



THE ROLES OF WOMEN IN MALDIVIAN ONE-BY-ONE TUNA FISHERIES: A SCOPING STUDY

Peter Wessels, 2017

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Despite the assistance from those mentioned above, responsibility for the views expressed in this report rests solely with the author and does not necessarily represent the views of IPNLF. All reasonable efforts to verify findings have been made, although the author does not warrant that it is free from errors or omissions.

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The International Pole & Line Foundation (IPNLF) works to develop, support and promote socially and environmentally responsible pole-and-line and handline and troll tuna fisheries around the world. IPNLF's ambition is to contribute to thriving coastal fisheries, including the people, communities, businesses and seas connected with them. As a hub for sustainably-minded organisations, we use the influence of the market to forge change through practical fishery projects and stakeholder cooperation. IPNLF membership is open to organisations involved in the one-by-one caught tuna supply chain. Allied with our Members, IPNLF demonstrates the value of one-by-one caught tuna to consumers, policymakers and throughout the supply chain. We work across science, policy and the seafood sector, using an evidence-based, solutions-focused approach with guidance from our Scientific & Technical Advisory Committee and Board of Trustees.

IPNLF was officially registered in the United Kingdom in 2012 (Charity 1145586), with branch offices in London and the Maldives, and a staff presence in Indonesia.

Cover image: Female worker in a one-by-one tuna processing factory, Maldives © Monika Flueckiger

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ACRONYMS

FAO	Food and Agriculture Organisation of the United Nations
LIN	Lower-Income Nation
SSF	Small-Scale Fisheries
MoFA	Ministry of Fisheries and Agriculture
MRC	Marine Research Centre
MIFCO	Maldives Industrial Fisheries Corporation
FAN	Fisherman's Association of Naifaru

1. INTRODUCTION

Women play a pivotal role in fisheries around the world. Contrary to the widespread perception that fishing is a male-dominated activity, a recent study by the Food and Agriculture Organisation of the United Nations (FAO) (FAO 2015) finds that of the 120 million people worldwide who work in capture fisheries and associated supply chains, close to half are women. This perception of male-dominance has led to a degree of 'gender blindness' in the fisheries sector and has meant that the post-harvesting and trading activities of women are often overlooked or neglected in fisheries development and management, and training and assistance programs are often targeted for men (Barclay et al., 2015, cited in Krushelnytska, 2015).

Despite their important role, the literature is replete with evidence that women currently lack profile and recognition in fisheries. With the emergence of international commitments such as the United Nations Sustainable Development Goals and the FAO Voluntary Guidelines for Securing Sustainable Small Scale Fisheries there has been a renewed effort to quantify the contribution of women in fisheries supply chains and to integrate this data into policy. Many organisations working with fisheries have started to shine a light on the contribution of women in small-scale fisheries (e.g. International Collective in Support of Fishworkers, WorldFish Center, Asian Fisheries Society). Through increased reporting of the roles of women, researchers and agencies are also looking to take strategic initiatives to put gender more firmly on the fisheries agenda, by building the evidence base, and engaging in advocacy and networking to voice issues, especially those in which vulnerabilities are strongly gender biased (Williams 2012).

However, a challenge confronted in policy-making is the multi-dimensional role women play in fishing communities. In addition to fishing-related activities like harvesting, processing, or selling, there is a lot of evidence that women are also primarily responsible for managing the home and raising children. Paid and unpaid, their employment contributes to the individual, household and community at many different levels such as for food, income, and in cultural traditions (Weeratunge et al. 2010). Therefore, taking into account these different roles is essential because before any planning for policy or improvements can begin, the context and condition of a particular fishing community must be understood.

This report provides an analysis of the roles women are playing in pole-and-line and handline (one-by-one) tuna supply chains in Naifaru, Lhaviyani Atoll, the Maldives. One-by-one tuna fisheries are widely regarded to be the most environmentally and socially

responsible form of tuna fishing, with minimal impact on the environment, and associated social benefits such as increased employment. In the Maldives, traditional one-by-one methods have been practiced for centuries. Despite the high social importance of these fisheries within the Maldivian culture, no studies have explored the contributions women bring to these fisheries in any detail. In this report, the importance of gender research in fisheries will be discussed, followed by an overview of the Maldives tuna fisheries and activities and a summary of the roles women are playing in one-by-one supply chains in Naifaru. Finally, the report will conclude with a discussion of challenges and recommendations going forward.

1.2 The importance of gender research in fisheries

Gender analysis in research is by no means a new endeavour; in the past two decades, there has been an increasing, if still relatively small, representation of gender in fisheries research and policy. However, a lack of data on women and women's fishing practices persists and often means that there is insufficient baseline data to make true assertions on women's contribution to fisheries (Kleiber *et al.*, 2014).

In terms of experiences and ecological knowledge, men and women have unique and differing perspectives of their surroundings. These differences are rooted in social status, access to assets, social roles, and cultural norms (Waller, 2016). For instance, where men travel offshore to fish, they will have an accurate and thorough understanding of the condition of the fishery; whereas women that are responsible for processing and selling fish might be in a better position to evaluate market conditions. A further challenge that researchers and policy makers confront in gender-aware policy making is that women, particularly in lower-income nations (LIN) occupy a multi-dimensional role in the community. In many LIN, women are responsible for managing the home; cooking, cleaning, and raising children. In small-scale fisheries the communities have additional responsibilities on top of whatever activities they are engaged in in the fishery, be it harvesting, processing or selling. In the context of policy making and fisheries management, it is therefore essential to take into account the differences in roles and experiences of men and women to understand the context and condition of fishing communities. In their analysis of tuna fisheries in the Solomon Islands, Barclay *et al.* (2015, cited in Krushelnytska, 2015) highlighted some specific areas where this research is needed to get a balanced understanding of the fishery:

- Female participation (%) in the fisheries sector and ratio of men to women in the sector

- Aggregated individual income statistics for those in the formal sector
- Household income statistics for those in the informal sector
- The correlation of income level and educational attainment of women participating in fisheries
- Women's access to micro-credit facilities
- Income, expenditure and consumption profiles of households with female fishers/fisheries employees at the household level

Overall, a comprehensive and integrated approach should be taken to fill some of the data and information gaps that exist, particularly for coastal fisheries. The following section will describe the methodology applied to research on roles women are playing in pole-and-line and handline (one-by-one) tuna supply chains in Naifaru, Lhaviyani Atoll.



Female workers in a Maldivian cannery © Horizon Fisheries



2. METHODOLOGY

2.1 Data Collection

The fieldwork component of this research was conducted over two months in July and August 2016. The majority was in Naifaru, the largest and most populated island in the Lhaviyani Atoll, which is approximately 140 miles north of Male, the capital city of the Maldives (Figure 1). It is primarily a fishing village, and it is located near Felivaru, one of the largest tuna processing plants in the Maldives.

Data collection for this research came primarily from interviews. Interviewees included government officials in the Ministry of Fisheries and Agriculture (MoFA), the Marine Research Center (MRC) and male and female participants connected to one-by-one tuna fishery supply chains.

The interviews included:

- women occupying various positions at the Felivaru tuna cannery;
- a representative of the Maldives Industrial Fisheries Corporation (MIFCO);
- seven of the eleven members of the Fisherman's Association of Naifaru (FAN) agreed to a group interview;
- women who prepare tuna based snacks at home and sell them out of their homes or to the island cooperative
- pole-and-line tuna fishers



Figure 1 Map of the Maldives highlighting research area Naifaru



3. THE ROLE OF WOMEN IN ONE-BY-ONE TUNA SUPPLY CHAINS

3.1 Fishery overview

The Maldives is a nation with a long tradition of tuna fishing using one-by-one methods dating back hundreds of years (Adam 1999 and references cited therein). The primary target species of the pole-and-line fishery is skipjack tuna (*Katsuwonus pelamis*) and yellowfin tuna (*Thunnus albacares*) in the handline fishery. The Maldivian pole-and-line fishery is the largest fishery in the country and accounts for roughly one-fifth (~21%) of all of the pole-and-line caught tuna in the world, alongside Japan (~28%) and Indonesia (~25%) as the major fisheries (Gillett 2015). In 2014, 87,101 metric tonnes (mt) of tuna were landed by pole-and-line vessels (Adam et al. 2015), with peak landings in 2006 reporting a catch of 166,000mt tuna (138,000mt of skipjack). The Maldives handline fishery has also grown rapidly in recent years and recent reported figures indicate that the fishery catches over 38,000mt of tuna annually (Ahusan et al, 2016).

Until the 1980s, the tuna fishery was the mainstay of the Maldivian economy, providing employment and a source of protein for its inhabitants and much of the social fabric of the country, especially of the outer islands, is still closely linked with tuna fish and fishing. Whole families - adults and children, males and females - are normally involved in these fisheries. The traditional pole-and-line method of fishing is still practiced on most of these islands. In 2012, the pole-and-line fishery directly supported over 10,000 fishers, almost ten per cent of the country's population (MoFA 2012). While it is critical to enumerate the fishers' employment in the one-by-one tuna industry, corresponding information on the relative contribution of women to one-by-one fishing-related activities is not known.

3.2 Women in the Maldivian fisheries sector

In 1999, the FAO conducted an in-depth study of **Maldivian gender roles** in bio-resource management (Kanvinde, 1999). They observed a gender-biased division of labour at every stage of fishery production (pre-harvesting, harvesting, and post-harvesting activities) and by the type of fish product. Overall, **they found that men and women's gender roles were complementary and gender bias came about where men took on tasks requiring more physical strength, done outdoors, and far from home, while women took on tasks that closely resemble their reproductive roles.** They concluded that different

gender roles in the sector are determined more by physical differences than by the status ascribed to men and women and activities aimed at mainstreaming gender in the fisheries sector need to recognise where women and men complement each other to the benefit of both, while also focusing on issues that disadvantage and constrain women.

Table 1. Adaptation of FAO's 1999 Analysis of Gender Roles in Fisheries Harvesting and Post-harvesting Activities (source: Kanvinde, 1999)

Activity	Men	Women	Children
Salted products (tuna, sharks, reef fish)			
• Cleaning and washing	+	+	
• Applying salt and storing in brine tank		+	
• Washing		+	
• Sun drying		+	+
Walhoa mas (soft-dried products) and Hikimas (hard-dried products)			
• Filleting	+	+	
• Boiling		+	
• Smoking		+	
• Drying		+	+
• Storing		+	+
Marketing			
• in the local area	+	+	
• in Male'	+		

This was a valuable contribution to understanding the role of women in the broader Maldivian fisheries sector and served to illustrate that women are playing a key and active part. However, we still lack up-to-date, sex-disaggregated data on one-by-one tuna fisheries, which makes it difficult to identify women's contributions to the sector or to assess women's access to sector incentives and services.

3.3 Case Study: Women in Naifaru

The research conducted during this scoping study indicated that in Naifaru, women have a great deal of association with the fishery once the catch has been landed. They make up the majority of employees at the fish processing plants, and are also responsible for selling fish in markets and shops, and purchasing and preparing fish for household consumption. This gives women in the Maldives a unique understanding of the quality and market conditions of fish. Of the women interviewed for this research, most were able to describe the present condition of the fishery as well as prior trends in the price,

quality, accessibility, etc. of a species.

In addition to identifying women's roles in the tuna supply chain the research indicated women are also engaged in broader initiatives that are impacting the fishing community through cooperatives and the Fisherman's Association of Naifaru (FAN).

3.3.1 Supply chain involvement

In Naifaru, women are found to be working at multiple nodes of the tuna supply chain; in pre-harvesting, harvesting and post-harvesting activities.

Harvesting: For the moment, tuna fishing remains a male dominated profession, but access to training and education for women holds the potential to see more women in a harvesting capacity. Many of the women interviewed expressed interest in participating in the harvesting stage, but noted that their responsibility for raising children and managing the home was a barrier to engaging in activities that might take them away from the home for extended periods.

Inputs: Women are employed as sales assistants in shops that sell fishing gear and materials for maintaining fishing vessels. Additionally, more and more women are moving into managerial roles in vessel construction facilities.

Processing: Women dominate the processing sector in the Maldives. Until recently their primary job was cleaning and cutting fish, and while they continue to occupy this role, the number of women in managerial and foreman positions is reported to be rapidly increasing.

Distribution and Marketing: Women have a significant presence in the distribution and marketing sector. For example, women have formed cooperatives that market tuna products, such as dried tuna strips, tuna based chips and crackers. These products are distributed between islands, to the resorts and there are efforts to expand trade internationally, in which women are playing an integral role.

Retail: Women have a strong presence in retail and are responsible for the packaging and sale of tuna products whether it is in a market setting, a shop or out of their homes.

Consumption: Purchasing of tuna from retail outlets and preparation for consumption is predominately the role of women.

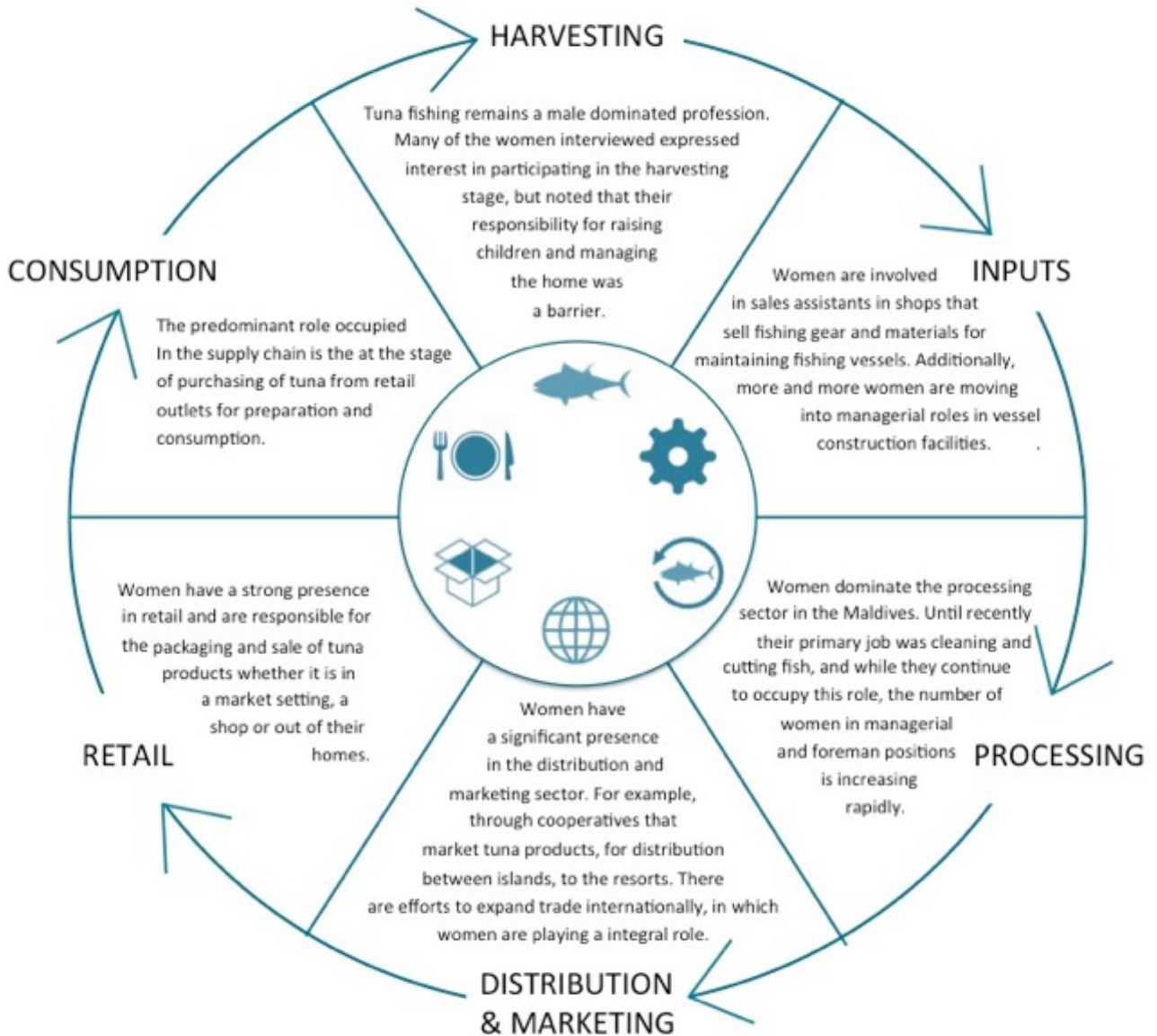


Figure 2 The various roles of women working in tuna supply chains in Naifaru, Maldives

3.3.2 Cooperatives

Cooperatives have existed in the Maldives for centuries; primarily these cooperatives were formed of women with a small proportion of men involved who were mostly retired fishers. Traditionally, they served as communication and support groups for women in and between islands. These cooperatives would change in composition and function depending on the need or societal trends of the Maldives at the time. While these groups were effective in the capacity they filled, they suffered from a lack of organisation and recognition as a formal association. A few years ago, one such cooperative approached

one of the largest tuna exporting corporations in the islands and made a proposal for a loan. They used the money they were granted to buy office and storage space, improve the quality of packaging for their products, and began marketing their products. Through these improvements, the cooperative evolved into a well-organised and functioning group. Women from the community are encouraged to send in samples of the tuna based products they make at home and if their product is of high enough quality they enter into an agreement for up to one year with the cooperative. Through their membership in the cooperative the women are guaranteed an income, provided they can meet the required amount of product, for an agreed period of time. An additional benefit of connecting with the cooperative is that they provide the opportunity for wider distribution of the tuna products; therefore, expanding the markets women are able to access.

Beyond the financial rewards associated with engaging with the cooperative, the research highlighted a broader commitment to supporting further education and training of cooperative members. For example, one female respondent who is finishing a degree in economics was given the opportunity to attend a woman's entrepreneurship conference in Japan. Such up-skilling indicates the potential these cooperatives hold in both providing women with a potential income stream, as well as the opportunity to develop their personal skills base.

3.3.3 *Fisherman's Association of Naifaru (FAN)*

Despite its title, ten out of the eleven members of Fisherman's Association of Naifaru (FAN) are women. It originated several years ago, when a group of women wanted to have a children's park built in Naifaru. While they were able to collect the necessary funds, they were unable to obtain the construction permits because they were not a registered group. In response, the women organised themselves into the FAN and succeeded in getting the park built. The group remained together and has since transformed into a liaison group between fishers in the Atoll and the consulate. As the fishers are often at sea for extended periods, the FAN deals with issues at home or conflicts with the consulate that arise in their absence. Participation in FAN is voluntary, but members recognise the cascading economic benefit FAN's presence has for fishers. While interviews revealed that for the most part FAN members have no formal training relating to the one-by-one tuna industry, almost all had been employed as teachers at some point. This was something that was remarked upon as making them well suited for this work and also meant they are committed to youth and community enrichment to

support the fishery going forward. This illustrates that much like the cooperatives, the benefits FAN is having extend beyond the fishers and into the community.

3.3.4 Informal involvement

In addition to the direct fishery-oriented roles women are playing in Naifaru's one-by-one tuna fisheries, there are also many informal roles that women take on that go unreported. For example, it is not uncommon for fishing crews to venture far from their home island in search of fish schools and this may require stopping at another island for repairs or fuel. Women will cook, clean and provide other hospitality services to these visiting crews, which while not playing a formal 'role' in the fishery is an indispensable activity. This underscores the extent to which women are a critical part of the Felivaru fishing industry and community, be it in more advanced roles like management or the more traditional roles like providing hospitality for visiting fishing crews. Their knowledge of the fishery and contribution to the fishery could have many implications for policy decisions if adequately understood and better utilised.



Woman from the Naifaru preparing tuna-based products to sell locally © Peter Wessels



Woman cleaning tuna in a Maldivian processing plant © Monika Fleutiger

4. DISCUSSION

As pressures continue to mount for fisheries worldwide there has been increased efforts in managing fisheries and a re-evaluation of existing management strategies that appear to not be achieving their goals. This scoping study indicates that in the case of Felivaru, women widely participate throughout the one-by-one tuna supply chain both directly and indirectly. The accounts of FAN and the cooperatives along with rapidly expanding opportunities for women along the supply chain illustrates the significant contribution women are making to the tuna industry in the Maldives. Emerging women's cooperatives provide a diversification of livelihoods for women in the Maldives and with the next generation of Maldivian women pursuing higher levels of education and more responsibility in their careers, more and more women are moving into management positions, which is elevating the role of women in the Maldivian workforce.

There are many factors influencing this change. For one, the government of the Maldives has made this issue a fundamental objective of their legislation, running campaigns aimed at improving the quality of life and access to education and employment. The opportunity for women to pursue education beyond primary school has also factored heavily into the transformation that has occurred for women in the Maldives including those working in the fishing industry. For many generations, access to education beyond primary school was limited which afforded very little opportunity to seek advanced or skilled employment opportunities. With the transition in government came a lift on this restriction for women, leading the level of education and the number of women seeking higher education to increase, with each subsequent generation. This has meant women have also gained access to new assets and new opportunities. Finally, the impact of access to technology, social networking and mass media has also been a driver behind increasing the status of and opportunities offered to women in the Maldives.

The research has illustrated the potential women have for enhancing these fisheries if given the resources and recognition. However, quantitative research is vital in strengthening the results brought forth by qualitative studies such as this and especially when it comes to policy reform. Although this research highlights many of the unobserved roles and responsibilities of women, many more remain to be uncovered. Going forward, there is an opportunity to engage with activities aimed at identifying additional data that would strengthen gender-responsive policy and planning. Areas for attention could include, sex-disaggregated data on workers by subsector activities, and on incomes earned by workers in different activities. Collecting this data can be used to understand how women's involvement in fisheries contribute to the health of the fishery itself and the

wellbeing of the communities of which they are a part and make sure that those participating in these tuna fisheries are recognised and adequately represented in decision-making.



Women from Naifaru preparing baitfish based product for to sell locally © Peter Wessels

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