

Women's Role in the Elasmobranch Fishery in Indonesia

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Small-scale fisheries contribute to food security by providing millions of people with food, income and employment. In small-scale fisheries, women account for about 50 per cent of the workforce, particularly in processing and trade (Food and Agriculture Organization, 2015). In developing countries such as Indonesia, at least 56 million people have been involved in fisheries activities, with small-scale fishers accounting for 90% of all fishers in the country.

Of that number, 70% or approximately 39 million people are women, holding various economic roles and initiatives driven by fisherwomen and fishermen's wives, who contribute to the local economy and help reduce poverty in coastal communities. The fact that women have a huge role in the fisheries chain, especially in trade and processing, is still not appropriately acknowledged, under-studied and sometimes excluded from policies (CARE-USA, 2020; Faculty of Fisheries and Marine Sciences, Papua University, 2018; Kruijssen and Newton, 2021; Sari et al., 2021).

Indonesia is the world's largest shark fishing country, with an average annual production exceeding 100,000 tons, and the annual export value of shark products from Indonesia is approximately USD 10 million (Dent and Clarke, 2015). Furthermore, high volumes of sharks are caught incidentally or as a valuable secondary catch in small-scale, mixed-species tropical fisheries, which contribute to food security in poor and developing nations (Dent and Clarke, 2015; Megalofonou et al., 2005; Muttaqin et al., 2018; Petersen et al., 2009; Seidu et al., 2022).

The shark fishery, on its right, is a controversial and largely misunderstood topic, not to mention the involvement of vulnerable groups in the supply chain (Shiffman et al., 2021, 2020). During more than a decade of working in the shark fishery, the authors observed the role of women in many shark fishing hotspots, namely Southwest Aceh, Tanjung Luar, Lamakera, Northern Java, North Maluku, East Kalimantan, and West Kalimantan. In this field note, the authors use two examples from Southwest Aceh and Lamakera.

Southwest Aceh

Aceh province is one of the most productive shark and ray fisheries in Indonesia, with more than 17 landing sites throughout the province, where most of its landings are centred in the capital and western part of the province (Dinas Kelautan dan Perikanan Aceh, 2016; Ichsan and Herman, 2023; Simeon et al., 2020). In the Southwest (SW) Aceh Regency, sharks and rays are caught as targets, with a record of 70 sharks being landed in one day from a single fishing trip (Ichsan and Herman, 2023). Like many other shark targeted fisheries in Indonesia, Southwest Aceh shark species are dominated by requiem (Carcharhinidae), threshers (Alopiidae) and hammerhead (Sphyrnidae) sharks (Ichsan et al., 2021; Ichsan and Herman, 2023; Simeon et al., 2020) (Figure 1).



Fig 1. Shark fisheries in SW Aceh (Picture by Muhammad Ichsan).

In Southwest Aceh, shark fishing is an important livelihood for this community in many aspects, including social, economic, and cultural (Ichsan et al., 2021; Ichsan and Herman, 2023; Simeon et al., 2020). Here, women have a significant role, for example, as processors who work for local traders. In one particular processing unit, the owner of the processing centre prioritises widowed women as their part-time processors to improve their household incomes. This job involves drying, sorting, and packaging, with a daily rate of payment and working only for a few hours (Figure 2). (Muhammad Ichsan, personal observation). Although this fishery is

highly lucrative, there are minimal to no measures that specifically address the livelihood and decision-making involvement of this vulnerable group.



Figure 2. Women in southwest shark fisheries work for local traders (Picture by Muhammad Ichsan). We asked and obtained consent from the individuals in the photo and the precinct owner (Picture by Muhammad Ichsan).

Lamakera

Lamakera is famous as the world's last village where manta rays (Family Mobulidae) are hunted. This village is located in the southern part of Indonesia and has a centuries-long tradition of hunting marine megafauna (Barnes, 1996). According to studies, in 2014, manta hunting and trade were estimated to contribute as much as IDR 1 billion (~ US\$90,000) (Booth et al., 2021; Jaiteh, 2014; Lewis et al., 2015).

Due to its geography (small islands with a dry climate and infertile land that makes farming difficult), the Lamakera communities and surrounding villages have highly depended on marine resources throughout their history. In turn, these fisheries-related activities become a strong tradition and are embedded in the culture and beliefs of the communities (Septiyana, 2017) (Figure 3).

In terms of manta ray fisheries, megafauna hunting, including manta rays, has existed for centuries and throughout the year, the socio-economic aspects behind the fishing motive have been changing. Once, artisanal fishing activities with traditional boats and gear supported food security in the region, transitioning to semi-industrial fishing targeting gill-rakers to fulfil international market demands in the late 1990s to early 2000s (Dewar, 2022; Utami and Marlow, 2018).



Muhammad Ichsan

Figure 3. Lamakera fishing village (Picture by Muhammad Ichsan).

In 2015, government legislation banned the extractive utilisation of manta rays of any kind (Kementerian Kelautan dan Perikanan, 2014). This national regulation had a significant impact on the Lamakera community in terms of cultural practices and livelihood, including on vulnerable groups such as women.

The women within the fishery are an integral part of the system. Papalele, also known as the "fish collectors/retailer", primarily women, play a crucial role in buying the catch from fishermen, processing various marine resources, including manta gill plates and meat, and selling them to subsequent buyers (Figure 4). The primary motivation for women to work as papalele is the opportunity to boost their husband's income and improve family well-being and financial stability (Niomi Pridina, personal observation). However, there is a lack of comprehensive information on the importance and roles of women in Lamakera fisheries.



Figure 4. Papalele in Lamakera processing fish for retail (Picture by Muhammad Ichsan). We asked and granted consent from the individuals in the photo.

Improving livelihood

There is an urgent need to improve the involvement of people from vulnerable groups, such as women, who contribute to coastal community livelihoods, as they play crucial roles as traders, processors, and even household financial managers. Authors proposed some recommendations, for example, 1) comprehensive study on women importance and role in elasmobranch fishing communities; 2) an inclusive approach where local management includes vulnerable groups in formal decision-making (RTI International, 2022) such as incorporating Gender Equality and Social Inclusion (GESI) Policy in environmental organisations' plans and work (Ali, 2019; Fitriana, 2021); 3) institutionalise women and other vulnerable groups such as establishing "Koperasi Wanita" or women fisheries group (Ahmad et al., 2020; Imaniar, 2017); 4) encourage community-based approach in exploring alternative livelihoods that focus on vulnerable groups (Mustika et al., 2020) and lastly, 5) spreading awareness and strengthening advocacy for women importance in shark fisheries (RTI International, 2022). All these recommendations, if appropriately applied and designed as case- and location-specific, may result in improvements in women's participation and welfare.

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