishers are central to this. Although women fishers on Rodrigues face their own challenges, those in Mauritius face more significant issues associated with being unregistered fisherwomen and gleaners who are not acknowledged as an integral part of the system.

Broader gender context in Mauritius

Mauritius particularly lags behind in gender equality measures related to economic participation, ranking 115 out of 153 countries according to the 2020 Global Gender Gap Index, a global report of the World Economic Forum that attempts to measure the gap between women and men in four key dimensions: 1) economic participation and opportunity; 2) educational attainment; 3) health and survival; and 4) political empowerment. Several factors explain this low number. There is a significant difference in labour force participation. For example, in 2019, 46% of women 16 years and older were active in the economy versus 73% of men in the same age category. Despite a steady increase over the last few years of women in the labour force and higher educational attainment levels, unemployment among women is still higher. While men earned an average monthly income of MUR 25,100 (USD 625), women tended to earn an average of MUR 19,100 (USD 475); men earn nearly one-third more than women. Although Mauritius regularly ranks high on most development indices and is considered a high-income country, gender inequality remains a challenge.

Conclusion

Not being registered does not mean a fisher has not been impacted. The sea is important to one and all. Given the well documented marginalisation of women in fisheries policies and management interventions worldwide and as we have observed in Mauritius, several priorities in particular come to the fore as the country rebuilds from the oil spill. We confer with Kleiber et al. (2015) and others (Ogden 2017; Smith and Basurto 2019) that counting both women and men in fisheries can help researchers and managers better understand socioecological systems at play. Counting women's fishing activities can inform the disaster recovery process, particularly in consideration of the role of gleaning and subsistence fishing in food security. Finally, including fisherwomen as much as fishermen in decision-making processes and policy development will lead to fair and equitable marine resource management and more sustainable outcomes, both ecologically and socially.

The compounding crises of COVID-19 and the oil spill have highlighted an important policy and research gap: women in fisheries often go uncounted. The oil spill impacted a high-income island, well-known for its social welfare programmes. Yet, there is a relevant group in our society whose needs have been overlooked.

Our current system systematically disadvantages these women. Out of 2200 registered fishers, less than 100 of them are women on the island of Mauritius. Although there is likely an equal to larger number of unregistered fishers compared to registered ones, fisherwomen and gleaners are far less likely to be registered or recognized at all. As women are overwhelmingly unregistered, a system which does not take into account unregistered fishers inadvertently further exacerbates gender inequalities. This compensation policy which discriminates against unregistered fishers by virtue of that fact discriminates against women because women are systematically more likely than men to be unregistered. The oil spill has made visible the inequalities between men and women fishers that already existed in the Mauritian context.

In this article, we have highlighted that any policy that discriminates against unregistered fishers in Mauritius, inadvertently discriminates against women. A gender lens should be applied to policy-making, and decision-making should be inclusive of both women and men. This article does not try to push for stricter regulations in gleaning activities, but instead highlights that subsistence fishers are fishers worthy of support. Everything may appear fine on the outside, but when disaster strikes, systemic inequalities come to the surface.

References

- Ferrant G., Pesando L.M. and Nowacka K. 2014. Unpaid care work: The missing link in the analysis of gender gaps in labour outcomes. Paris: Organisation for Economic Cooperation and Development.
- Grantham R., Lau J. and Kleiber D. 2020. Gleaning: Beyond the subsistence narrative. *Maritime Studies* 19:509–524. (Also available at <https://doi.org/10.1007/s40152-020-00200-3>).
- Harper S., Adshade M., Lam V.W.Y., Pauly D. and Sumaila U.R. 2020. Valuing invisible catches: Estimating the global contribution by women to small-scale marine capture fisheries production. *PLoS ONE* 15(3):1–16. (Also available at <https://doi.org/10.1371/journal.pone.0228912>).
- Harper S., Grubb C., Stiles M. and Sumaila U.R. 2017. Contributions by women to fisheries economies: Insights from five maritime countries. *Coastal Management* 45(2):91–106. (Also available at <https://doi.org/10.1080/08920753.2017.1278143>).
- Harper S., Zeller D., Hauzer M., Pauly D. and Sumaila U.R. 2013. Women and fisheries: Contribution to food security and local economies. *Marine Policy* 39(1):56–63. (Also available at <https://doi.org/10.1016/j.marpol.2012.10.018>).
- Kleiber D., Harris L.M. and Vincent A.C.J. 2015. Gender and small-scale fisheries: A case for counting women and beyond. *Fish and Fisheries* 16(4):547–562. (Also available at <https://doi.org/10.1111/faf.12075>).
- Lalljee B., Velmurugan A., and Singh A.K. 2018. Climate resilient and livelihood security – Perspectives for Mauritius Island. p. 403–431. In: Sivaperuman C. (ed). *Biodiversity and Climate Change Adaptation in Tropical Islands*. Elsevier Inc. (Available at <http://dx.doi.org/10.1016/B978-0-12-813064-3/00014-4>).
- Mangubhai S. and Lawless S. 2021. Exploring gender inclusion in small-scale fisheries management in Melanesia. *Marine Policy* 123: article 104287. (Available at <https://doi.org/10.1016/j.marpol.2020.104287>).
- Ogden L.E. 2017. Fisherwomen – The uncounted dimension in fisheries management. *BioScience* 67(2):111–117.
- Ram-Bidesi V. 2015. Recognizing the role of women in supporting marine stewardship in the Pacific Islands. *Marine Policy* 59:1–8. (Also available at <https://doi.org/10.1016/j.marpol.2015.04.020>).
- Santos A.N. 2015. Fisheries as a way of life: Gendered livelihoods, identities and perspectives of artisanal fisheries in eastern Brazil. *Marine Policy* 62:279–288. (Also available at <https://doi.org/10.1016/j.marpol.2015.09.007>).
- Smith H. and Basurto X. 2019. Defining small-scale fisheries and examining the role of science in shaping perceptions of who and what counts: A systematic review. *Frontiers in Marine Science* 7 May. (Available at <https://doi.org/10.3389/fmars.2019.00236>).
- Trimble M. and Johnson D. 2013. Artisanal fishing as an undesirable way of life? The implications for governance of fishers' wellbeing aspirations in coastal Uruguay and southeastern Brazil. *Marine Policy* 37(1):37–44. (Also available at <https://doi.org/10.1016/j.marpol.2012.04.002>).

Enhancing knowledge and skills of Fijian women seafood vendors

Bulou Vitukawalu,^{1*} Ana Ciriyaawa,¹ Rosi Batibasaga¹ and Fareea Ma¹

To enhance the knowledge and skills of 30 women seafood vendors on proper seafood handling, hygiene and processing, the Wildlife Conservation Society hosted a three-day training from 10–12 November 2020. The training also provided the opportunity to introduce new information on the size-at-maturity of key commercial fish species in Fiji, and the 4FJ Fish Smart Campaign.

Background

In Fiji, women play significant roles in small-scale fisheries, and are increasingly involved in a wide range of activities such as gleaning, fishing, post-harvest processing, selling and marketing of seafood. Often, women are considered primary income supporters for households, contributing to food security and local livelihoods (Vunisea 2016). Despite their level of involvement in the fisheries sector, however, women are largely undervalued, overlooked and receive little direct support from government or non-government organisations (Mangubhai et al. 2018). Women also have poor access to information and financial resources, and receive little training to build their capacity to manage their fisheries for food and/or livelihoods (Thomas et al. 2020).

In the Northern Fisheries Division, women seafood vendors at the Labasa market depend greatly on selling fish and other invertebrates as their main source of income (Vitukawalu et al. 2020). These women play crucial roles within their households, while contributing to small-scale fisheries (Thomas et al. 2020). Despite women's contribution in the fisheries sector, women encounter barriers and constraints at the market place that impede their ability to earn a livelihood. At the Labasa market, a major issue highlighted by women seafood vendors is the lack of training on seafood spoilage, and post-harvest handling and preservation methods (Vitukawalu et al. 2020).

A training held in Labasa – on the island of Vanua Levu – brought together 30 women seafood vendors from the Labasa and Nabouwalu markets, and the coastal communities of Bua and Macuata provinces. The training provided a great platform for these women to meet and share common issues they faced while fishing in their customary fishing grounds and then later selling at market places. Participants developed an understanding of size-at-maturity and why it matters for sustainably harvesting and managing fisheries. They also gained knowledge and skills on the proper methods for seafood handling, hygiene and processing to ensure a long shelf-life for their product, and to meet health safety standards for their customers. The workshop provided the non-governmental organisations cChange and the Wildlife Conservation Society to present the 4FJ Fish Smart Campaign that is aimed at increasing participants' awareness on the importance of protecting the future of Fiji's fisheries for food security, livelihoods and the sustainability of the oceans.

Challenges faced by women in the fisheries sector

During the first day of the training, women vendors identified the various challenges they faced both on their fishing grounds and at market places.

1. There has been a decrease in the size and abundance of fish and invertebrates caught and sold at the markets. In most cases, women spend more time and effort in catching fish and invertebrates because there are less and less in their nearby customary fishing grounds (*iqoligoli*). Additionally, women highlighted their concerns about the destruction of key habitats within their fisheries grounds such as mangroves (e.g. harvesting for firewood) and coral reefs (e.g. cyclone damage), which could be contributing factors to the decreases in fish catches.
2. The price of fish sold by fishermen to middle-women vendors has increased while the number of fish sold in a bundle has decreased. This issue stems from the fact that now, fewer fish are caught and sold, which means for some fishers, it is difficult to make enough money to cover their fishing expenses.
3. There has been a lot of confusion over "size-at-maturity", and women seafood vendors have highlighted the need to have more awareness training on this concept, especially with regard to the species of fish that are commonly caught or sold by women.
4. Many women highlighted their concerns about increasingly threatened fisheries such as mud crabs, groupers (including coral trout), rabbitfish, Spanish mackerel, saltwater clams, lobsters and octopus. For most women, the importance of having proper fisheries management within their communities is crucial to sustaining these overharvested species.
5. The absence of ice plants within market vicinities was highlighted by most women. Ease of access to ice would help maintain the freshness of their catch, thus allowing them to sell their catch at a higher price. Currently, ice plants are located far from market places, which means that vendors incur costs in order to transport ice to the markets. It was noted that even if vendors bought ice, there is no proper place to store unused ice and hence in most cases, the ice is wasted. The lack of electricity is a barrier to installing freezers to store fish and ice safely.

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Mafa Qirolele of cChange Pacific introduces the 4FJ Fish Smart Campaign to women seafood vendors in Labasa, Fiji. ©Bulou Vitukawalu, WCS

6. Women in coastal communities expressed concerns about the issuance of fishing licenses by government authorities to outsiders to fish within their customary fishing grounds. This increasingly pressure on their fish stocks was another reason the women felt their fish catch had decreased compared to the past.
7. Strong views were expressed on racial discrimination, which exists within the town council administration. For instance, *iTaukei* (indigenous Fijian) seafood vendors at the Labasa and Nabouwalu markets stated that, in most cases, the administration would prioritise issues raised by Indo-Fijian vegetable vendors, while ignoring the concerns raised by *iTaukei* seafood vendors.
2. The Fijian government and non-governmental organisations should create more awareness programmes on the use of sustainable and eco-friendly fishing gear to ensure that communities practice sustainable fishing methods. The Ministry of Fisheries should enforce strict rules and penalties on the use of certain gear types, such as nets with mesh sizes less than 5 cm.
3. There is a need to raise awareness in communities about conserving marine and terrestrial resources. As resource owners, communities (including women) need to be empowered and better informed on the sustainable use of such resources. Additionally, coastal communities need to be encouraged to plant and protect more mangroves, which provide breeding grounds for fish and invertebrates.

Participants highlighted a few recommendations and action steps that might help address the challenges faced within the fisheries sector.

1. Expenses associated with fishing affect the profits women make from selling fish at the markets. To solve this issue, women suggested they needed to find ways of minimising costs and expenses, such as finding other alternatives to obtain fisheries resources. For example, choosing to go fishing in a rowing boat instead of a boat with an engine would save money on fuel expenses.
4. Improving communication between women seafood vendors and the relevant authorities to ensure their grievances are heard is crucial. Finding ways for these vendors to voice their concerns is necessary in order to achieve change.
5. More workshops and awareness are needed for stakeholders (including other fishers and seafood vendors) invested in the fisheries sector, especially on topics such as size-at-maturity, spawning times and relevant fishing laws.

Seafood handling, hygiene and processing

In Fiji, seafood is often in high demand and requires good handling and hygiene practices for a sustainable supply. Post-harvest fisheries in Fiji is an area that is still developing and, thus, needs much more commitment and effort to ensure sustainable, safe and high-quality fish reach the market (Lako 2020). Days 2 and 3 of the training workshop helped seafood vendors gain valuable knowledge and skills on proper seafood handling, hygiene and processing methods. Dr Jimaima Lako, a Food and Nutritionist Scientist at the Fiji National University, conducted the training.

The training was divided into four components:

- post-harvest practices and handling;
- seafood spoilage and sickness;
- basic food preservation concepts; and
- seafood processing and preservation techniques with recipes.

Specifically, the women gained hands-on experience in:

- hygiene and handling of fish on arrival and while processing, including the correct way to gut fish safely to reduce the spread of disease;
- assessing the quality and freshness of fish through visual evaluation techniques;
- filleting fish for fresh and old stock for value-adding and preservation; and
- practicing basic and simple seafood value-adding by pickling fish, saltwater clams (*kaikoso*), seaweed (*lumi* paste) and brined seagrapes (*sama*).



Susana Duguci (age 42): *The difficulty we face as vendors is fishers themselves are selling us small fish so we don't really have much choice. In order for our business to continue, we buy fish to sell. These are fish that are normally confiscated by the MoF [Ministry of Fisheries] if they come across it. So we lose money. All these people need to be charged: the fishers, the middlemen and probably the buyer if met at the right place and at the right time.*

Madhu Lata (age 48): *I agree. I think selling small-sized fish is a big issue at the moment. [The Ministry of] Fisheries should be more alert, and more awareness should be taking place especially with the fishers who come to sell fish to us at the market. A lot of enforcement is also required.*

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References

- Lako J. 2020. Lecture notes on post-harvest fisheries handling and practices. Suva, Fiji: Fiji National University.
- Mangubhai S., Vakalalabure M., Fox M., Leweniqila L., Meo I., Naleba M. and Thomas A. 2018. Fiji's Northern Division hosts its first Women in Fisheries Forum. SPC Women in Fisheries Information Bulletin 28:17–18.
- Thomas A., Mangubhai S., Fox M., Lalavanua W., Meo S., Naisilisili W., Ralifo A., Veitayaki J. and Waqairatu S. 2020. The critical contribution of women fishers to food security and livelihoods in Fiji. Summary for decision-makers. Suva, Fiji: Wildlife Conservation Society. 6 p.
- Vitukawalu B., Mangubhai S., Berdejo V., Naleba M., Nand Y. and Leli P. 2020. Addressing barriers and constraints to gender equality and social inclusion of women seafood sellers in municipal markets in Fiji. SPC Women in Fisheries Information Bulletin 31:30–35.
- Vunisea A. 2016. The participation of women in fishing activities in Fiji. SPC Women in Fisheries Information Bulletin 27:19–28.





Inspiring profile

Josephine Kalsuak

by Josephine Kalsuak

Josephine Kalsuak is from Vanuatu and is a Senior Human Rights Adviser at the Human Rights and Social Development Division at the Pacific Community (SPC) based in Suva, Fiji.

I have a Bachelor (Honours) of Human Service with Distinction from Griffith University in Australia; my honours thesis focused on supporting Ni-Vanuatu rural development. I also attained a Graduate Diploma in Not-for-Profit Management from Unitec Institute of Technology in New Zealand, and I am in the final stages of completing my Master's thesis on social policy at the University of the South Pacific.

My professional career started in 2005 in Vanuatu, where I ignited and instilled my passion for human rights. At the time, I was a Youth Project Coordinator for a non-governmental organisation called the Foundation of the Peoples of the South Pacific. I supported a coastal gardens project focused on the inclusion of young people in the governance structures of community-based coastal initiatives. This provided me a foundation of knowledge and experience for a career focused on human rights.

As a Senior Human Rights Advisor at SPC, one of my key roles is supporting civil society organisations under the Pacific People Advancing Change (PPAC) programme from Vanuatu, Solomon Islands, Tonga and the Federated State of Micronesia, to build their capacity for advocacy, and especial-

ly to run advocacy campaigns. We do this through a package of assistance that includes advocacy training workshops, ongoing mentoring, and the provision of small grants for advocates. Civil society organisation (CSO) advocacy campaigns range from environment and waste management, to youth empowerment, age of consent, domestic violence prevention, to rights of people with disability, and climate change adaptation. The common approach applied in all these campaigns is that we place people at the centre of planning and implementing these advocacy campaigns. Examples of some of the achievements of CSOs in the grant year 2019 to 2020 include: 1) the Jojikum and Marshall Islands Conservation Society, advocating for single use plastic and promoting reusable bags to enhance the right to a clean and safe environment; 2) two CSOs collaborated with the Marshall Islands Environmental Protection Authority and other government agencies and formed the Eniwot Juon (*say never mind, no need to single use plastic*) campaign; 3) the Tonga Centre for Women and Children obtained support from district officers on the island of Va'vau to raised awareness with community leaders about domestic violence prevention strategies; and 4) in Solomon Islands, Auki market vendors successfully acquired provincial government commitment to support an Auki market waste management system. For the next grant year 2020 to 2021, the Wai Hau Conservation Foundation in Solomon Islands aims to improve women's participation in conservation and raise awareness about logging impacts in Malaita Province, and the Ahetaha Water Conservation Association plans to advance gender-sensitive water, sanitation and health awareness in Malaita.

Another key part of my job is to work with SPC's Fisheries, Aquaculture and Marine Ecosystems Division to mainstream human rights and people-centred approaches into their existing programmes. For example, I contributed to the review of the "SPC Handbook for Gender Equity and Social Inclusion in Fisheries and Aquaculture", to ensure appropriate approaches were being promoted and the language was sensitive to basic human rights. I also helped facilitate sessions at a workshop in July 2020, which looked at national legislation in six Pacific Island countries (Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu) and identified existing biases or barriers that may inhibit the realisation of human rights, including gender issues, for small-scale fisheries.

Why does human rights matter for fisheries and aquaculture in the Pacific?

Managing fisheries is not about managing fisheries resources, but about managing people, their aspirations, attitudes, and their behaviour. Therefore, understanding the people side of fisheries and aquaculture in the Pacific helps inform the development of effective policies, programmes, and practices for these sectors, and will ultimately improve their long-term outcomes. Human rights matter for fisheries and aquaculture in terms of effective decisions and policy implementation.

Human rights principles and frameworks provide an enabling environment to understand the different capabilities and concerns of men, women, young men and young women, elderly, people with disabilities, children and other groups residing in a coastal community. It promotes the participation of fishers and all other stakeholders in these sectors in decision-making processes to ensure fisheries services are tailored, especially from government agencies, are done in partnership with the people involved, and ensures a sense of ownership. A human rights-based approach to fisheries

and aquaculture also ensures that the people involved are respected, informed, engaged, supported, and treated with dignity and compassion. Human rights promote the interconnectivity between people and their environment, which comprises natural and marine resources to ensure equitable outcomes.

What has been the most interesting thing you have learned, working with fisheries and aquaculture practitioners?

Collaborating with practitioners in fisheries and aquaculture is interesting and a learning process. It involves active listening, creativity and finding entry points to advance dialogue and engagement. An important lesson I have learned is the need to contextualise human rights terminologies to the fisheries and aquaculture sectors. This means starting with the terminologies that fisheries and aquaculture practitioners are familiar with, for example food security and livelihood, and making the linkages to these fundamental human rights.

From a gender and human rights perspective, what are the areas in the fisheries and aquaculture sectors that need attention?

From a human rights perspective, I think an area that needs attention is recognising and understanding that human rights are essential in order to achieve sustainable development goals in these sectors. I also think the sectors need to apply a gender lens to their work. It is important to understand that both men and women are involved in these sector in different capacities, and valuing the contribution of both men and women equally is important. Lastly, fisheries and aquaculture initiatives, projects and programmes, are unlikely to be fully successful unless underlying issues of inequality in these sectors are addressed.



Inspiring profile

Senita Wauwia

Champion for local women and fisheries
in Papua New Guinea

by Ruth Konia

"I am from inland East Sepik Province and there are no mangroves where I come from. When I used to come to the provincial capital of Wewak on the coast, I just saw mangroves as smelly places where people dumped their rubbish. But then I also began to hear people say they get crabs and fish from mangroves. However, I didn't really understand the importance of mangroves for that. That was all I knew of mangroves before I joined The Nature Conservancy." – Senita Wauwia, Field Coordinator, Mangoro Market Meri Program

In 2013, Senita Wauwia began working at The Nature Conservancy in Papua New Guinea (PNG) as a part-time support officer, supporting administration such as logistics for meetings and workshops. The following year, she was recruited full-time as Project Officer, under a United States Agency for International Development Mangrove Rehabilitation for Sustainably Managed Healthy Forest (USAID MARSH Project). "With the MARSH Project, I began to understand and appreciate the importance of mangroves, and the goods and services these systems provide."

When the MARSH Project ended, Senita was retained as Project Assistant, providing logistical support to other projects. However, the women of The Nature Conservancy's PNG programme wanted to be more involved in conservation work. In 2017 the team worked to develop a new programme called "Mangoro Market Meri" (meaning Mangroves, Women and Markets) in PNG. The project involved partnering with local women in their efforts to build markets for sustainably harvested mangrove products, such as shellfish and mud crabs. "Together, we are focused on training in leadership, financial literacy and business management and to generate much needed income and employment opportunities. And we're helping to foster a knowledge-sharing network between local women's groups so they can create more prosperous and healthy futures for their families and villages," said Senita.

Senita has been an integral part of this programme. The project team felt that there was more in Senita than basic administration tasks. Senita was smart and keen to learn more about conservation and help women. Senita is now leading work with women in PNG to progress sustainable mangrove and fisheries management under Mangoro Market



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Meri. "The Mangoro Market Meri Program gave me the wings to fly. My workstation is in the mangroves. I love the smell of hydrogen sulphide gas from the mangroves. Getting my hands and feet dirty while working with the women, filling up the poly bags with soil for planting the propagules is what I do best.

"Mangoro Market Meri brought me out of my shell. I now have the confidence to speak-up and take the lead in discussions. Something I have never done before in my life. Mangoro Market Meri has not only empowered the women we work with but it also empowers us women who are working in this programme and team."

"I am looking forward to new and exciting things working with women and men at different levels. I would like to see more men taking an interest in what their women are doing and appreciating their women more, so work will progress."



Senita in the mangroves. ©Ruth Konia

Rapid Care Analysis for Navolau and Nakorotubu districts in Fiji

By Marama Tuivuna¹

The Women in Fisheries Network in Fiji (WiFN-Fiji) in its capacity as a member of the Oxfam in Fiji Socio-Economic Empowerment Design – Shifting Power and Shifting Voices (SPSV) Coalition of Non-Government Organisations, piloted a Rapid Care Analysis (RCA) across three sectors and provinces in Fiji: agriculture in Nadroga, fisheries in Ra, and handicrafts in Ba. RCA is a participatory tool used to gather and analyse care work. The RCA toolkit has eight exercises that focus on achieving the following objectives: 1) explore relationships of care in the community; 2) identify unpaid and paid work activities performed by women and men, and create a rough estimate of average weekly time spent on each category of work by men and women; 3) document care for women, men, girls and boys at a household level; 4) record changes in care; 5) map care support services and infrastructure; and 6) identify and prioritise options for reducing and/or redistributing care work.

RCAs were conducted in four villages of Navolau District: Navolau 1, Navolau 2, Namuaimada and Nakorokula. Namuaimada Village was selected because WiFN-Fiji has ongoing work with women in the village who are engaged in seagrape harvesting. Saioko Village in Nakorotubu District was selected because women there are engaged in two sectors – fisheries and handicrafts. The selection of these four villages allows a comparison of differences, if any, in care work; in other words, a single economic activity in the community vs a dual economic activity in the community.

The study found that, on average, a woman in Navolau District spends 67 hours per week on unpaid care work compared with 30 hours for men, while in Nakorotubu District, women spend 80 hours per week on unpaid care work compared to 47 hours for men. In Navolau District, women spend 71 hours per week on non-work (e.g. sleep and leisure activities) compared with 94 hours for men. Similarly, in Nakorotubu District, women spend 81 hours per week on non-work and men spend 97 hours.

The two main conclusions of the study were:

1. Women in Navolau and Nakorotubu districts spend twice the amount of hours per week on performing unpaid care work than men, but have less time for leisure activities relative to men.
2. Regardless of whether a community has a single economic activity (e.g. villages in Navolau District) or dual economic activities (Saioko and Verevere villages in Nakorotubu District), women spend almost twice as many hours per week on unpaid care work than men.

The study clearly showed that the distribution of unpaid care work in these communities is uneven, being heavier for women than men. While there is gender-related inequality in unpaid care work, women in these communities highlighted that they enjoy performing these unpaid care roles and ac-

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tivities. Interventions to reduce or redistribute such work from women to men, to other household members, to the community and to the State would require women having a critical role in their design.

Unequal power where men are overpowering or domineering towards women and girls is evident and more prominent in two of the five villages. This observation is one of concern and an opportunity for further research and engagement. A holistic approach is necessary, if the SPSV Coalition wishes to provide programmes of intervention to change gendered norms of care work, determine how to redistribute care work more fairly, and ensure more equitable leisure time for women and men in these communities.

Further to the unequal distribution of unpaid care work, problematic care activities identified includes limited access to proper infrastructure such as access to piped water, lack of proper sanitation, not enough fishing boats and gear for women, and heavy reliance on one source of livelihood such as fishing, harvesting seagrapes and farming for income. Also, a number of solutions to problematic care activities were identified.

WiFN-Fiji has secured funding from Oxfam to address some recommendations and next steps from the RCA report. The proposed project will focus on addressing recommendations for the respective villages to improve the distributions of unpaid care work which includes but are not limited; awareness on sustainable fisheries management, human rights and social inclusion, access to water for all, and setting up a waste management system. WiFN-Fiji will engage organisation(s) when required to conduct some of the training sessions during project implementation. The project will address RCA solutions to problematic activities that will assist women and men in maximising their participation in economic activities. Also, the RCA findings will be used to influence stakeholders at regional, national and local levels.

The project's duration is from October 2020 to May 2021. The full report and infographics of the RCA for Navolau and Nakorotubu districts are available from the WiFN-Fiji website (www.womeninfisheriesfiji.org) or a copy can be requested from wifnet-workfiji@gmail.com



New study to inform financial assistance for women in the fisheries sector affected by COVID-19 in Fiji

Marama Tuivuna¹

The global COVID-19 crisis has impacted multiple sectors since its first confirmed case in March 2020. The Women in Fisheries Network – Fiji (WiFN-Fiji) – recently assessed the impact of COVID-19 on women who sell fisheries products at local markets. In total, 100 market vendors were interviewed on Saturdays from 9–30 May 2020 at Suva, Nausori and Laqere seafood markets. Women vendors in these markets are from the provinces of Tailevu, Rewa and Ra. The findings from the assessment are likely to be representative of other markets, which faced similar short-term lockdowns and national-scale COVID-19 restrictions. The findings of this research will inform a financial assistance project to be implemented by the WiFN-Fiji.

The study found that women vendors experienced a decrease in their sales, decrease in seafood and freshwater products, and incurred extra transportation costs. The women explained this was due to the COVID-19 restrictions, such as curfews, that limited their fishing activities, including in areas they could travel to. Lockdowns resulted in women paying extra transport costs to transport their seafood and freshwater products from Nausori, and selling at a lower price due to market saturation.

WiFN-Fiji is implementing a project to provide financial assistance to women fishers who are dependent on their fisheries for local livelihoods. The funding is helping women with transportation costs to sell their products at markets, as well as buying essential items such as food for their households. The financial assistance was specifically

requested by most of the women fisher vendors interviewed, who needed the assistance to assist cope with the impact of COVID-19 on their livelihoods.

The project is also providing financial assistance to women fishers affected by COVID-19 by targeting communities that WiFN-Fiji has worked with, and networking with community members and other women fishers in Fiji. The project's objectives are to:

- financially assist women who rely on fisheries products for their livelihood;
- be a part of the partners and government effort to assist those affected by COVID-19 in Fiji;
- document both the impact of COVID-19 on women, and the impact of the financial response; and
- contribute data collected from this project will to a database on women in fisheries, which is being developed in the network.

Baseline information will be collected from key informants, including village headmen and provincial office to help guide investments by WiFN-Fiji. Monitoring will also take place to assess and document the impact of the financial assistance project on women fishers. The project's duration is from 1 October 2020 to 31 May 2021.



Fazlin Mohammed, one of the women fish vendors at Bailey stall.



A woman fish vendor sells shrimp at the Suva Fish Market. She earns FJD 90 a day from sales.

Gender equality vs equity: Say goodbye to apple-picking and baseball matches!

Sangeeta Mangubhai¹

Gender experts frequently talk about gender equality and gender equity, and although they sound familiar and are related terms, they have different meanings. Understanding these two terms is critical for a fair, just and socially inclusive society.

Two graphics have been repeatedly used to explain this important distinction between the two terms, and that in fact, equity leads to equality. In one, three people are attempting to pick apples from a tree, while in the other graphic three people are trying to watch a baseline match over a fence (Fig. 1a and 1b). In the equality image, everyone is given a single box to stand on – in other words, there is equality because everyone has the exact same number and type of box. However, the outcome is not the same for

everyone, and not everyone can pick those apples or see that baseball match. However, in the equity image, each person is given a different number of boxes (or none in the case of the baseball match) to create an equal outcome.

Over the last 12 months I have wracked my brains trying to find a fisheries equivalence that my colleagues might relate to. While I could not escape the boxes (representing inputs or resources provided), I am delighted to share a new graphic that I co-designed with Fijian artist Tui Ledua (Fig. 2). In this graphic, the wall is symbolic of the barriers that exist and which create inequalities in our society. In the equality image you can see the boy cannot see over the wall, and therefore cannot cast his fishing line. The woman can cast a line, but she has to stand on her tip-toes, and even so, she can only reach a few fish in front of her, and only the small ones. The man on the other hand can cast his line farther and reach the large fish. In the equity image, each figure gets a different number of boxes, and everyone has the same fair chance of catching the big fish.

What this means is that if we want equality in outcomes from fisheries development, we may need to provide different resources or different amounts of resources to different groups in the community. This may mean the intervention is unequal, but the end result is greater equality across groups in society.

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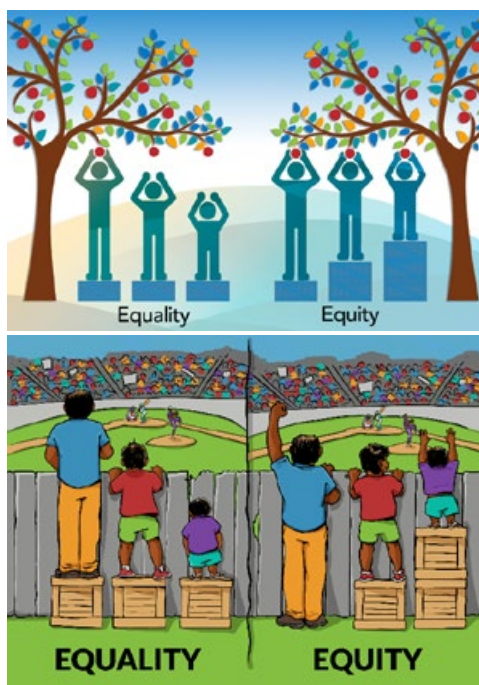


Figure 1. Equality vs equity graphics used by gender development practitioners. © Angus Maguire, Interaction Institute for Social Change

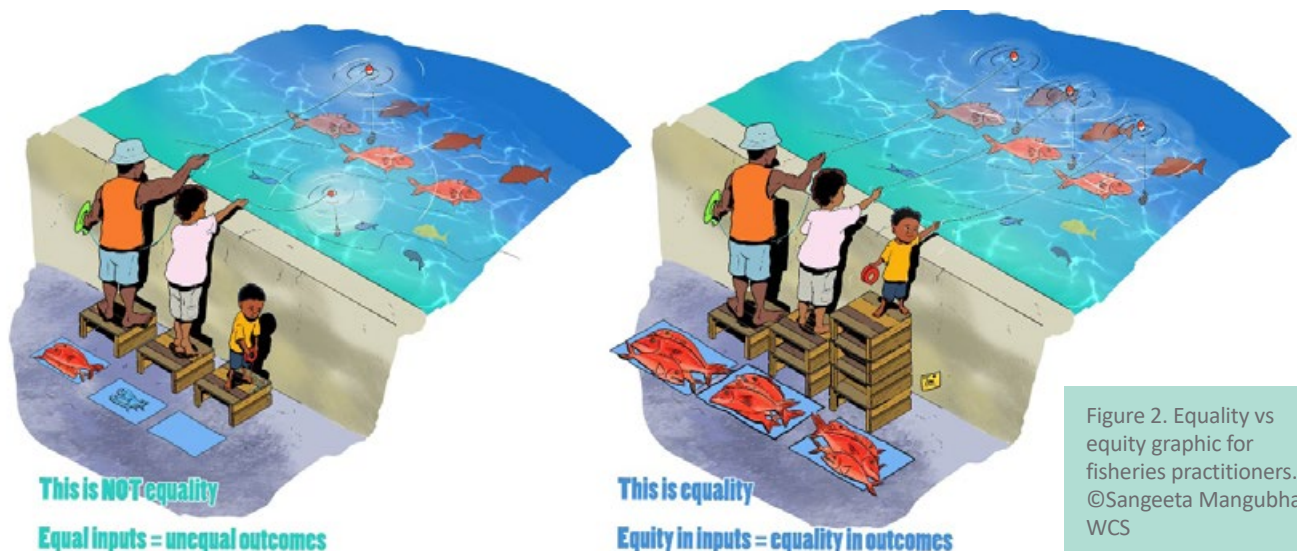


Figure 2. Equality vs equity graphic for fisheries practitioners. ©Sangeeta Mangubhai, WCS