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# GENDER ANALYSIS OF POST-HARVEST FISHERIES IN CAMBODIA



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*CAPFISH-Capture: Post-Harvest Fisheries Development project is implemented jointly by UNIDO and Fisheries Administration (FIA) in cooperation with support institutions and private sector fishery businesses*

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# Cambodia Programme for Sustainable and Inclusive Growth in the Fisheries Sector (CAPFISH-Capture)

## CAPFISH Capture-Post-Harvest Fisheries Development

### **GENDER ANALYSIS OF POST-HARVEST FISHERIES IN CAMBODIA**

Prepared for the Fisheries Administration ( Ministry of Agriculture, Forestry and Fisheries) of the Royal Government of Cambodia by the United Nations Industrial Development Organization

Based on the work of NUPPUN Research and Consulting Co., Ltd.  
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# FOREWORD

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Fisheries play an important role in Cambodian economy providing domestic works, income sources and enhance food and nutrition, especially for the rural population. Women play an essential role in this sector to ensure the availability of and distribution of fishery products, either by organizing and managing the supply chain or by transforming products to allow their preservation despite gender inequality in access to resources, services, technology, information and market. The National Strategic Development Plan (NSDP) recognizes women as the backbone of the economy and society. Gender equality and empowerment of women is a substantial effect on inclusive development and cannot be separated from other social issues. The NSDP 2019-23 also affirm gender equality as a priority for inclusive and sustainable development and Strategic Planning Framework for Fisheries (SPF) updated for 2015-2024 highlights gender mainstreaming as a mechanism to promote gender equality and combat child labour in the sector. With this regard, Fisheries Administration (FiA) inviting all key stakeholders including civil society, development partners and donors to contribute and participate with Gender Equality and Child Labor Working Group of FiA to update next-five-year Action Plan on Gender Equality Promotion and Child Labor Elimination 2021-2025 for effectively address Gender and child labor issues in our fisheries communities.

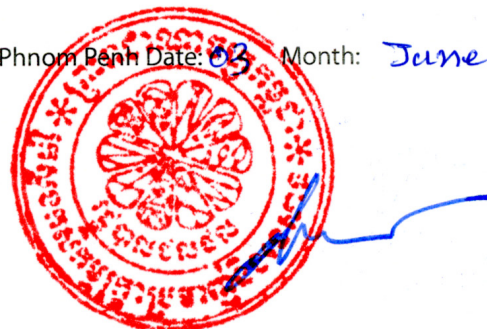
As a part of contribution to planning of activities mentioned above, Gender Analysis of Post-harvest Fisheries study carries out and validated in late 2020 in collaboration between United Nations Industrialization Organization (UNIDO) and FiA, Gender and Child Labor Working Group and Department of Fisheries Post-harvest, Technology and Quality control (DFPTQ). The assessment was aimed to identify gender inequalities and their consequences, through an analysis of women's and men's roles in the post-harvest fishery in Cambodia and mainstream gender concerns in their work.

The study deployed in September 2020 through comprehensive literature review, interview with key informants and conducted quantitative and qualitative interview with post-harvest fisheries value chain actors including collectors, retailers, wholesalers and processors. Both business owners and workers were interviewed with tree stories were captures and highlighted in this study report. The gender inequality in ownership and decision-making power, access to and control over resources, division of labor and other key challenges related to supply and demand as well as capacity needs for gender equality were reveal in this study report. The key findings and recommendations were validated in the workshop in October 2020 with key stakeholders who provided more inputs to be incorporated in the assessment's discussions and recommendations. The present report is the outcome of this Gender Analysis study.

On behalf of FiA as well as Gender Equality and Child labor Working Group, I would like to encourage relevant departments or ministries and all stakeholders, please effectively use the advantages of the results of this study as the key documents for making further developing fisheries programs or fisheries policies to enhance gender equality in this sector.

This study is part of CAPFISH Capture: Post-harvest Fisheries Development, which is funded by European Union.

Phnom Penh Date: 04 Month: June Years: 2021



**H.E. Poum Sotha**

Delegate of the Royal Government of Cambodia  
and Director General of Fisheries Administration



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# ACRONYMS

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<b>ADB</b>	Asian Development Bank
<b>AFD</b>	French Development Agency
<b>BDS</b>	Business Development Service
<b>CAPFISH</b>	Cambodia Programme for Sustainable and Inclusive Growth in the Fisheries Sector
<b>CEDAW</b>	Convention on the Elimination of All Forms of Discrimination against Women
<b>CFC</b>	Community Fishery Committees
<b>CGAs</b>	Cambodia Gender Assessments
<b>CSOs</b>	Civil Society Organizations
<b>DFPTQ</b>	Department of Fisheries Post-Harvest Technologies and Quality Control
<b>FAO</b>	Food and Agriculture Organization
<b>FFS</b>	Farming Field Schools
<b>FDG</b>	Focus Group Discussion
<b>FiA</b>	Fisheries Administration
<b>FIs</b>	Financial Institutions
<b>GMAGs</b>	Gender Mainstreaming Action Groups
<b>ISID</b>	Inclusive and Sustainable Industrial Development
<b>KII</b>	Key Informants Interview
<b>KPT</b>	Kampot
<b>KTH</b>	Kampong Thom
<b>MAFF</b>	Ministry of Agriculture, Forestry and Fisheries
<b>MoWA</b>	Ministry of Women's Affairs
<b>MSMEs</b>	Micro, Small and Medium Sized Enterprises
<b>M&amp;E</b>	Monitoring and Evaluation
<b>NGOs</b>	Non-governmental Organizations
<b>NSDP</b>	National Strategic Development Plan
<b>PCP</b>	Programme for Country Partnership UNIDO
<b>PDAFF</b>	Provincial Department of Agriculture, Forestry and Fisheries
<b>SDGs</b>	Sustainable Development Goals
<b>SRP</b>	Siem Reap
<b>TWG-G</b>	Technical Working Group on Gender
<b>UNIDO</b>	United Nations Industrial Development Organization





A woman is preparing production of smoked fish under her house in Kampong Chhnang province. Photo: UNIDO



# EXECUTIVE SUMMARY

This study is part of the Cambodia Programme for Sustainable and Inclusive Growth in the Fisheries Sector (CAPFish), a five year programme co-funded by the European Union and implemented from 2019 to 2024. CAPFish is projected to contribute positively to the achievement of the country's 2030 Sustainable Development Goals (SDGs), specifically SDG1 (end of poverty), SDG2 (food security, improved nutrition and sustainable agriculture), SDG5 (gender equality), SDG6 (sustainable management of water), SDG8 (sustained, inclusive and sustainable economic growth), SDG13 (climate change), and SDG14 (oceans and marine resources). The programme consists of different components and implementing agencies, namely the United Nations Industrial Development Organization (UNIDO) together with the Food and Agriculture Organization (FAO). The European Union (EU) and Cambodian Fisheries Administration (FiA) have entrusted UNIDO to implement the CAPFish Capture: Post-Harvest Fisheries Development project, with its specific objective to contribute to the development of post-harvest fisheries through upgrading the regulatory and institutional system, as well as through the adoption of better practices and innovation by the private sector. This gender analysis of post-harvest fisheries is intended to provide a baseline for the inception phase of the project, as it seeks to improve women's inclusion in the fisheries sector. The project aims to reduce the gender gap in the fisheries sector by encouraging women to engage in representation roles and improving women's access to economic development and education opportunities, particularly for girls and young women.

The analysis identifies gender inequalities and their consequences, through an analysis of women's and men's roles in the post-harvest fishery in Cambodia. The analysis is followed by recommendations, including entry points for the development of an operational Gender Action Plan for UNIDO CAPFish.

Over the recent decades, the role of women in fisheries has been captured through an increasing mass of data, analyses, and research. Women play a significant role in different aspects of fisheries, aquaculture and fishery

post-harvesting activities, particularly fish processing and marketing. It is estimated that 47% of work in the fishery sector, on a global scale, is provided by women. These findings challenge the perception that the sector is dominated by men. Despite the significant contribution of women at all stages of the supply chain and their involvement in fish selling and processing, women's roles tend to be conceptualized more as an extension of domestic work, and thus undervalued in economic terms. The perception of fisheries as a sector dominated by men breadwinners persists and reinforces gender inequalities that have significant repercussions for women and for the entire sector. Women's roles in the sector are overlooked or scarcely recognized, even if their work is essential to ensure the availability of and distribution of fishery products, either by organizing and managing the supply chain or by transforming products to allow their preservation. All along the post-harvest fisheries value chain, women face major constraints that limit their capacity to develop, upgrade and secure their businesses and sustainable incomes. Various gender studies have highlighted these inequalities and their consequences, which can be summarized as:

- **Scarce visibility:** the lower status of women, which is the consequence of overall gender inequalities in the public and private sphere, determines the perception of their activities in the fishery supply chains, which tend to be considered as ancillary to the ones of men, being more like household's supporters than key contributors. This lack of recognition and invisibility hampers their access to resources, decision making and adapted services.
- **Lack of data:** women's roles in fisheries is often undocumented by national statistics and databases, which tend to focus on levels of fish capture, driven by production targets or overfishing concerns. This creates a lack of detailed sex-disaggregated and gender-specific data all along the supply chains, which perpetuates women's invisibility.
- **Chronic time poverty:** gendered division of labour, which assigns women to the primary share of unpaid care work results in a heavy burden for women who are fully employed in post harvesting fishery activities. This hampers their wellbeing and their full participation in

social, economic and cultural life, and also limits their productive capacities.

- **Losses are gendered:** processors experience higher losses than other value chain actors, and among them women processors are more at risk of losses than men. This is explained by their diminished access to key resources, lack of mobility, lower bargaining power, time poverty and vulnerability.
- **Systematic gender discrimination:** women engaged in fishery supply chains experience overall societal constraints and barriers in the private as well as in public sphere. This limits their access to resources, education and knowledge, fair income, participation in associations or networks, decision making, representation and voice to influence policies and legislation.

Cambodia has one of the largest and most biologically diverse fisheries in the world, nourished by the Mekong River and the Tonle Sap Lake basin, which create large areas of permanent or seasonal wetlands covering nearly one third of the country. Besides freshwater fisheries, coastal marine fisheries contribute 18% to total fish catches. Cambodia's annual production is estimated at 500,000 tonnes of wild fish and contributes between six to nine percent of GDP and accounts for 76% of households' animal protein intake (FAO 2019). Average fish consumption is 52.4 kg/person/year, one of the highest in the world. Fish represents the cheapest form of animal protein in Cambodia (ibid.). As a sector with a low entry barrier, fishing is also an important safety net for vulnerable households, employing nearly six million people, either full-time, part time or seasonally.

Women play an essential role in fisheries post harvesting, as wholesalers, processors and retailers. Accurate sex segregated data is still lacking, but at country level, it is estimated that women own 61.2% of the 505,134 Micro-Small-Medium Enterprises (MSME) in Cambodia. The majority of women's businesses are informal micro-enterprises, their income is lower than men, and their access to resources to expand their activities are still insufficient (International Finance Corporation 2019).

Despite their significant participation in productive activities, and primary roles and responsibilities to provide nutrition and care to their families, women's productivity is hampered by several gender inequalities. According to Cambodia's Ministry of Women's Affairs (MoWA) latest gender assessment, women are overrepresented in jobs that are low paid or temporary (MoWA 2014). Their access to innovative equipment and gender-responsive time/

labour-saving technologies is still limited. The availability of accessible information or technical education remains low, especially in rural areas, where the majority of the population lives. It is estimated that only ten percent of agricultural extension services reach women.

For many years, Cambodia has been working towards improving gender equality. Gender equality and social protection are articulated in various national policies and the legal system, and are seen as instrumental for agricultural and rural development, of which fisheries represents a major component. The Ministry of Agriculture, Forestry and Fishery (MAFF) Gender Mainstreaming Policy and Strategic Framework in Agriculture (2016-2020) set goals for the promotion of women's economic empowerment, capacity building and representation and participation across the sector. The Fishery Administration (FiA), through its Working Group for Gender and Child Labour, is in charge of mainstreaming gender within FiA operations. It has adopted a Gender Equality Promotion and Child Labour Elimination Strategy to address gender and child labour issues in fishery communities.

The research for this report was conducted in three geographical areas: freshwater fishery locations around the Tonle Sap Lake in Siem Reap and Kampong Thom province, and one marine fishery location in Kampot province. The methodological approach of the study combines secondary and primary data, and quantitative and qualitative data collection methods. The secondary data provides a background literature analysis of key gender perspectives in relation to post harvesting activities from the available literature, in order to frame the analysis. The secondary data is contextualized in relation to Cambodia gender specificities in terms of gendered division of labour, access to and control over resources and technologies, women's and men's participation in decision making and opportunities for and constraints on women's participation. A review of relevant Cambodian-focused national and sector policies on gender equality and research on the role of women in agribusinesses, by UNIDO and others, further contextualizes the gender rationale and approach.

The gender analysis has taken into consideration the division of labour within the sector, access to resources and the decision-making role of women and men. It has also drafted a profile of the different value chain operators, in terms of women and men's participation, business size, inputs, constraints, and expansion plans. A quantitative survey was conducted with 205 key value chain actors, collectors, wholesalers and processors, focusing on the

above-mentioned issues. Qualitative methods have been applied to gather information from different value chain actors and key stakeholders, such as Fishery Administration officials at the provincial level and microfinance operators. The Covid-19 pandemic posed significant limitations to the research by limiting direct interactions with informants, creating a reliance on remote data collection through internet and phone-based systems.

The conclusions of the study provide entry points and recommendations on the best ways to empower women across the project lifespan, contribute to closing the gender gap in the sector and outline potential plans of action for mainstreaming gender into the project.

Results of the study showed that nearly half of the wholesale businesses are owned by women and 38.5% are co-owned by men and women, with retail and wholesale businesses having the largest ratio of women-owned businesses, 80% and 50% respectively. Among processing businesses, female ownership accounts for 42% of the business, while joint ownership is at 55%.

Most of the businesses analyzed by the study are of micro size, not formally registered and do not label their products. Activities are primarily carried out at home with very few businesses having dedicated facilities for processing or storage. This contributes to significant losses, as climatic conditions easily spoil products without appropriate storage and facilities. Less than 20% of enterprises employ external workers, who are normally seasonal/rate workers, and the majority are women.

The gendered division of labour reveals a majority of women in roles that require specific skills, such as purchasing of raw material, and fish selection, sorting, cleaning, salting, fermenting and smoking. Women also tend to be in charge of decision-making related to marketing, and in the tasks that require negotiation skills. Most bookkeeping is done by women.

Many processors, and particularly women, sell products directly to low-end consumers. This represents a significant commercial advantage for micro businesses and for women in particular, allowing them to retain control over the marketing chain and secure a better profit margin along a shorter value chain.

Among the prevailing constraints, a lack of capital, technology and equipment are regularly mentioned as limiting factors, alongside the reduction of available fish resources.

These limitations seem to constitute an obstacle for future expansion plans. The majority of surveyed businesses (52%) plan to expand their business, but percentages vary among the type of business. Processors are keener to expand their businesses, while retailers are less interested in expanding their activity. Women owners are less keen to expand. Despite a lack of capital being perceived as a main constraint, only 39% of operators are taking loans. Others feel that the reduced volumes of available fish, lack of technology and limited production capacity may hamper their repayment capacity and are worried about falling into debt. Women predominantly borrow from banks or relatives, and not from microfinance institutions. Case studies also show that women are often burdened by debts due to non-productive loans, especially when they have to respond to health emergencies, as heads of households.

Among the 205 quantitative survey participants, only 14 (seven men and seven women) have had chances to attend vocational training or participate in capacity building. Opportunities for training seem to be scarce or participants not fully aware of available opportunities. Most of the respondents are interested and willing to attend training.

A number of important issues emerged from the analysis:

- Women are key actors in the post-harvest fisheries in Cambodia. Women and men's contributions represent a fundamental component of the country's productive output in fisheries and nutrition and livelihoods for millions of Cambodians. Women play a crucial role in all stages of the value chain;
- The analysis of the division of labour across the different sector activities highlights women's crucial role in decision making in the purchase and selection of raw material, in the processing phases, and in transactions, including bookkeeping and financial management. Women are key holders of knowledge and skills related to the post-harvest sector;
- Men participate in the post-harvest value chain, but their tasks appear less related to technical processes. Men are mainly involved in transport and tasks that require physical strength, or they support women in their work. Men play an important complementary role and women only enterprises may be disadvantaged if they lack this support;
- Despite the characterization of the industry as dominated by micro enterprises, women also own larger businesses (the only fish exporter in the study

is owned by a woman). This suggests a need for a multi-faceted approach to supporting women in the post-harvest sector because the realities of women micro retailers differ significantly from women heading large enterprises;

- A significant number of women in the study are heads of household. Post-harvest fisheries work offers a source of income to vulnerable women, which is adaptable to their mobility limitations and access to resources. However, the work is labour intensive with often low income;
- All actors in the fisheries post-harvest value chain suffer constraints due to the combined lack of capital, modern technology and inputs, and advanced technical knowledge, especially women;
- Business limitations are often exacerbated in the case of women-owned businesses, due to gender-based constraints in terms of mobility, time availability, access to education and capacity building opportunities. Despite their extensive labour commitments to post-harvest fishery work, women remain bounded to and are mainly responsible for unpaid home-care work, which limits their agency and stretches their available time for economic-focused work;
- The businesses analyzed in this study show that the sector is becoming less attractive for younger generations. This is due to various factors, such as a scarcity of raw material, labour intensity and low financial returns. There is a need to develop strategies to ensure the generational renewal and increased attractiveness of the sector, where women can play a major role;
- A substantial number of both female and male operators do not plan to expand their business. Key factors influencing their perspective include the depletion and reduced availability of resources, alongside a lack of technological inputs;
- Although lack of capital is mentioned as a main challenge, access to loans is not the main limiting factor. Rather, a significant number of both female and male operators are worried about their ability to pay back loans in the current economic climate;
- The sector lacks research and development, despite its central role in Cambodian social and economic life, which results in a lack of technological improvements for producers. None of the study participants received extension services, vocational training or other capacity development;

- The reduction of quantity and quality of fish capture, lamented by many operators, is going to increase producers' and customers' stress, among them, in particular women due to their role in productive activities to ensure food security in their homes, and their insertion in the fish value chain as processors in the post-harvest sector. This underlines the need to improve techniques and develop gender-responsive adaptation technologies to reduce post-harvesting losses;
- The offer of specific gender capacity building and training by FiA provincial staff is still limited. FiA teams are not yet equipped to provide gender inclusive extension and training programs that respond to the specific needs of women in the supply chain; and
- There are indications that improving coordination and association building are seen by operators as a possible strategy to improve their capacity and negotiating power. Community fishery experiences indicate that post harvesting activities within community structures can provide recognition, empowerment and enhanced decision-making power to women in the sector.

## Recommendations

### Related to the Project:

- Value Chain Investment Support (VCIS) should be shaped to respond to the needs of different women-led enterprises. Women own the majority of the sector enterprises, but there are significant differences in terms of their business size, investment, technology and outputs.
- The majority of women owned/managed enterprises are seasonal or micro-businesses, and women are worried about taking loans to expand their business. Interventions should take into consideration the limitations faced by these operators and consider grants tied to accessing capacity building, improving access to simple equipment, and/or support collective initiatives;
- VCIS should consider providing additional levels of incentives when supporting fishery MSMEs, particularly women-owned/managed businesses, such as developing sustainable business plans (supply chain management, market development, product development) and adoption of food safety standards where appropriate;
- Consider developing value chain investment guidelines for the purpose of upgrading micro, small and medium enterprises, focused on the simplification of



bookkeeping and registration processes for MSMEs, especially those owned by women;

- Inclusion of post-harvesting fisheries within Communities Fishery Committees' portfolio of activities appears to be a viable approach for women's empowerment. Other associative forms, such as women's producer cooperatives, should also be investigated;
- Improvements on quality and safety standards need to consider micro-producer's needs, in majority women, to apply homogeneous and simplified safety standards and producers grading;
- Special labels for organic products and products respecting environmental standards should be considered and procedures made available to micro and small women producers and women producers associations (see for example FAO's Participatory Guarantee System (PGS) for community and local producers). This can add value to niche products that are unlikely to achieve large economies of scale;
- A National Action Plan for inspection and control of quality should also consider including women-led or owned micro, small, medium and large enterprises;
- Pursue and systematize the acquisition of data concerning gender into different levels of the fishery value chain;
- Consider participatory research as a tool for better capturing and understanding women's knowledge and skills, particularly in relation to post-harvest fish processing. This can form a basis for technological upgrading, such as solar fish drying, adapted smoking halls, grading fermentation processes and product standardization);
- Applied research and development is crucial for the development of the sector, and should be incentivized through links with academia, development agencies and other stakeholders. Raw material scarcity and environmental constraints are increasingly impacting the sector and technical solutions to reduce losses and inputs, and improve labour productivity are urgent;
- A value chain analysis of exportable products should be conducted. Not all Cambodian fish products are exportable or likely to gain a profitable market share. Therefore, care must be taken to avoid charging micro producers, most of them women, with complex and costly standardization and labeling processes, as required by the EU or the US, when their exporting perspectives are limited;

- Further study should look at mechanisms, such as tax exemption for micro enterprises owned by women, or other incentives, to support micro enterprise expansion, especially those owned by women. The significant number of women headed households in the sector suggests the need to consider vulnerability and risk of poverty when restructuring the sector towards higher commercial production;
- Technical training on post-harvest management for value chain operators should be reformulated, such as using model Farming Field Schools. Training should be practical and delivered at field sites. Training modules should respond to operators' needs and shaped to address the distinct constraints women face, particularly time poverty, lack of mobility and other gender biases.

#### Related to institutional stakeholders

- National policies are critical for enhancing gender equality in the post-harvest fisheries. The key stakeholders for policy implementation are the FiA and its Gender Technical Working Group. A joint review of this study's results should be conducted, and it should inform the development of the FiA's Gender Action Plan for 2021-2030.
- Ensure M&E systems are gender disaggregated and implemented in collaboration with institutional actors such as FiA, National Statistics Institute, Ministry of Agriculture, Forestry and Fisheries (MAFF), and Ministry of Women's Affairs (MoWA);
- Post harvesting gender training modules need to be urgently mainstreamed for FiA staff, especially at the provincial level, as well as for private sector operators. CSOs and development agencies should also be involved to share expertise and knowledge;
- The COVID-19 pandemic has severely impacted all economic sectors in Cambodia. There is a need for an urgent evaluation of the difficulties and needs faced by operators in the post-harvesting fisheries value chain, with a specific focus on women, to design appropriate support and recovery measures.

#### Related to financial institutions

- Access to finance for women should be improved and tailored towards their needs, such as considering collateral requirements, supporting formulation of business plans and collective loans to women's associations or cooperatives.



# 1. INTRODUCTION

The Cambodia Programme for Sustainable and Inclusive Growth in the Fisheries Sector (CAPFish) is a five year programme co-funded by the EU and implemented from 2019 to 2024. The overall objective is to contribute to the achievement of the Royal Government of Cambodia's long-term vision of social and economic development, food security and poverty reduction. The programme features different components and implementing agencies, including the French Development Agency (AFD), the United Nations Industrial Development Organization (UNIDO), the Food and Agriculture Organization (FAO), non-governmental organizations (NGOs) and the FiA of MAFF.

CAPFish is designed to contribute positively to the achievement of the SDGs in Cambodia, specifically SDG1 (ending poverty), SDG2 (food security, improved nutrition and sustainable agriculture), SDG5 (gender equality), SDG6 (sustainable management of water), SDG8 (sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all) SDG9 (Building resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation), and SDG13 (climate change), and SDG14 (oceans and marine resources).

UNIDO is one of the main agencies implementing the CAPFish Capture – Post-Harvest Fisheries Development project. Its specific objective is to contribute to the development of post-harvest fisheries through upgrading the regulatory and institutional system, as well as through the adoption of better practices and innovation by the private sector.

The project will aim at inclusive post-harvest fishery value chain development, focusing on strengthening the institutional capacity of relevant authorities for establishing official control systems and subsequently supporting the upgrading of post-harvest fisheries businesses through capacity building, food safety system implementation, matching investment support and providing business support mechanisms.

The project's main expected outputs are:

- 1: Enhanced technical competence and sustainability of the relevant authorities and official control services supporting the post-harvest fisheries;
- 2: Enhanced private sector capacity to comply with international standards and market requirements relevant to post-harvest fisheries; and

- 3: Enhanced post-harvest fisheries business competitiveness through business support mechanisms.

The second output, support to private sector, particularly to MSMEs engaged in the post-harvest fisheries, has identified a number of key focus areas, namely:

1. Diagnostics/business models to analyze the private sector businesses in fisheries and develop frameworks for private sector development;
2. Strengthening the capacity of financial institutions and business development service (BDS) providers for private sector support;
3. BDS providers upgrade infrastructure in post-harvest operations through investment support;
4. Food safety system implementation, value addition, traceability and certification to improve competitiveness;
5. Supporting businesses for linking to markets, focusing on linking enterprises to high end retail market chains (both national and international); and
6. Trade shows, marketing information tools, training for private sector.

In order to support inclusive and gender equitable development of the sector, this gender analysis of the post-harvest fisheries subsector in Cambodia provides a baseline for the inception phase of CAPFish. Women's empowerment represents a cross-cutting issue that will contribute to close the gender gap in the fisheries sector by encouraging women to engage in representation roles and supporting women's access to economic development and education opportunities, particularly girls and young women.



Inspection of fish processing establishment by FiA inspectors at Siem Reap. Photo: UNIDO



## 2. SCOPE AND OBJECTIVE OF THE STUDY

This study will contribute to identify gender inequalities and their consequences in the post-harvest fishery sector through an analysis of women's and men's roles in the sector. The analysis will then form the basis for recommendations and entry points for the development of an operational Gender Action Plan for CAPFish.

This study is expected to:

- Improve understanding of trends and challenges in terms of gender equality and socio-economic conditions of women and men active in the post-harvest fisheries;
- Contribute to the effective participation of women and men in the management and delivery of project activities;
- Help shape interventions that directly support women's political, economic and social empowerment, such as access to finance and training; and
- Strengthen the project staff and the implementing partners' understanding of the dynamics of women's empowerment in relation to inclusive and sustainable industrial development.

The study includes two post-harvest freshwater fishery locations around the Tonle Sap Lake, in Siem Reap and Kampong Thom provinces, and one post-harvest marine fishery location in Kampot province.

The methodological approach of the study combines secondary and primary data, and quantitative and qualitative data gathering methods.

The secondary data provides a brief analysis of key gender perspectives in relation to post-harvesting activities from the available literature, in order to set a framework for the analysis. This data is contextualized in relation to Cambodia gender specificities in terms of gendered division of labour, access to and control over resources and technologies, women and men's participation in decision making. A review of relevant national and sector policies on gender equality and the empowerment of women, and documents and statistics on the role of women in agribusinesses also informs the analytical framework, alongside other gender positioning documents from UNIDO and partners.

The conclusions of the study provide entry points and recommendations on potential ways to empower women across the project life-span, contribute to closing the gender gap in the sector and develop a coherent plan of action for mainstreaming gender in the project.



*A small scale processor in Kampong Chhnang province preparing freshwater fishes on a bamboo mat for smoking. Photo: Bettina Gatt*





# 3. METHODOLOGY

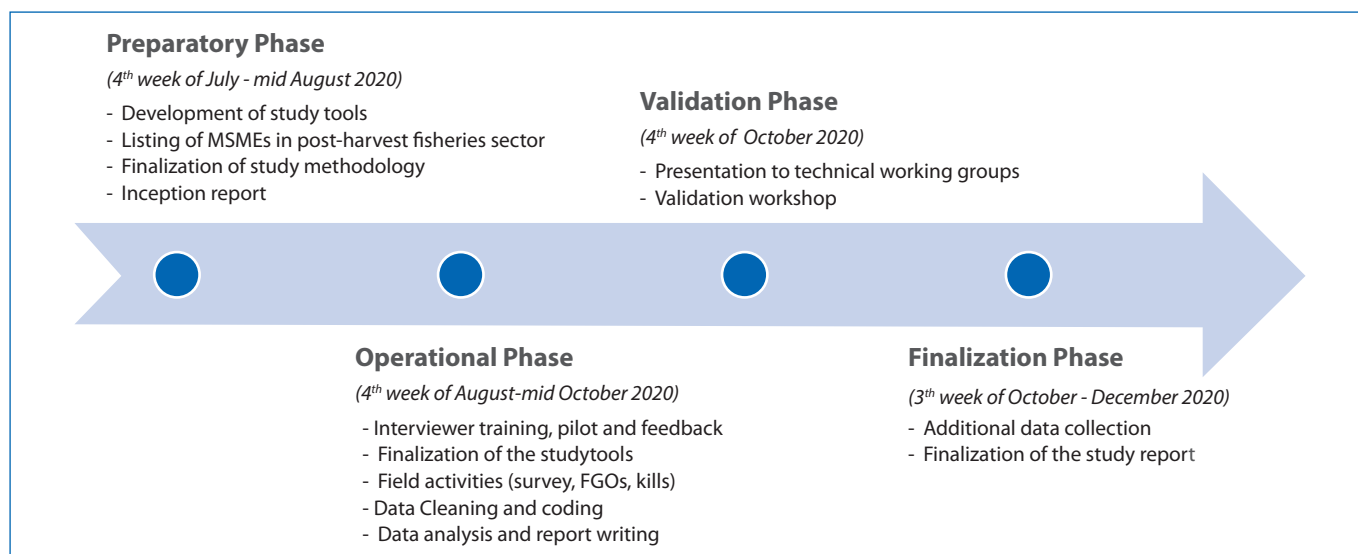
This study's methodological approach synthesises an analysis of secondary data through a comprehensive literature review, primary data collected through quantitative and qualitative tools, and a consultative workshop with key stakeholders.

The study was implemented in four phases over a period of six months from July to December 2020, as summarized in Figure 1. The first phase involved preparatory work, including development of study tools, listing MSMEs in the post-harvest fisheries, finalization of the study methodology, and getting the inception report approved

by the technical working groups of UNIDO and FiA.

The second phase of the study was operational. This included training of interviewers, piloting and refining study tools, finalization of study tools, data collection (survey, focus group discussion, and key informant interviews), data cleaning and coding, data analysis and report writing. Outputs from this phase were submitted and presented to the technical working groups of UNIDO and FiA. They were then presented to key stakeholders in a validation workshop held in the fourth week of October 2020, which constituted the third phase of the study.

Figure 1. Study timeline



Feedbacks from the validation workshop were incorporated, including the collection of additional data with a more in-depth focus on gender dynamics among households of owners of businesses participated in the survey. Additional key informant interviews were also conducted. As a completion of the fourth phase, the study report has been finalized in December 2020.

## 3.1. LITERATURE REVIEW

The literature review examined relevant gender studies and reviews related to women's roles in fisheries and the post-harvest fishery sector. The review focused primarily,

but not exclusively on Cambodia and the region. The review informed the conceptual framework for the study. The review also sorted the most relevant data and statistics concerning gender equality in Cambodia, with particular focus on agriculture, livelihoods, and economic participation and empowerment. The literature review also provides an analysis of national gender equality policies for the advancement and empowerment of women in Cambodia, and an overview of the sectoral gender policies and strategies guiding governmental action in agriculture and fisheries. Other National Strategies and positioning documents, particularly relevant for the study contextualization, have also been reviewed. UNIDO's

Gender Policy, Strategy and Gender Mainstreaming Guides for agribusiness development, and the FAO's Gender Sector Guidelines including Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, were also reviewed.

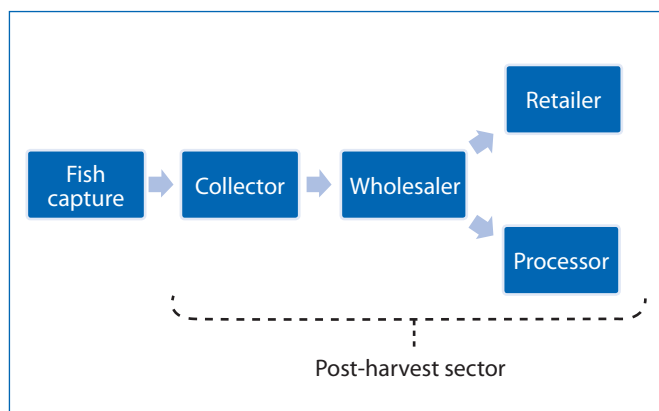
An assessment of the most recent and relevant data concerning fisheries in Cambodia and specifically the post-harvest sector also contributed to frame the gender analysis and draft the methodological tools for primary data collection.

### 3.2. PRIMARY DATA COLLECTION

A preliminary review of the fisheries sector was carried out to inform data collection. The operations that follow the capture of fish until the final product sales are multifaceted. There are different value chains and actors for nearly each category of products. See for example a 2015 study on Cambodia's marine fishery value chains, which identifies specific value chain frameworks for different products such as shrimps, squids, and crabs (UNIDO-FiA-MAFF 2015). The value chains of fresh water fisheries in Cambodia are further complicated by the broad variety of products, the seasonal variations in availability and capture, the different types of capture, their location and the number and role of intermediaries (Navy and Johnstone 2015; Mille, Navy, and Nob 2016).

In order to focus the data collection process, it was decided to rely on the existing fresh water and marine water value chain actors recorded by the Fishery Administration Cantonment officials in each of the target provinces. The value chain actors recorded within the FiA databases are categorized as fish collectors (middle-people), wholesalers (national and provincial), retailers and processors (dried fish, fermented fish, smoked fish, fish sauce and other products), as shown in the figure below.

Figure 2. Illustrative value chain for the fish capture sector



Each actor's position along the chain can vary and their boundaries are often blurred or overlap. The overall distinction between capture and post harvesting is not definitive because the two activities may occur within the same household.

The classification of the different actors has been based on a study conducted in 2012 on freshwater value chains in Cambodia (Hap et al. 2012):

- **Collectors:** buy fish from fisherfolk and bring them to the landing sites, and set prices with fisherfolk depending on fish quality, supply and market demand. Collectors have capital for immediate cash payment to fisherfolk and often provide credit to small-scale fisherfolk.
- **Wholesalers:** act as fish distributors buying fish from fisherfolk, collectors or middle-people and re-sell the fish to retailers or other customers. Semi-wholesalers are traders who have permanent stalls outside markets where they buy fish from wholesalers and sell them to small retailers.
- **Retailers:** buy fish from wholesalers, processors or others, and re-sell in markets directly to consumers. Generally, they have a permanent stall in the markets, but some are mobile traders.
- **Processors:** buy fish from fisherfolk, collectors/wholesalers, and/or retailers, and make products such as fish paste, salted-dried fish, fermented fish and smoked fish. Products are then usually sold to consumers, retailers and/or wholesalers.

#### 3.2.1. Identification of the informants

In order to identify a sample of informants for the study, the study team relied on the databases provided by the Fishery Cantonment officials in Siem Reap, Kampong Thom and Kampot provinces, which contain MSMEs engaged in post harvesting activities. From the lists obtained, processors largely outnumbered the other actors. These percentages have been taken into account to ensure an appropriate proportion of the different groups among the sample. A gender distribution of the enterprise owners was also calculated to ensure an appropriate gender distribution for the survey sample. A woman-owned enterprise was defined based on the gender of the owner, manager or majority stakeholder. After these enlisting activities, 431 businesses were identified across the three provinces, of which 74% were owned by women, as in Table 1.

**Table 1. Summary of ownership amongst different fishery actors**

Category	KTH		KPT		SRP		ALL	
	Total	Women-owned (% of total)	Total	Women-owned (% of total)	Total	Women-owned (% of total)	Total	Women-owned (% of total)
Collector	9	67%	8	63%	15	73%	32	69%
Exporter	1	0%	1	0%	2	100%	4	50%
Processor	92	79%	56	46%	85	69%	233	68%
Retailer	36	100%	56	84%	13	69%	105	88%
Wholesaler	19	89%	14	71%	24	67%	57	75%
Total	157	84%	135	65%	139	70%	431	74%

Note: SRP = Siem Reap, KTH = Kampong Thom, KPT = Kampot.

### 3.2.2. Quantitative data gathering

#### ■ Sampling selection process

All 431 identified businesses were contacted and 205 accepted to participate in the study. However, the majority of businesses are categorized as micro enterprises, which seldom make use of external workers. Therefore, only 17 workers were eligible for the workers' survey. Female respondents accounted for 82% of total respondents in both the business and worker surveys. The sample size is summarized in Table 2.

**Table 2. Sample size by category**

Category	(number of businesses)		(number of workers)	
	Total	Of whom, female respondent	Total	Of whom, female respondent
Collector	19	79%	6	67%
Exporter	1	100%	0	0%
Processor	105	79%	10	90%
Retailer	56	95%	0	0%
Wholesaler	24	71%	1	100%
Sample	205	82%	17	82%

#### ■ Questionnaires

The survey questionnaires were drafted according to value chain analyses frameworks, and gender and fisheries survey methods and analyses. The questionnaire for the

business survey consists of nine sections including general information about the respondent, business activity and products, production processes (focusing on gender roles or division of labour in family, and access to and control of resources and decision making), employment, business policy (assessing whether the recruitment process provides an equal opportunity for both men and women, and issues related to gender-based violence), raw material procurement, markets, finance, and business characteristics (including working capital, invested capital and business registration).

#### ■ Survey method

There were two surveys: one with businesses and the other with workers. These surveys were conducted in two rounds. The first round of data collection involved face-to-face interviews from 25 September to 02 October 2020, both with business owners and workers. The second round was conducted remotely (due to COVID-19 precautions) through telephone and only with business owners, from 08 to 12 December 2020. This latter round was a follow-up survey with the same respondents that had participated in the first round of the business survey.

### 3.2.3. Qualitative data gathering

Key informant interviews (KII) with fishery cantonment officials of the three target provinces, gender focal point officials of FiA, and staff at financial institutions in Phnom Penh were carried out, as summarized in Table 3. A guideline for KIIs was used, focused on assessing institutional capacity in relation to gender dynamics in the

post-harvest fisheries sector (only for fishery cantonment officials and FiA gender focal point), identification of gender policy and its compliance among financial institutions, and assessment of gender training needs. Focus group discussions (FGD), planned at the initial stage of the study, could not be implemented due to COVID-19 restrictions.

A total of 18 KIIs were conducted with processors of the three target provinces of which 12 KIIs were with women-owned processing businesses. These KIIs were to compensate for the planned FGDs. A guideline was used that focused on reasons for engaging in the fisheries processing

business, challenges faced by women-owned businesses in the sector, access to processing technologies and capacity building opportunities, and business expansion plans. Findings from these KIIs provide explanatory evidence to complement the survey results.

Three case studies were also captured through telephone interviews (due to COVID-19 restrictions). The case studies include two women-owned processing businesses in Siem Reap and Kampong Thom provinces (one each), and one women-owned retailer in Kampot (Table 3).

**Table 3.** Sample size of KIIs and case studies

Key Informant Interviews					
Respondent	SRP	KTH	KPT	PNH	Total
Cantonment official	1	1	1		3
Gender focal point official				1	1
Financial institution				3	3
Processor	6 (Women)	6 (Women)	6 (Women)		18 (Processors)
Case Studies					
Respondent	SRP	KTH	KPT	PNH	Total
Processor	1 (Woman)	1 (Woman)	1 (Woman)		3 (Woman)

### 3.3. LIMITATIONS OF THE STUDY

The implementation process of the study was hampered by COVID-19 restrictions. While the study could conduct face-to-face interviews for the survey, FGDs were not possible, and KIIs were by phone. This remote approach limited, at least to a certain extent, information obtained from observation and inter-action among participants, which in turn could affect the quality of the qualitative data. To overcome this weakness, case studies were conducted to complement other data.

The data collection period was from late August to October which is comparatively a dry fishing period. However, the study team developed questionnaires keeping this constraint in mind to address the issues faced by the actors in relation to gender. Moreover, the scope of the study was to identify gender issues in the sector rather than quantifying. Hence, this did not have much impact on the findings of the study.



Fishes are arranged on bamboo sticks for smoking. Photo: UNIDO



# 4. GENDER AND POST-HARVEST FISHERIES IN CAMBODIA: ANALYSIS AND CONTEXTUALIZATION

## 4.1. GENDER IN POST-HARVEST FISHERIES: A RATIONALE FOR THE ANALYSIS

In recent decades, understanding the role of women in fisheries has improved due to increased data, analyses, and research (M. J. Williams, Nandeesh, and Choo, 2004). In 2012, a World Bank and WorldFish study established that on a global scale, 47% of workers in the sector are women (World Bank, 2012). Women play a crucial role at all stages of the supply chain (Weeratunge, Snyder, and Sze 2010; Lentisco and Lee, 2014). These findings have challenged the misconception that the fishery sector is dominated by men. Sector studies have increasingly taken into consideration the gender dimensions of fisheries and the role of women in the sector. Studies have tried to identify and quantify the barriers women face across the supply chain and in relation to different fishing approaches and contexts (Gee and Sisto, 2013; MFF, SEI, and SEAFDEC, 2018). The FAO Small-scale Fishery Guidelines takes into account gendered dimensions in the fishery sector (FAO, 2015) and guidelines have been finalized to further boost gender equality (FAO, 2017). Other sector specialized agencies have increasingly contributed to the advancement of gender studies in the fishery sector, supporting data collection and analyses, and developing strategic approaches, such as [WorldFish](#), [CGIAR](#) and the South East Asia Fishery Development Center SEAFDEC (SEAFDEC, 2018). A [Gender in Aquaculture and Fishquestionnaire](#) [Section](#), within the Asia Fishery Society, has been active for seven years, and has become an international platform for knowledge exchange.

Understanding that women play a significant role in different aspects of fisheries and aquaculture, fishery post-harvesting activities are where women significantly outnumber men (FAO, 2020). Fish processing is a women-dominated activity in the South Asian region, alongside marketing of fresh and processed products (Siason, Tech et al. 2002; Upadhyay 2018). However, the perception of fishery as men-dominated sector is still very present and downplays women's essential role to ensure the distribution of a fishery products, either by managing value chains or by processing fish into less perishable products. Significant analysis contributes to better understand the kind of

gender-based constraints faced by women involved in post-harvest fishery activities, which are briefly summarized below.

- **Scarce visibility:** the lower status of women influences the perception of their activities in the fishery supply chains, which tend to be considered as less significant than men's activities, with women viewed as household supporters rather than key fishery actors (Lentisco and Lee, 2014; 2015). In fish capture and aquaculture women account for only 14% and 19% of people involved, but constitute nearly half of people engaged in post-harvest fishery activities (FAO, 2020). The lack of recognition of women hampers their access to resources, decision making and related services.
- **Lack of data:** women's roles in fisheries are often undocumented by national statistics and databases, which tend to focus on fish capture, driven by production targets and overfishing concerns. This contributes to a lack of detailed gender-disaggregated data all along the supply chains, perpetuating women's invisibility (Gee and Sisto 2013). Being unrepresented and unaccounted for in national statistics, women end up by being overlooked by national policies, which do not support their interests or respond to their needs. This has major negative consequences in terms of women's rights, food security, nutrition and poverty level, and broader sector development.
- **Chronic time poverty:** gendered divisions of labour, such as women taking on most childcare responsibilities results in a heavy burden for women who are also engaged in post-harvest fishery activities (Diei-Ouadi et al. 2015). This negatively impacts their wellbeing and participation in social, economic and cultural life, while also limiting their productive capacities. Women in fishery supply chains are forced to choose activities that can be executed near their homes, flexible and do not require significant mobility or travel. Women face limitations in accessing innovation, knowledge and capacity building, which in turn limits their productivity, competitiveness, technological upgrading, networking, enterprise formalization, market access and marketing strategies (FAO 2017).

- **Losses are gendered:** processors experience higher losses than other value chain actors, and among them women processors are more at risk of losses than men. This is explained by women's lack of mobility, lower bargaining power, time poverty and vulnerability (Cole et al. 2018). Women processors lack of mobility and bargaining power force them to rely on low quality raw materials that are more likely to result in losses (Diei-Ouadi et al. 2015). This hampers profit and productivity. It can also have broader repercussions with fish losses and waste at a global level amounting to 35% of catches (FAO 2016).
- **Systematic gender discrimination:** women engaged in fishery supply chains experience overall societal constraints and barriers in the private as well as in public sphere. This limits their access to resources, education, knowledge, fair income, participation in associations and/or networks, decision making, representation, and capacity to policies and legislation (FAO 2018).

## 4.2. GENDER AND FISHERY IN CAMBODIA

Cambodia has one of the largest and most biologically diverse fisheries in the world, centred on the Tonle Sap Lake and Mekong River systems, which create large areas of permanent or seasonal wetlands, covering nearly one third of the country. This makes inland fisheries particularly accessible to small-scale fisherfolk and allows the integration of fishing and agriculture activities (Bann and Sopha 2020). Besides freshwater fisheries, coastal marine fisheries contribute 18% to Cambodia's total catch. The industry plays a crucial role for Cambodia's food security, employment and economy. Average fish consumption is estimated at 52.4 kg/person/year, and fish accounts for 76% of households' protein intake (FAO 2019). The sector employs nearly six million people, either full-time, part time or seasonally, and makes up 8-12 percent of GDP with a total value of approximately USD 1.5 billion per year (FiA 2019). As a sector with a low entry barrier, fishing is also an important safety net for vulnerable households (FAO 2019). The sector's outputs in 2018 are summarized below.

Table 4. Overview of Cambodia's fishery sector in 2018

Fish catch, processing and exports in 2018 (FiA 2019)					
Description		2018	± 2017		
<b>Freshwater total</b>		<b>535,005 t</b>	<b>+ 7,210 t</b>		
<i>Family fisheries in public domain</i>		360,730 t	+ 8,260 t		
<i>Family fisheries in rice fields</i>		157,300 t	-1,400 t		
<b>Marine fisheries</b>		<b>121,100 t</b>	<b>+ 75 t</b>		
<b>Aquaculture</b>		<b>254,048 t</b>	<b>+ 46,605 t</b>		
<b>Fishery exports</b>		<b>14,500 t</b>	<b>+ 1,500 t</b>		
<i>Fresh fish</i>		9,500 t	+ 1,000 t		
<i>Processed fish</i>		5,000 t	+ 500 t		
<b>Fish processing</b>		<b>83,735 t</b>	<b>+1,135 t</b>		
Freshwater products		Marine products			
<i>Fish paste (prahok)</i>	29,881 t	<i>Steamed fish</i>	1,261 t	<i>Snail meat</i>	325 t
<i>Dry salted fish</i>	18,221 t	<i>Boiled crabs</i>	775 t	<i>Fermented shrimp</i>	250 t
<i>Salted fish</i>	17,027 t	<i>Shrimp paste</i>	710 t	<i>Crab meat</i>	234 t
<i>Smoked fish</i>	3,183 t	<i>Dry shrimps</i>	702 t	<i>Fish powder</i>	205 t
<i>Fermented fish (prahak)</i>	2,651 t	<i>Clam meat</i>	700 t	<i>Dry anchovies</i>	145 t
<i>Fermented fish (mam)</i>	1,166 t	<i>Dried krill</i>	650 t	<i>Dry squid and rie</i>	51+35 t
<i>Fish cake</i>	399 t	<i>Spanish mackerel</i>	600 t	<i>Frozen shrimp + squid</i>	168+11 t
<i>Dry fish</i>	325 t	<i>Dry salted fish</i>	594 t	<i>Crab and shrimp shells</i>	537 t
<i>Dry shrimps</i>	147 t	<i>Salted crabs</i>	582 t	<i>Dried seaweed</i>	1,601 t
<i>Fish sauce</i>	52,800 l	<i>Fermented fish</i>	455 t	<i>Fish sauce</i>	5,200 l



One of the few systematic studies about fish processing and fermented products in Cambodia (Nam et al. 2009) highlights key constraints such as the absence of entrepreneurship, lack of credit, government intervention, an underdeveloped market, lack of qualified labour and inadequate technology. The micro enterprises that characterize the sector suffer many constraints. They have low purchasing power, have to deal with lack of infrastructures including access to clean water and limited availability and high cost of electricity supply, face competition from imports, lack domestic technological supplies, and have low levels of education and availability of technical training and extension services. Other constraints include a lack of grading systems or packaging material, shortage of capital, informal taxes, and poor domestic research and development for the sector.

The above national data helps to realize the relevance of women's role in fishery in Cambodia. While the percentage of women in the sector globally is 57%, in Cambodia it is 57% (Kusakabe 2016). Women are active in fish capture, albeit on a lesser scale than men, in fish wholesale, processing and retailing, featuring prominently across the post-harvest value chain.

Studies conducted on fresh water fish value chains in Cambodia have highlighted its gender dynamics. More women are active in certain processing businesses for certain products, like fermented fish, which is nearly exclusively produced by women (Hap and Jonhstone, 2015). Men are more involved in transportation and work that demands physical strength, such as carrying heavy loads, while women manage processes of sorting, cleaning, salting, and preparing fish for smoking, as well as collecting firewood (ibid.). Besides post-harvesting activities, some women are also fishing by themselves, or supporting their husband's fishing, by mending nets, preparing bait, or keeping accounts (Locke et al. 2017). In coastal areas, women account for three percent of vessel owners, more than 50% of traders and collectors, 90% of retailers and 74% of processors (UNIDO-FiA-MAFF 2015). Although women do not usually go out to the sea to fish, they fish near the shore and gather molluscs. In the aquaculture sector, women have a significant role and are involved across multiple aspects of the value chain (Leakhena et al. 2018).

According to a recent study, women getting recognition for their role in post-harvest fishery value chains is not easy: "The social status of fish business is not high – it is considered hard, smelly and insignificant, a business run by women as a secondary income for the family, despite the fact that in many households, women are the main

breadwinners. Due to such attitudes, women fish processors are unable to wield much political clout and negotiation power with authorities." (Kusakabe, 2016, p.100).

However, a recent study shows that women involved with Community Fishery Committees (CFC), which have taken a more central role in the sector since the abolition of the fishing lots in 2011, have better chances for their work and roles in the sector recognized (Kurien 2017). CFCs allow women's membership, as fishers or involvement in fishery-related activities, and are providing space for post-harvest businesses in their range of collective activities. This has empowered women members, not only in quantitative terms, women account for 45% of CFC members, but also in terms of access to decision making roles within their management structures (ibid.).

#### 4.3. WOMEN IN MICRO, SMALL AND MEDIUM ENTERPRISES IN CAMBODIA

Despite their significant and economically relevant engagement in the post-harvest fishery sector, women are still relatively invisible. Gender-disaggregated data on fish capture and post-harvest activities are still unsystematic, while figures and profiles of women's lead enterprises involved in the fishery supply chain are also unclear.

Some broader, non-fishery specific statistics are available and informative. In Cambodia, women comprise 49% of the total labour force with a participation rate of 80%, compared to men's 89% (Ministry of Women's Affairs Cambodia 2014). Women own 61.2% of Cambodia's 505,134 MSMEs, although the majority of women's businesses are informal micro-enterprises (Ibid.).

Women's MSMEs income is lower than those of men-owned businesses, and registered MSMEs are mostly owned by men (ADB 2015). Women in microenterprises have limited access to resources to expand their business, and technical and vocational training is limited or not adapted to women's needs (Ibid.)

Despite their significant participation in productive activities, Cambodian women take near exclusive responsibility for household nutrition and food provision, house keeping and care for children, sick and elderly family members. Recent global statistics on women and men's proportion of care work within households places Cambodia near the bottom out of 75 countries in terms of men's contribution to unpaid home-based work (ILO 2019, p.19). Women are overburdened and time poverty limits their opportunities

for education, capacity building, “participation in business associations and networking ... limiting opportunities to raise women’s specific concerns” (MoWA 2014, p.6).

The productivity of women is also hampered by limited access to new equipment and low prioritisation of obtaining time/labour-saving technologies. Women have limited access to information and education, including extension services, as only ten percent of agricultural extension services reach women (Leapheng 2018).

In terms of access to credit, despite limitations due to women possessing less collateral, data shows that in 2013 women constituted 80% of microfinance institutions’ borrowers and 53% of commercial banks’ borrowers, but women’s average loan size is lower than that of men (ADB 2015). Women are also more commonly savers than men, representing 70% of depositors (ibid.). Despite access, women often do not have full control of loan usage, even when taken in their name, which also influences their perception of risks.

#### 4.4. NATIONAL GENDER-RELATED POLICIES

Gender equality is embedded in Cambodia’s constitution, which prohibits all forms of discrimination against women (Art.45). Cambodia’s commitment to the promotion of gender equality is further supported by accession in 1992 to Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Overarching national development policies and strategies, the Rectangular Strategy for Growth, Employment, Equity and Efficiency Phase IV and the National Strategic Development Plan 2019-23 (NSDP) also affirm gender equality as a priority for inclusive and sustainable development (Royal Government of Cambodia 2018, 2019). Gender equality and social protection are seen as instrumental for agricultural and rural development, of which fisheries represents a major component. The NSDP recognizes women as the backbone of the economy and society.

Cambodia’s MoWA, is charged with the formulation of 5-year Gender Strategic Plans. The 2019-2024 plan focuses on strengthening Women’s Economic Empowerment through the promotion of entrepreneurship and the development of women’s potential, by enhancing productivity, and access to domestic and export markets at regional and international levels (MoWA Draft Plan 2019-2023). The Technical Working Group on Gender (TWG-G), chaired by MoWA, is the coordination body for the formulation of

policies, legislation, strategies, and aid effectiveness, while Gender Mainstreaming Action Groups (GMAGs) are charged with mainstreaming gender in each sector and developing sector-specific gender plans and strategies.

Cambodia’s Sustainable Development Goals 2016-2030 (CSDG) framework (Royal Government of Cambodia 2019a) has set the following localized targets for Goal 5, Gender Equality:

- 5.4. Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.
- 5.5. Ensure full and efficient participation of men and women and equal opportunities in leaderships at all levels of the economy, politics and public life.
- 5.6. Adopt and strengthen sound policies and enforce legislation for the promotion of gender equality and the empowerment of all women and girls at all levels, with indicators of the number of line Ministries and Agencies possessing and implementing Gender Mainstreaming Strategic Plans.

#### 4.5. GENDER IN NATIONAL FISHERIES POLICIES AND STRATEGIES

These overall strategic directions have been further operationalized by MAFF through a Gender Mainstreaming Policy and Strategic Framework in Agriculture (2016-2020) and a strategic direction to achieve gender equality and women’s empowerment through the Agriculture Sector Strategic Development Plan (2016-2020) (MAFF 2015a). The MAFF Gender Mainstreaming Policy and Strategic Framework in Agriculture 2016-2020 sets three key objectives:

1. To promote women’s economic empowerment through women’s access to goods and services for agricultural development and markets;
2. To strengthen capacities, resources and commitment within MAFF to ensure effective mainstreaming of gender perspectives into the agriculture sector; and
3. To increase women’s and men’s equal representation and participation in the agriculture sector.

The FiA Working Group for Gender and Child Labour, in charge of mainstreaming gender within FiA operations, updated its 2007 Gender Mainstreaming Policy and Strategy in the Fisheries Sector and has adopted a Gender Equality Promotion and Child Labour Elimination Strategy, to effectively address gender and child labour issues in fishery communities (Ministry of Agriculture Forestry and Fisheries 2015).

Among the key gender strategic objectives is the promotion of economic empowerment and improving M&E mechanisms on gender equality and child labour.

Besides specific gender policies, the Strategic Planning Framework for Fisheries (SPFF) updated for 2015-2024 highlights gender mainstreaming as a mechanism to promote gender equality and combat child labour in the sector (MAFF 2015b).

#### 4.6. CAPFISH PROJECT ALIGNMENT WITH UNIDO GENDER OBJECTIVES

The CAPFish Project is embedded in UNIDO's Programme for Country Partnership (PCP) in Cambodia. Agro Value

Chain development is one of the key components of the PCP, aimed at strengthening forward and backward industrial linkages along the agri-business value chain to promote competitive and inclusive growth of the country's agro-industrial sector. This is intended to increase employment and income opportunities. Women and youth empowerment stand as crosscutting themes. Women's economic empowerment and youth employment will be integrated across all PCP interventions.

Among UNIDO's overall gender mainstreaming recommendations, there is the need to develop sectoral gender value chain analyses to inform industrial policy and strategy (UNIDO 2018). This should be achieved by studies that generate sex-disaggregated statistics and examine where women and men are located in the various segments of the value chain, their paid and unpaid contributions, and key bottlenecks and power imbalances faced, as well as compliance with labour standards.

This study is thus aligned with and responds to UNIDO's commitment to ensure a gender perspective in all of its projects and programmes, as well as implementing gender-relevant targeted interventions.



Women workers processing crab meat in a processing establishment in Kampot province. Photo: UNIDO





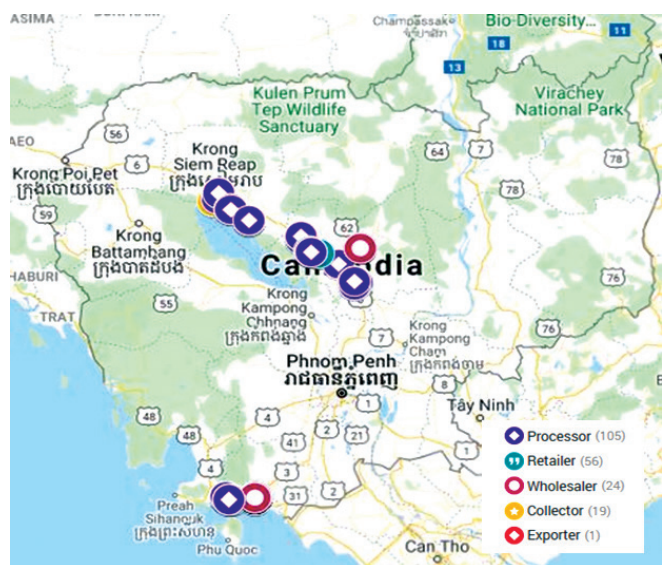
# 5. RESULTS OF POST-HARVEST FISHERIES GENDER ANALYSIS

This section presents key findings from the study's quantitative survey, integrated with the information gathered from interviews with FiA provincial officials and business operators. The study was conducted in three provinces: Kampong Thom, Siem Reaps and Kampot (Table 5 and Map 1).

**Table 5.** Survey informants' location

Province	N.	District	N.	Commune	N.				
KTH	71	Stoung	21	Kampong Chen Tboung	12				
				Kampong Chen Cheung	6				
				Kampong Kdei	1				
				Msa Krang	1				
				Trea	1				
		Santuk	20	Tang Krasang	11				
				Pnov	5				
				Tboung Krapeu	3				
				Kakaho	1				
				Kampong Svay	15				
		Prasat Sambour	8	Sambour	8				
				Stueng Saen	7	Kampong Krabau	5		
						Achar Leak	1		
						Stueng Saen	1		
				SRP	55	Siem Reap	33	Siem Reap	28
Chreav	2								
Sla Kram	1								
Ta Vien	1								
Tang Krasang	1								
Soutr Nikom	14	Kampong Khleang	13						
		Dan Run	1						
		Prasant Bakong	5			Kampong Pluk	5		
						Chi Kreaing	3		
		KPT	79			Kampot	54	Kampong Bay	30
Andoung Khmer	18								
Traeuy Kaoh	6								
Tuek Chou	24							Preaek Tnoat	23
								Trapeang Sangkae	1
Angkor Chey	1	Praphnum	1						

Map 1. Survey respondents' location



“Normally, women have more power than men, because they handle all the work related to their business. In the past, they just process the leftover fish for family consumption. Then they became skilful and made a business out of it. They think of every aspect of their business, while men just help with their physical strength.” (FiA Official, Kampong Thom)

“Men mostly fish, while women are responsible for preparing the fish: smoking, fermenting fish and selling. There is also a small proportion of women that go fishing with their husbands.” (FiA Official Siem Reap)

In most of the cases, business size tends to be micro or small, more a family business than a structured commercial operation. Technologies and mechanisation are minimal, with most of the operators using traditional techniques for their production, including simple tools, and minimal investment.

## 5.1. GENERAL OVERVIEW ON GENDER AND POST-HARVEST FISHERY ACTIVITIES IN THE THREE RESEARCH SITES

Preliminary information gathered from Key Informants, particularly FiA Cantonment Officials in the three provincial departments, have contributed to highlight key general aspects of post harvesting fishery activity and the role of women.



A woman processor checking quality of fish being dried under sun. Photo: NUPPUN Research Consulting firm. Photo: UNIDO

Women play a major role in all the aspects of the business, as articulated in the following quotes:

“Women have enough decision-making power in their business because they know every aspect of it. Even when I buy fish, the husband of the seller asks his wife about the appropriate price for customers.” (FiA Official, Kampot)

Post-harvesting fishery activities reach a peak during the high season, lasting from October until March, both in fresh water areas in Siem Reap and Kampong Thom, as well as along the coast in Kampot. During that time, large quantities of fish are available and households engage in processing fish.

The FiA Cantonment officials are providing some training and capacity building to operators, but not systemically and it's mostly focused on food safety. Participation of women in these training is encouraged, but is insufficient. This is also because FiA provincial departments lack women staff and extension services that reach and provide in-farm capacity building. According to the FiA officers, women's responsibilities for productive work and unpaid house care hamper their opportunities to participate in training initiatives requiring mobility.

In all the sites, fisherfolk are experiencing a significant reduction in catches, while the demand for processed fishery products remain high, causing operators difficulties in meeting customer demands.

## 5.2. SURVEY SAMPLE

The sample was chosen to ensure an appropriate gender balance that focused primarily on women, but also captured views from men. The survey was conducted with 205 businesses operators in the post-harvest fishery sector, 82.4% were women respondents and 17.6% men. This ratio reflects women's dominance in businesses ownership among FiA provincial recorded operators.



The respondents mainly fall into four categories: collectors, retailers, wholesaler and processors. Only one respondent

was an exporter. 99% of respondents are business owners and one percent managers (see Table 6).

**Table 6.** Sample size category, location and gender

Category	Kampong Thom			Kampot			Siem Reap			All provinces		
	M*	W*	Total	M	W	Total	M	W	Total	M	W	Total
Collector	1	3	4	3	5	8	-	7	7	4	15	19
Retailer	-	16	16	2	33	35	1	4	5	3	53	56
Wholesaler	-	3	3	3	7	10	4	6	10	7		24
Processor	10	38	48	4	20	24	8	24	32	22		105
Exporter	-	-	-	-				1	1		1	1
<b>Total</b>	<b>11</b>	<b>60</b>	<b>71</b>	<b>12</b>	<b>65</b>	<b>79</b>	<b>13</b>	<b>42</b>	<b>55</b>	<b>36</b>	<b>169</b>	<b>205</b>

\*M and W notations indicate respectively male and female sexes.

The category of processors has been further analyzed to understand specific aspects related to the activity and its gender implications.

### 5.3. DEMOGRAPHY, MARITAL STATUS AND EDUCATION

Data concerning age, marital status and household heads were gathered among a data subset of 88 processors, of which 68 are women and 20 men. The age of the respondents (see Table 7) reveals that fishery processing involves mostly middle age women and men: processors below 30 years of age account for only eight percent of the sample and over 50% of respondents are older than 40 years.

**Table 7.** Age and sex of respondents

Age in years	W	M	Total	Percent
20-25	2	0	2	2.3%
26-30	5	0	5	5.7%
31-35	10	2	12	13.6%
36-40	18	6	24	27.3%
41-45	11	4	15	17.0%
46-50	12	2	14	15.9%
51-55	1	1	2	2.3%
56-60	3	4	7	8.0%
over 60	6	1	7	8.0%
<b>Total</b>	<b>68</b>	<b>20</b>	<b>88</b>	<b>100%</b>

These results mirror the findings of a recent study that highlights the tendency among younger generations to leave the fishery sector, as it considered unprofitable and demanding work, and instead find employment in the garment industry (women) or the construction business (men) (Kusakabe 2019).

Among the sample, all 20 men are married, while among women 11 are either single, widowed or divorced. More than half of the women are the head of household (see Table 8).

**Table 8.** Head of household by gender

Head of household	W	M	Total (%)
No	28 (41.2%)	15 (75%)	43 (48.9%)
Yes	40 (58.8%)	5 (25%)	45 (51.1%)
<b>Total</b>	<b>68</b>	<b>20</b>	<b>88</b>

The high percentage of women headed households in this sample (the national average is around 22%) (National Institute of Statistics 2018), represents an element of vulnerability, which should be further investigated and taken into consideration for future interventions.

This dynamic was reinforced through interviews with some women retailers and processors:

*"If talking about family, I play the role as family leader, a husband, a wife, a father, a mother and a child. Because my husband is sick and paralyzed, ...my mother-in-law got*

diabetes and is paralyzed too and my mother has hearing problems. I alone play the roles of good wife, good mother, and good child at the same time.” (Interview with retailer in Kampot)

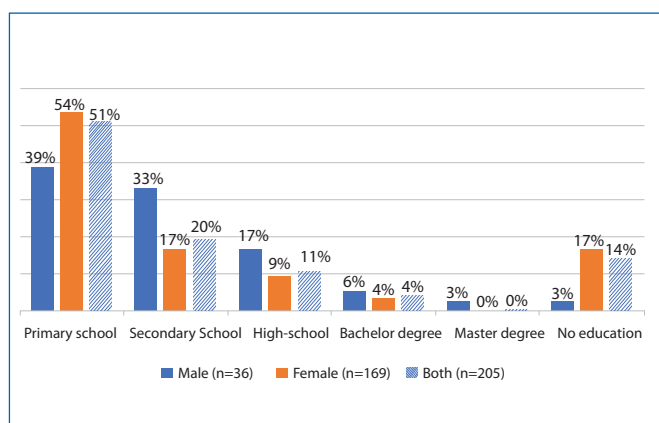
“I don’t have husband yet. I am still single, but I can look after my niece and nephew like other women who have a husband. I look after them like my own children.” (Interview with processor in Siem Reap)

In terms of dependents, 26.1% of the 88 processors have less than five dependents, 69.4% between five and nine dependents, and 4.5% ten or more.

Fishery-related work is the principal occupation for 76.1% of the processors (73.5% of women, 85% of men). Besides fishery-related work, the most frequent occupation is farming, followed by animal breeding or selling other products.

Data concerning education (gathered from all 205 respondents) show that women are more likely than men to have lower educational levels. 17% of women do not have any educational background (Figure 3). This reflects trends of gender inequality in Cambodia generally.

**Figure 3. Educational level by gender of respondents**



(Unit: % of sample by sexes)

## 5.4. BUSINESS OWNERSHIP, CHARACTERISTICS, AND SIZE

More than half of the whole sample of 205 retailers, wholesalers, processors and collectors, are owned by women, 50.7%, while 43.4% are co-owned by men and women. Only 3.9% of the businesses are owned solely by men.

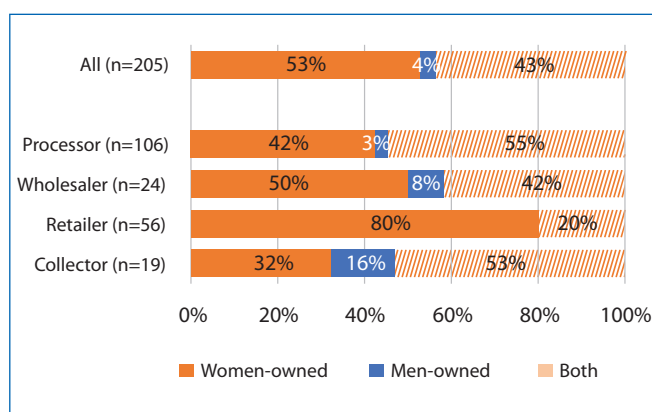
**Table 9. Business ownership by gender**

Ownership status	Sample	%Total
Women owned business	104	50.7%
Joint ownership (equal share)	89	43.4%
Men owned business	8	3.9%
Joint ownership (women own bigger share)	4	2.0%
<b>Total</b>	<b>205</b>	<b>100%</b>

Female ownership varies across the sectors. Retail and wholesale businesses have the largest ratio of women-owned businesses, 80% and 50% respectively. This corresponds to the national data discussed in previous chapters that show women dominating petty commerce in Cambodia, especially retail. Among processing businesses, women own 42% of businesses, while joint ownership is most common at 55%. In the collecting activities, women-owned businesses accounted for only 32%, with joint ownership at 53%, although the sample size is too small to draw broader conclusions. Wholesale has a largely equal share of women and joint-owned businesses.

The significant number of joint-owned businesses highlights the complementarity of women and men’s roles. In fishery-related households, men usually carry out fishing activities, while women take responsibility for post-harvest operations of selling and processing.

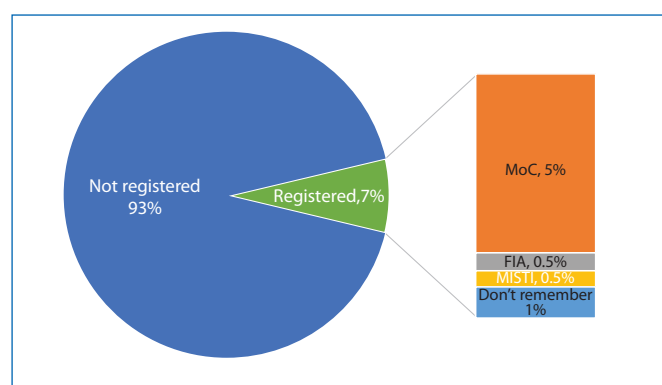
**Figure 4. Business ownership by gender and category**



(Unit: % of sample by category)

The majority of surveyed businesses were operating in the informal sector and are not formally registered (Figure 5). These reflects national trends, where it is estimated that only 5% of businesses in Cambodia are registered<sup>1</sup>. The main reasons for not formally registering their businesses are summarized in Figure 6 and are related to the small size of the activity, mostly family business, while a third of respondents lack information about the process. It should be noted that the complete registration process is complex, and involves many different entities, such as the Ministry of Commerce, the General Department of Taxation, the Ministry of Labour and Vocational Training, and a specialized agency, such as the Fishery Administration or the Ministry of Industry, Science, Technology and Innovation<sup>2</sup>.

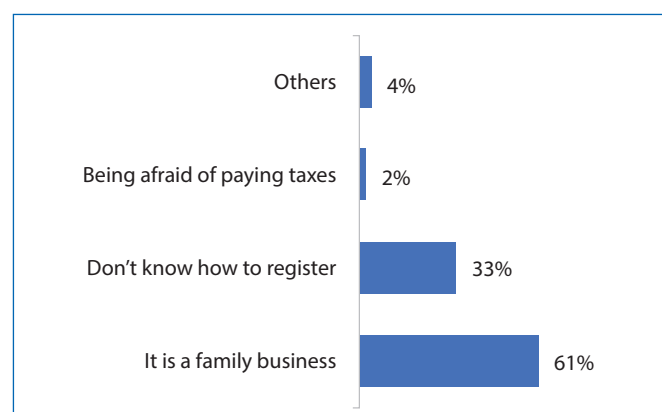
**Figure 5. Registration status of surveyed businesses**



(Unit: % of sample 205)

**Note:** MoC = Ministry of Commerce; FiA = Fishery Administration; GDT = General Directorate of Taxation; MISTI = Ministry of Industry, Science, Technology and Innovation

**Figure 6. Reason for not registering businesses**



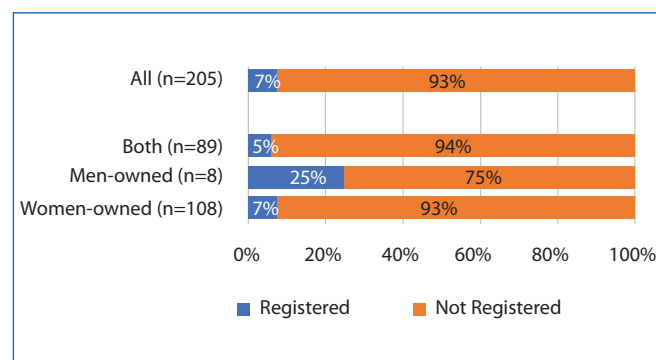
(Unit: % of 'Not registered', n=190)

<sup>1</sup> The Phnom Penh Post, 25 August 2019.

<sup>2</sup> A new online registration system allows operators to deal with a single entity, the Ministry of Commerce, and receive the registration in 8 working days, but the process doesn't appear to be widely used yet.

Formal registration of businesses is higher among men-owned businesses compared to women or joint-owned businesses (Figure 7). However, the small sample size of men-owned businesses means broader conclusions cannot be made.

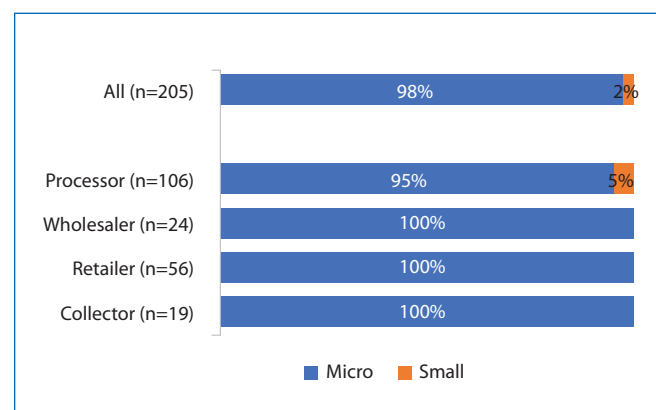
**Figure 7. Business registration status by gender**



(Unit: % of sample by category)

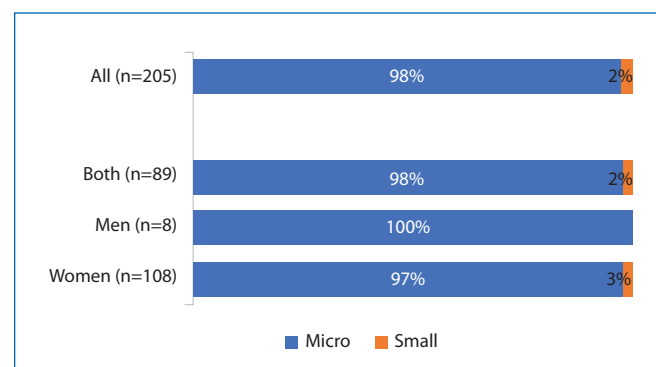
Surveyed businesses are predominantly of micro size, employing less than ten people. Small-size businesses, employing 10-50 people, accounted for only 2% of the sample and were mostly processors (Figure 9).

**Figure 8. Business size categorized by employment**



(Unit: % of sample)

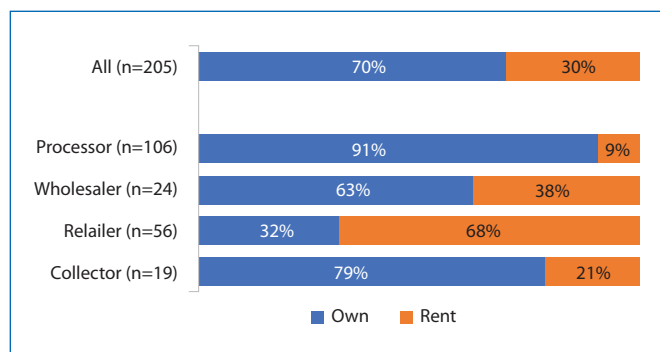
**Figure 9. Business size categorized by ownership**



(Unit: % of sample)

Most surveyed businesses were operating on their own land, especially the processors, while retailers tend to operate in rented space (68%), mostly situated within markets (Figure 10).

**Figure 10. Ownership of land used for business operation**

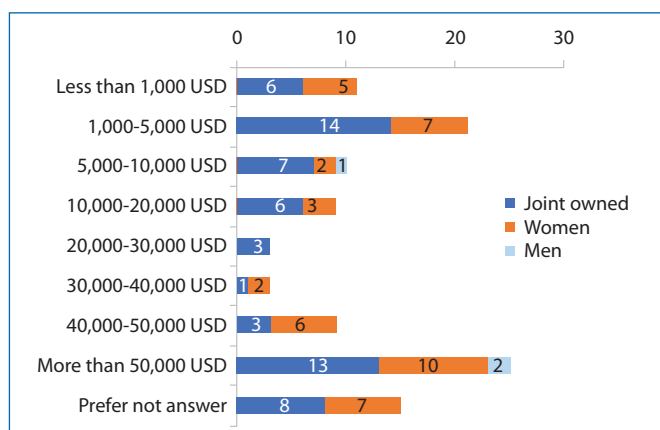


(Unit: % of sample by category)

Among processors, fish processing and storage occur within a processor's home 84.1% of the time and in a courtyard 5.7% of the time. Only 10.2% of processors possessed a dedicated building for their activities. 31% of processors have access to tap water, 38% used well water and 26% used water from ponds or a river.

Businesses' operations have been rated according to their investments or operational capital (Figure 11). Processors have been asked to estimate their capital investment, while traders (collectors, wholesalers and retailers) were asked to estimate their daily running capital.

**Figure 11. Processors' capital investment by gender (n=106)**



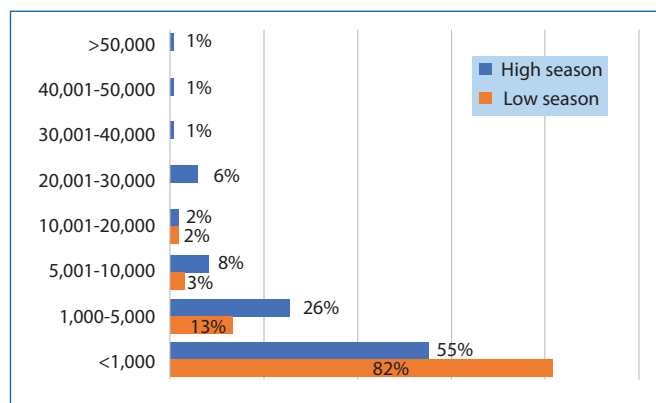
Out of 91 processors reporting their investment capital, 35% declared investment capital of less than USD 5,000, 20% between USD 5,000 and USD 20,000, 16% between

USD 20,000 and USD 50,000 and 27% higher than USD 50,000. Women owned or co-owned enterprises are well represented across all levels of investment. However, there is a tendency toward polarization: both joint ownership and women owned business are overrepresented among the lowest investment echelon, from USD 1,000 to USD 5,000 and the highest, over USD 50,000 group (Figure 11).

Processors with investment capital exceeding USD 50,000 (25 businesses) produce dried shrimp (32%), dried fish (28%), fermented fish including prahok and paork (16% each), marinated fish (12%), crab meat (4%), and fish sauce (4%).

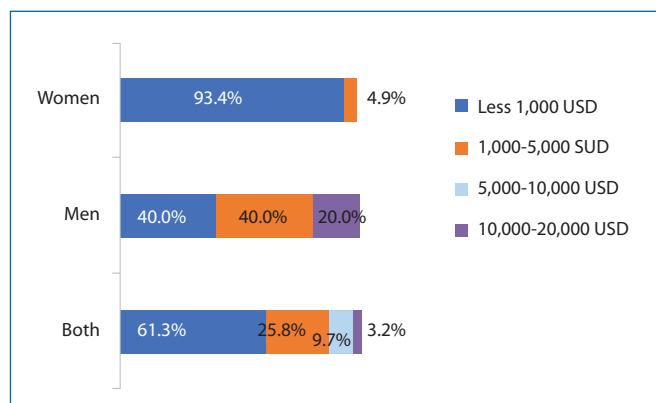
Among traders, a running capital of less than USD 1,000 per day was the most common amount (Figure 12). While the working capital varies from less than USD 1,000 to USD 20,000 in the low season, in the high season, it can exceed USD 50,000 (Figure 13). Among traders, women-owned businesses tend to have lower working capital (Figure 13).

**Figure 12. Working capital of traders**



(Unit: in US dollars per day per transaction)

**Figure 13. Working capital by ownership**



(Unit: % by sample category)

Limited working capital is typical among women small retailers, who buy fish to sell in the markets on a daily basis. The lack of capital for day-by-day transactions has significant impacts on the business:

*“The problem is that if I have money to give them when I buy, they give me good fish, but if I don’t have money and have to pay them later, they sell me the fish that are lower quality.”* (Interview with woman retailer in Kampot)

The figures about business size, facilities and invested/running capital among the survey sample outline a business sector that is mostly characterized by family businesses, with very limited inputs apart from labour.

*“This is a business that demands little investment and is profitable. I do not have money to invest in other business.”* (Women-owned processing business owner in Kampong Thom)

Women processors highlight the advantage of a home-based business, which enables them to do housework and childcare, even though the business activity is labour intensive:

*“I have to wake up before dawn to deliver dried shrimp to my consumer. Then after buying food and stuff for my husband and children, I dry the shrimp. Sometimes if my children are home, they will help me clean dishes.”* (Women-owned processing business owner in Kampot)

Women have a decision-making role among in 53% of the surveyed businesses. This is not just in the majority of women owned businesses, but also in joint-owned businesses, where women (15%) are more likely than men (8%) to take decisions, although joint decision-making is most common (76%). When businesses are owned by men decisions are made only by men in 63% of cases and jointly in 37% of cases (Table 10). More details concerning specific decision-making will be discussed in the next chapters.

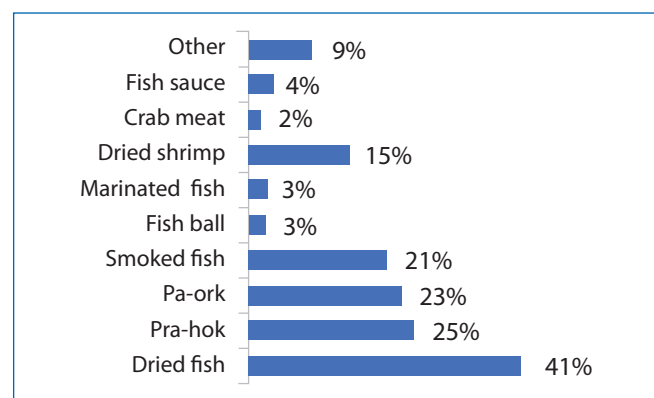
**Table 10.** Business ownership and decision making by gender

Who owns this business?	Who is taking decisions (managing/controlling the process of your business)?					Sample	
	Women	Men	Both (consultation and jointly decide)	Both (consultation but mostly men influence making decision)	Both (consultation but mostly women influence making decision)	Size	%Total
Women-owned	89%	3%	6%	1%	1%	108	53%
Men-owned	0%	63%	37%	0%	0%	8	4%
Both	15%	8%	76%	0%	1%	89	43%
<b>Total</b>	<b>53%</b>	<b>7%</b>	<b>38%</b>	<b>0%</b>	<b>1%</b>	<b>205</b>	<b>100%</b>

## 5.5. GENDER ASPECTS OF PROCESSING BUSINESSES

Half of surveyed fish processing businesses have been active for 10-20 years, with 13.6% of businesses active for more than 20 years, and three processors in business for more than 30 years. Recently established businesses less than four years old account for only 19.3% of the total, which seems to indicate that the processing industry is losing attraction and no longer expanding.

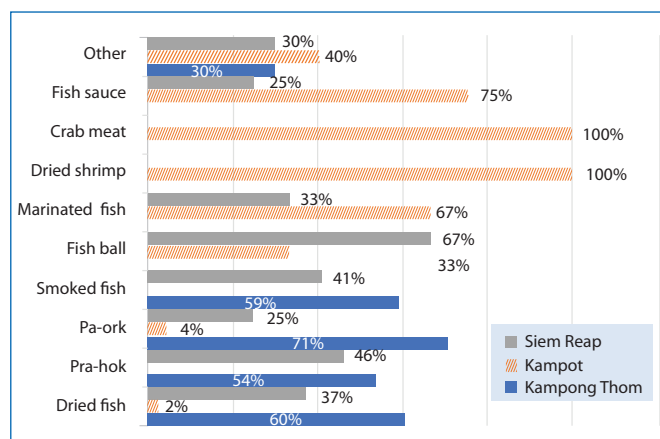
**Figure 14.** Fishery products commonly processed by surveyed businesses



(Unit: % of total processor, sample size = 106)



**Figure 15. Fishery products commonly processed by surveyed businesses, by province**



(Unit: % of total observation of each product)

The most common fishery products produced by the surveyed businesses are dried fish, fermented fish (prahok), fermented fish paste (paork), smoked fish, and dried shrimp (Figure 14). Around two thirds of the processors (68%) process only one product, while one third (32%), mainly freshwater fish processors in Kampong Thom and Siem Reap provinces, process at least two or three products (Figure 15). Kampong Thom and Siem Reap, both located near the Tonle Sap Lake, are known for freshwater dried fish, as well as fermented fish like paork, prahok and smoked fish. Kampot processors largely source from marine water and produce fish products such as dried shrimps, crab meat and fish sauce. Other reported products include shrimp paste, dried squid, other types of fermented fish (known locally as mam, Trey heum, Trey prom) and fish powder.

Freshwater processors are more flexible and to a certain degree can adapt their production to the raw material availability:

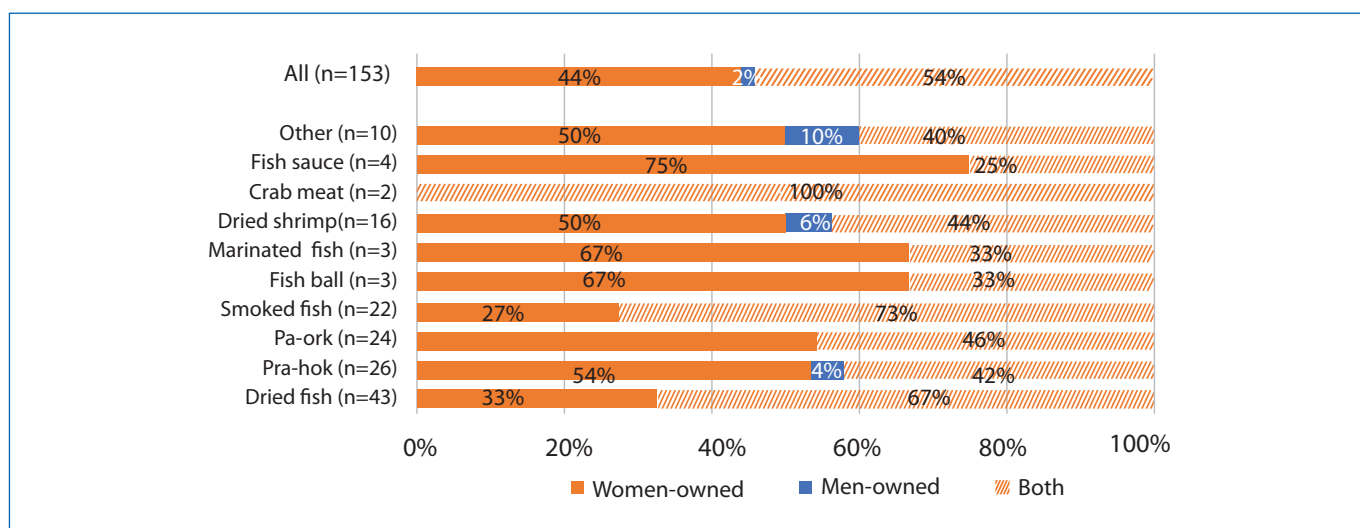
*“When I cannot get enough fish to smoke, I will make prahok instead.” (Woman processing business owner in Siem Reap)*

Women-owned processing businesses are dominant across the sector, accounting for more than half (54%) of fermented products (prahok and paork), 67% of marinated fish and fish ball products, 75% of fish sauce production and half of dried shrimp production. Dried fish and smoked fish were mainly processed by joint ownership businesses at 67% and 73%, respectively (Figure 16).

The joint ownership of businesses such as smoked fish, common among households around the Tonle Sap, shows a complementary division of labour, with men predominantly fishing and women predominantly engaged in processing. This was reflected by KIs in the three provinces: when asked about key challenges, men often mentioned stormy weather causing difficulties in fishing.

This aspect needs to be carefully evaluated and taken into consideration, especially while planning capacity building activities. Even if men share ownership of processing businesses, they may not be directly involved and are in fact more likely active in fishing than processing. Capacity building for processors should proactively target women, as they are the key actors.

**Figure 16. Processed fishery products by gender**

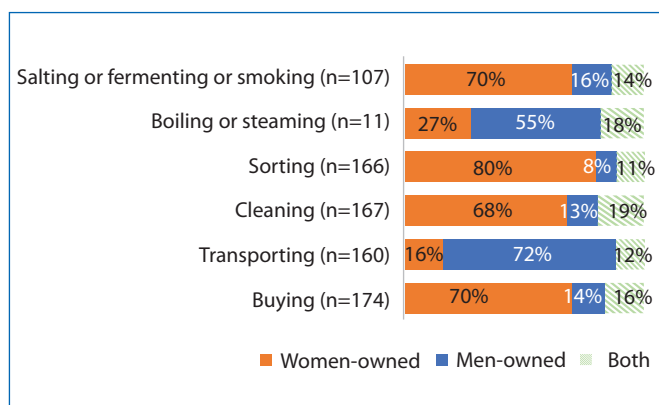


(Unit: % of total observation of each product)

### 5.5.1. Gender division of labour

Women’s role is predominant in four tasks including sorting (80%); buying raw material (70%); salting, fermenting or smoking (70%), and cleaning (68%). On the other hand, men are predominant in transportation of raw materials or work demanding physical strength. Processing activities such as boiling and steaming are mostly done by men (Figure 17).

Figure 17. Labour division of men and women in processing



(Unit: % of total observation of each activity)

It is important to highlight that women tend to bear responsibilities for the purchase of fish (only 14% of men are involved), a task that requires specific skills to evaluate and select products, along with negotiating skills to get best prices.

The gender division of labour seems to indicate that women manage most of the tasks requiring specific knowledge of processes, such as selecting, sorting, salting, smoking and managing fish fermentation. This has been confirmed by FiA officials.

*“Women buy fish from fishermen as they are good at negotiation and communication. As for men, they help related to work that requires strong physical strength such as carrying. In processing businesses, however, both men and women are involved... But women are the most involved in processing businesses, and they do most of the work by themselves. Thus, it is hard for them.” (FiA Official in Kampong Thom)*

Women also almost always do cleaning work, either alone (65%) or with men or girls (25%), while men alone are responsible for cleaning in only 3% of cases. When fish catches originate from family fishing activities, women often cooperate with men, or take care of gear repairs.

*“Men mostly do fishing, while women are responsible for preparing fish, smoking, fermenting fish and selling. There are*

*also a small proportion of women who go fishing with their husbands.” (FiA Official in Siem Reap)*

One of the women processors interviewed during the study, who produces smoked fish, is used to fishing by herself when raw fish is not available:

*“I produce smoked fish and lay fishing nets. I buy fish from others or sometimes I lay fishing nets to catch fish by myself.” (Woman fish processor in Siem Reap)*

Transport is typically a man’s task, performed by men or boys in 62% of cases, but women participate with men or on their own in 26% of cases.

Women’s processing tasks expose them to a number of risks: interviewed women complained about smoke causing eye and lung irritation, back pain and the risk of lacerations while sitting for long hours to sort and clean fish. Having to work on processes that cannot be stopped, such as smoking, also causes women to miss lunch or sleep. The high perishability of fish forces women to process a large amount of fish without delay, and fulfill their schedules no matter the labour cost to avoid losses.

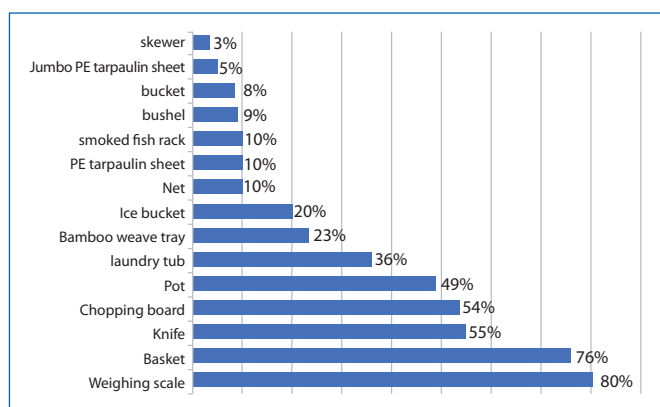
The significant percentage of women heads of households among processors in this survey should be considered in relation to tasks that are typically masculine, such as transport and provision of supplies. Two of the women processors who are heads of households interviewed during the study have organised their businesses to receive raw material supplies from fishers directly at their home. As will be seen below, processors’ sales are often organised in a similar way, with purchasers coming to buy directly at processing sites. This allows businesses that lack the support of men to cope with lack of mobility and represents an arrangement that allows women heads of households to stay in business. This also generates a shorter value chain which still allows producers to retain a substantial margin of profit. This needs to be considered in plans that foresee the rearrangement of supply and value chains.

In summary, the gender analysis of processing activities shows that men and women have different and complementary realms of activities. This generates differential sets of skills and knowledge. Women, through their work in critical tasks such as fish purchases and their handling of the main fish transformation processes, are the principal repositories of the knowledge needed for the industry to operate.

### 5.5.2. Access to and control over business inputs

The most common materials used in traditional processing are baskets, weighing scales, chopping boards, ice buckets, pots, PE tarpaulin sheets, Jumbo PE tarpaulin sheets, crab needles and leg crackers, nets, bamboo weaved trays and knives (Figure 18).

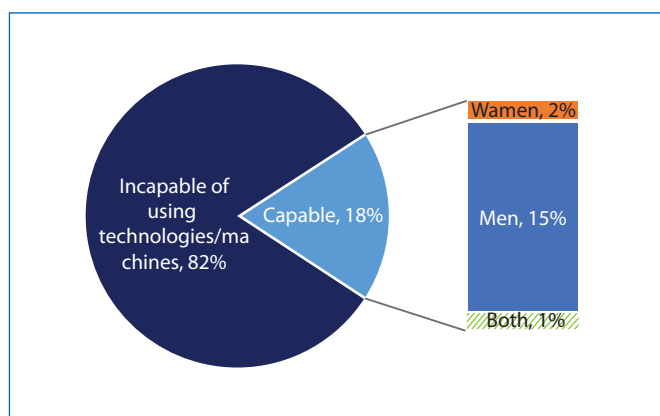
**Figure 18. Top 15 equipment used in businesses**



(Unit: % of sample)

Business equipment is mainly owned by women (53%) or both men and women (42%). Only 18% of processors reported the ability to use technology or machines; among them, the majority are men (Figure 19). The most common inputs of this nature are marinating machines (2 cases), meat grinders (1 case), water filter machines (1 case), and mixing machines (1 case).

**Figure 19. Capability in accessing to technologies/ machines**



(Unit: % of sample)

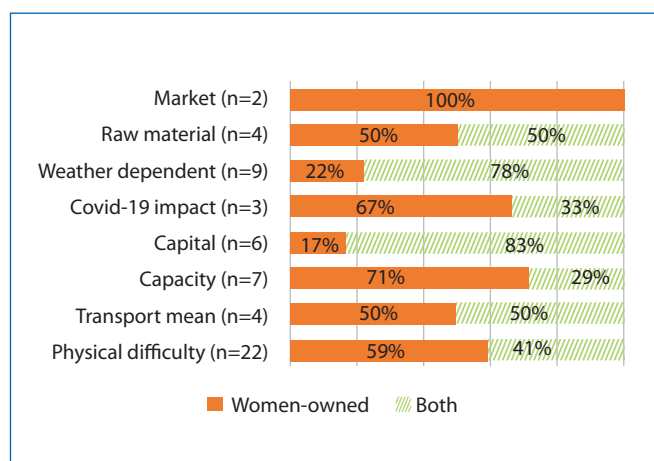
The main inputs, other than fish, are salt and wood for smoking. The cost of these inputs is mentioned as a key problem by 50% of women processors and 70% of men processors, while their availability, quality and transportation appear to be less of a problem for both women and men. One processor notably mentioned the low quality of salt as a problem influencing output quality.

The biggest challenges experienced by processors related to their assigned tasks are physical difficulties, a particularly important factor for women-owned businesses, which have less access to

manpower. Weather is considered a challenge, in particular by jointly-owned businesses, underlining the fact that fish captures are influenced by weather and that in joint businesses men are often responsible for fishing. Other challenges include lack of capacity, lack of capital, lack of transport means and raw materials. Covid-19 was also mentioned as challenge by some processors (Figure 20).

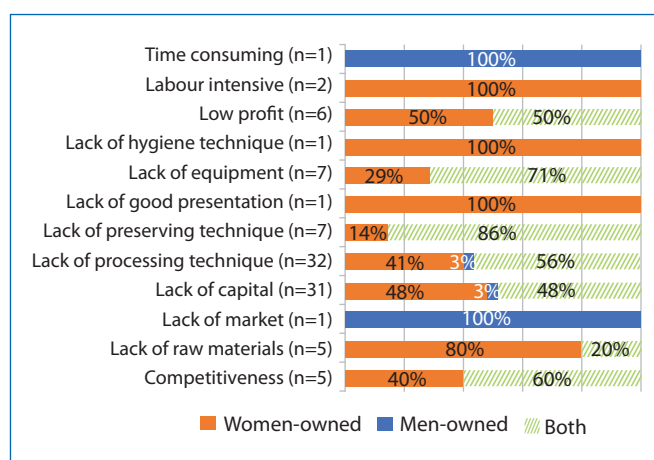
Prominent challenges inherent to the business itself are the lack of processing techniques and lack of capital (Figure 21). Other challenges arise from the lack of equipment, lack of preserving techniques, low profit and lower availability of raw material, as well as competitiveness (Figure 21). A number of other issues are mentioned by processors, to a lesser extent, which are also worth consideration: labour intensity (women owners), problems related to product presentation (a woman owner), lack of market access (a man owner) and the time consuming nature of the work (one man owner).

**Figure 20. Challenges related to assigned tasks**



(Unit: % of total observation of each challenge)

**Figure 21. Challenges in owning processing business**



(Unit: % of total observation of each challenge)

### 5.5.3. Production standards

Only eight processors (five women-owned, two joint-owned, one man-owned) label their products. Among them, five businesses report the origin of their products (four joint owned and one owned by a woman). Manufacturing and expiry dates are reported by three businesses, of which two are owned by women, two are joint ownership and one is owned by a man.

Only one of the interviewed processors properly complied with a recognised standard procedure (such as Hazard Analysis Critical Control Points (HACCP), Good Management Practice (GMP), Cambodian Standard (CS), Good Hygiene Practice (GHP) or ISO9001:2008). Among processors, seven mistakenly reported that they complied with a standard procedure, while some declared that they sometimes adhered to operational standards. Only one formally registered business producing fish sauce complies with the Hazard Analysis Critical Control Points (HACCP), having received technical support from a private company. The same producer labels products with raw material origin, manufacturing and expiry dates, and adopts hygiene practices (routinely wearing gloves and masks and using disinfecting tools). It must be said that applied research in the field of fish processing is still lacking, and producers largely cannot refer to laboratories or other specialised structures to have their products analysed in order to establish clear product specifications, expiry dates or content. Products such as dried or smoked fish are usually sold by piece or, in the case of small smoked fish, as a set of skewers; labelling would entail packaging with vacuum wrapping or similar processes that are quite uncommon in the Cambodian market.

### 5.5.4. Production and Losses

Estimations of production quantity have been very difficult to establish and data should only be considered as indicative. Around 50% of processors declare a yearly production output of less than 500 kg, 37% between 500 and 3,500 kg, while the rest declared productions of 5,000 kg or more. However, many informants did not answer the question or were not able to provide clear figures.

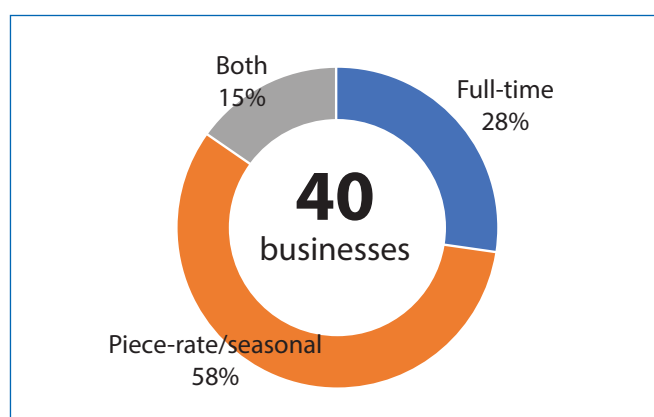
Production lasts all year round for 45.5% of businesses; another 17.5% continue the production all year round but with reduced seasonal output, while 37% of businesses only work during the high season. There are no differences by gender in terms of this production cycle. Seasonality

seems to indicate that the processing business, for a significant share of producers, must be associated with other livelihood activities for the low season. It is important to further investigate if and how seasonality is related to the lack of proper storage facilities and conservation techniques. Processors have mentioned limited processing facilities (located in open air, without shelter from the rain) as a main reason for product loss (42%). Poor product storage facilities are a reason for losses for 25% of producers, followed by scarce supplies (20%), lack of technical skills (19%) and lack of technology and machinery (14%). Poor processing facilities are perceived as a key reason for losses by 51% of women, compared to 35% of men.

### 5.5.5. Employment

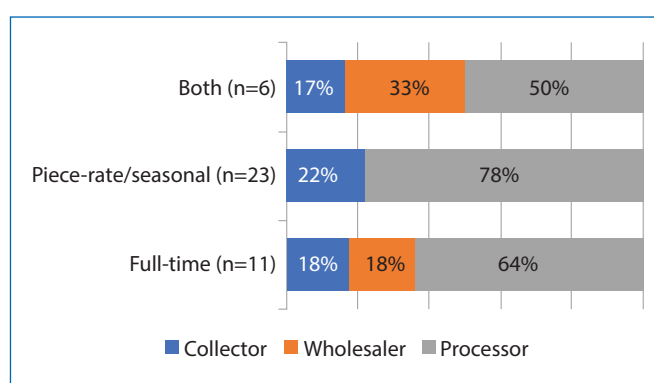
Only 40 surveyed businesses employ external workers: 28% of them (11 cases) employ full-time staff and 58% employ staff on a piece-rate or as seasonal workers (23 cases). Another 15% of businesses (6 cases) employ both types of external work (Figures 22 and 23). The majority of processors are regularly using an external labour force.

Figure 22. Type of employment



(Unit: % of observation by employment type)

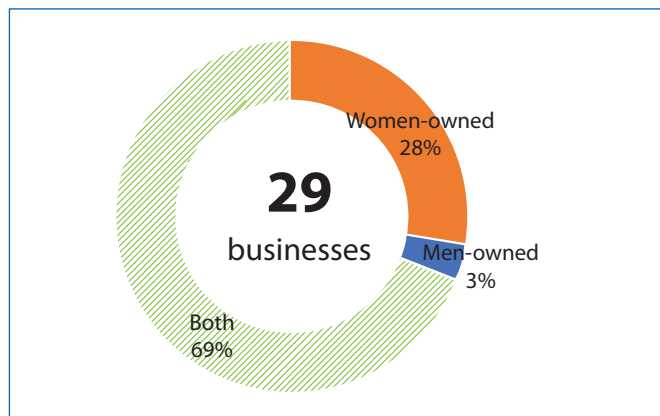
Figure 23. Type of employment by sample type



(Unit: % of observation by category)

Out of the 40 businesses employing external workers, 29 employ female workers or staff (72% of the total businesses employing workers). Of these businesses, 69% are owned by both sexes, 28% are women-owned and only 3% are men-owned (Figure 24).

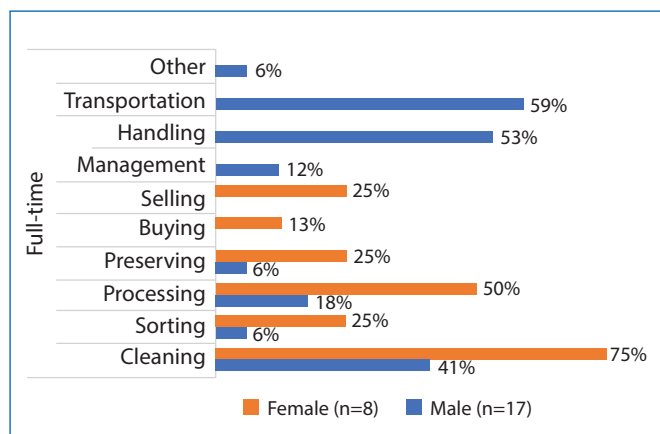
**Figure 24. Employing female workers or staff by owner type**



(Unit: % of observation)

The choice between female or male workers – either full-time staff, seasonal or piece-rate workers – is based on the gendered division of labour, worker capacity and the tasks required. Nearly half of employers believe that work requiring physical strength or involves the use of machinery is more suitable for men, and that women are best at cleaning and sorting fish. Male workers are mainly recruited for tasks such as transport, handling loads and cleaning; in one case a male manager was recruited by a business (Figure 25). Women workers are mainly recruited for sorting, cleaning and processing. Some are also hired for buying and selling, as owners recognise their skills and capacity in commerce. Only one business employed women in handling loads – a shrimp paste processing business which only requires light handling.

**Figure 25. Roles of male and female full-time staff**

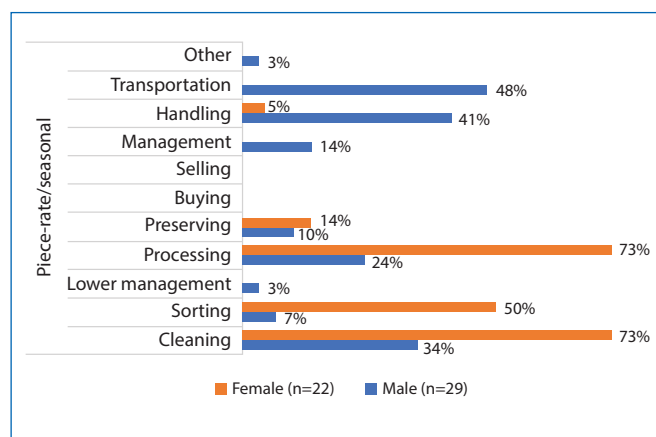


(Unit: % of observation of each sex)

The majority of the surveyed businesses provide equal pay for women and men workers, only in 17% of the enterprises (seven businesses) do owners provide higher salary or working wages to men based on men's physical strength and capacity to handle heavy loads, despite women having similar experience and responsibilities.

One business-owner mentioned challenges related to recruiting women workers: "they are picky on their roles." Nine owners offered a list of difficulties associated with men workers: "are hard to deal with," "going out too much," "always asking for salary advances," "lacking skills and not as good as women," "coming late" and "being lazy or lacking discipline."

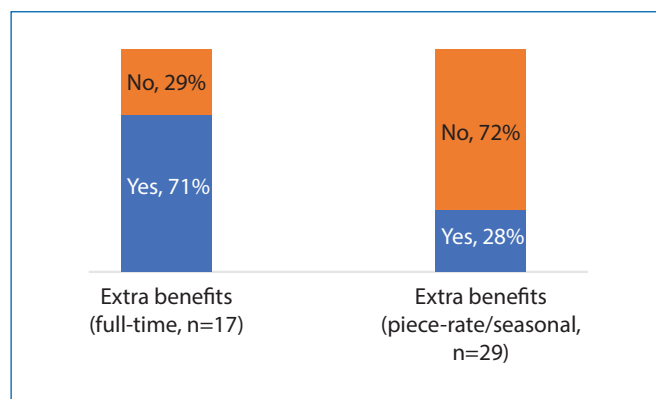
**Figure 26. Roles of male and female piece-rate/seasonal workers**



(Unit: % of observation of each sex)

Among businesses employing full-time staff, 71% reported providing additional benefits to workers, while only 28% of those employing piece-rate or seasonal workers provided benefits (Figure 27). The main benefits for staff are meals, accommodation or bonuses. A business owner mentioned annual leave, sick leave and maternity leave among their offered benefits, which are obligations under the Labour Law. Benefits for temporary workers are meals, food support and in one case, annual leave.

**Figure 27. Extra benefits besides salary or working wage**



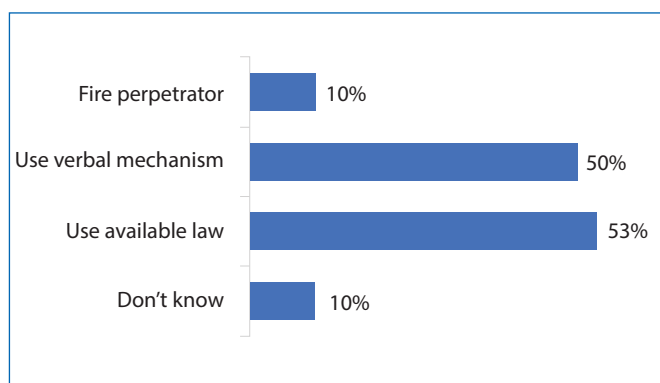
(Unit: % of observation of each sex)



Only four enterprises had separate toilets for male and female employees and none of the surveyed enterprises had nursing facilities.

Three enterprises have a training programme for men and women workers. None of the surveyed enterprises have specific internal policies related to sexual harassment, however owners appear to be aware of the problem and mentioned a number of different measures they have adopted to tackle it, such as firing workers, verbally admonishing them, or referring them to police or authorities (Figure 28).

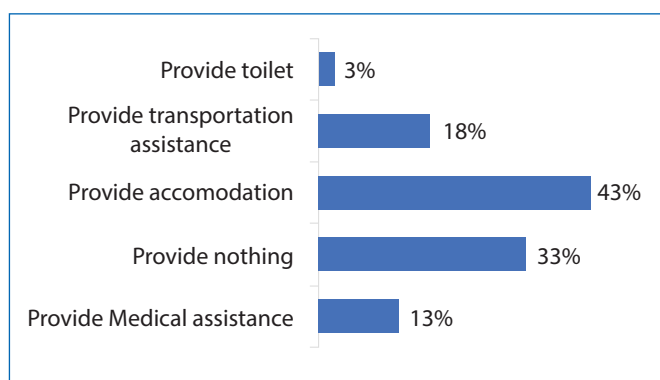
**Figure 28. Mechanisms dealing with sexual harassment or exploitation**



(Unit: % of businesses had employment, n=40)

The majority of business owners are open to providing particular support to women workers, supporting commuting, accommodation, or dedicated toilets, but 33% are not open to these investments (Figure 29).

**Figure 29. Responding to women workers' needs**



(Unit: % of businesses had employment, n=40)

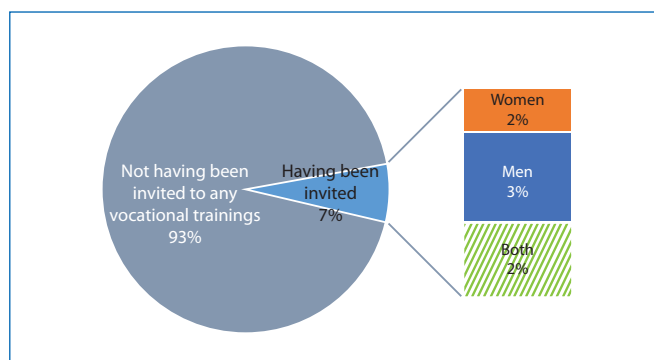
Recent trends concerning gender and education in Cambodia show a decrease in the literacy rate among young males below 24 years of age (National Institute of Statistics 2019). Therefore, employing young male workers with low educational attainments in tasks requiring use of machinery may expose them to risks unless safety training is provided.

### 5.5.6. Access to capacity building

Most of the surveyed business operators have never attended capacity building initiatives or received training; only 7% of survey respondents participated in such initiatives. This is also reflected by key informant interviews: only in Kampot were some women processors involved in capacity building initiatives, supported by FAO, UNDP and a local organisation (Samaki Organization). Interviewees appear very interested and willing to attend training, but they had never heard about opportunities and never been invited.

*"If there were trainings I would participate, but I never have. I want to participate in case they have good programs to train us about how to smoke fish better and so on."* (Woman processor in Siem Reap)

**Figure 30. Whether invited to any vocational training**



(Unit: % of businesses had employment, n=40)

FIA officials described various training initiatives. In Kampong Thom, training has been organised with the support of the FIA Department of Fisheries Post-Harvest Technologies and Quality Control (DFPTQ) on post-harvest techniques such as quality, hygiene and product safety, and was attended by fishing communities and community

fisheries processing groups established in four community fisheries in Stung, Kampong Svay, Santuk districts and Krong Steung Sen commune. In Kampot, a similar training on food safety was conducted by FIA and DFPTQ in collaboration with the FiA cantonment office. The FiA cantonment in Kampot, with support from NGOs, organised two exposure visits, one in Thailand and one in Koh Kong, to bring both women and men community processors to see other processing techniques and gain creative ideas for market linkages. In Siem Reap, the Department of Fisheries Post-Harvest Technologies and Quality Control provided training on post-harvest techniques to fisheries processing associations (around 10 members each) in different villages, all led by women. Unfortunately, it has not been possible to get access to DFPTQ training documentation. Among the challenges mentioned by FiA officials concerning training are the scarcity of human resources, the lack of capacity among staff (especially in relation to storage or packaging techniques), the lack of education among processors and the difficulties in ensuring women's participation.

*“Most women cannot participate in the training because of household chores or because they are collecting and selling fishery products.” (Interview with FiA official in Kampot)*

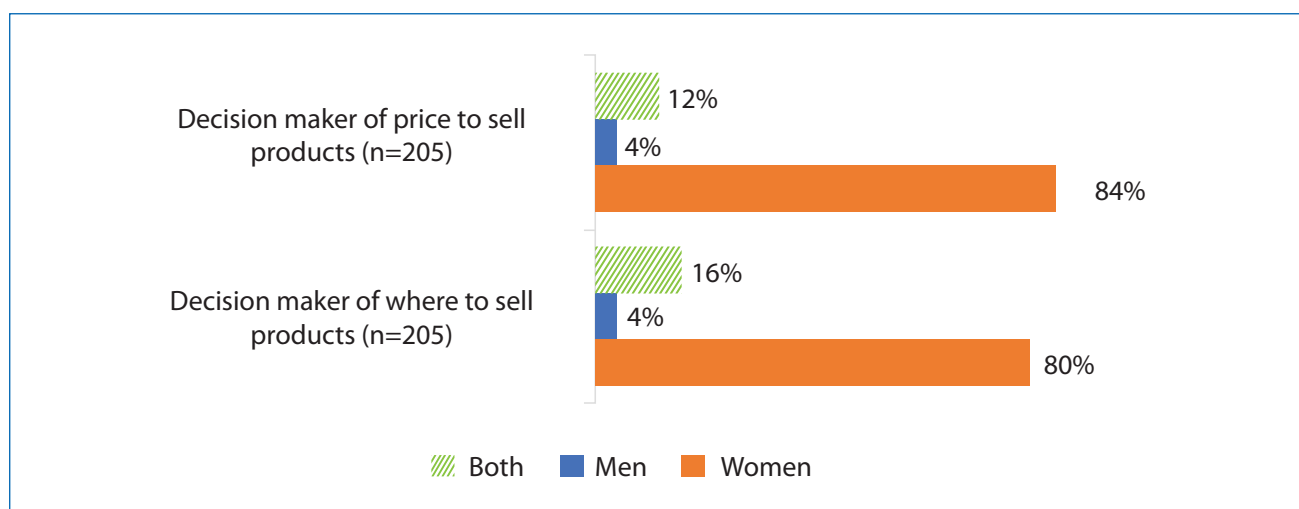
Training can be more easily implemented when processors are organised in groups, as is the case of community fishery committees engaging in post-harvest activities. The extension of agricultural services face limitations that have been overcome by initiatives like the Farmer Field Schools (FFSs) launched by FAO and now integrated by MAFF in several provinces. Similar interventions, focused on practice and responding to trainee needs, could be implemented in the post-harvesting fishery sector, and will allow experimentation and introduction of much needed new techniques like more efficient smoking structures, greenhouses for fish drying, or fish fermenting processes. Farmer Field Schools organised directly at the process sites will be better adapted to women's needs and support their increased participation.

## 5.6. GENDER ROLES IN MARKETING

### 5.6.1. Decision-making concerning sales

Women overwhelmingly retain essential decision-making power over the commercialisation of products (Figure 31).

**Figure 31.** Decision maker of where to sell and selling price, by gender



(Unit: % of sample)

These figures correspond to the overall data on women's economic activity in Cambodia and their roles in retail and small trade (ABD 2018). It indicates that women are the primary managers of fishery product commercialisation,

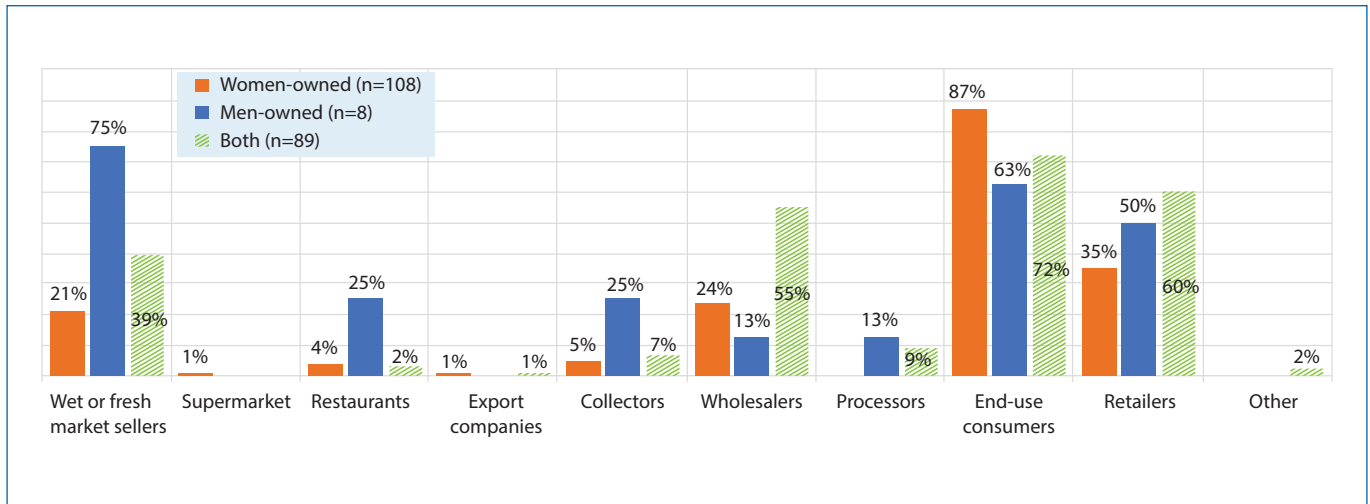
a significant role considering the country's per capita consumption of fish products (over 40 kg per year) and the sector output (656,000 tons of captured fish and 83,000 tons of fish products, of which only 14,500 are exported).

### 5.6.2. Customers and value chains

Sales by the surveyed businesses are mainly local and dominated by three main customers: end-use consumers, retailers and wet/fresh market sellers. The main market segments vary according to business ownership: women-

owned businesses sell primarily to end-use consumers (87%); whereas men-owned businesses sell to wet/fresh market sellers (75%), end-use consumers (63%) or retailers (50%). Joint-owned businesses sell to end-use consumers (72%), retailers (60%) and wholesalers (55%) (Figure 32).

Figure 32. Customers of the surveyed businesses by ownership



(Unit: % of total observation of each owner type)

The preference for end-use consumers may be related to limitations on mobility faced by women (including a lack of time, the need to care for dependents, lack of transport means or difficulties in handling loads). In some cases, this is also true for suppliers, who deliver them raw material directly at their homes.

*“Consumers come to buy fish at my house... Well, for now there are four or five consumers with their individual boats coming to buy.”* (Interview with woman processor in Siem Reap)

*“I don’t spend too much time delivering, only 30 minutes because I have regular consumers. They call me to order and [tell me] how many kilograms. Sometimes they even come to pick it up at my house.”* (Interview with woman processor in Kampot)

From the interviews, it appears that developing a network of customers is an essential aspect of business for women producers.

Selling products directly to low-end consumers represents a significant commercial advantage for micro businesses and for women in particular. It allows them to retain control over

the marketing process and secure a better profit margin along a shorter value chain that is skewed in favour of producers. Moreover, securing end-use consumers entails a relation of trust and is a stimulus for producers to work at keeping consistent quality standards. These businesses are generally the first cut off from business when the fishing sector undergoes processes of industrialisation, leaving operators struggling to find alternative livelihoods.

### 5.6.3. Access to markets

Results from key informant interviews indicate that, especially for processed fish products, there are no problems in finding markets. On the contrary, demand for these products is high. Reduced availability of raw materials and reduced outputs seems to be a more important concern than the lack of markets.

*“The fishing sector does not have much potential because currently there are many fishermen, many fish consumers, and the quantity of fish is about the same. Therefore, the supply cannot meet the demand. But fisheries processing products have more potential even though they are facing decreases in fish yields, because the market demand is high.”* (Interview with FiA official in Siem Reap).

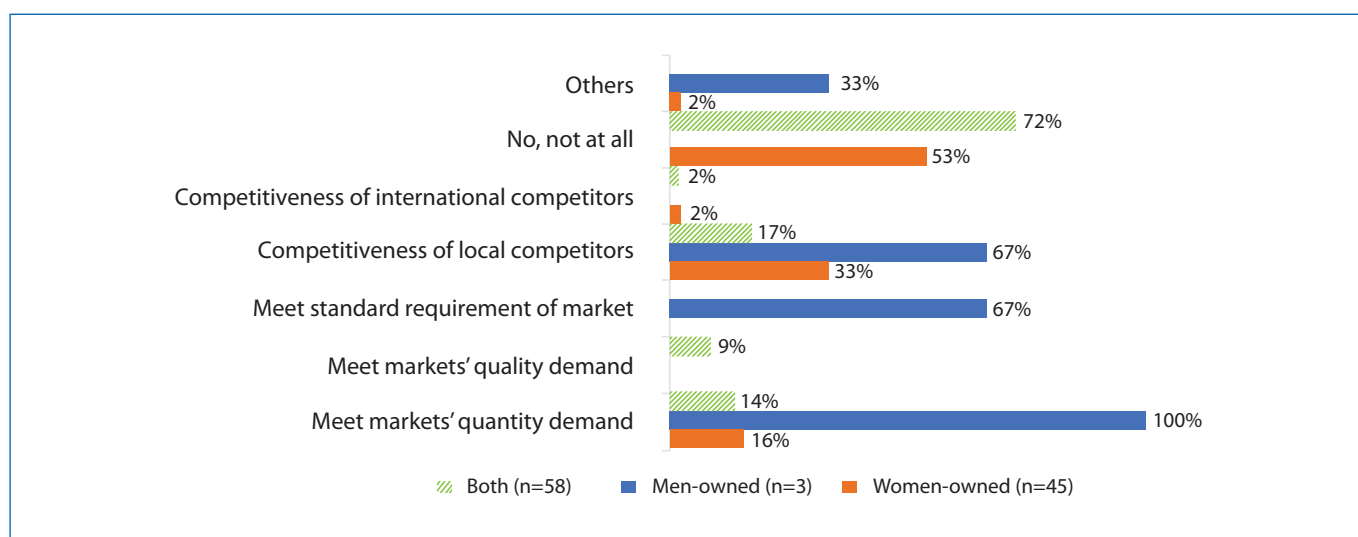
*“As for markets, there is no problem because they [processors] can sell whatever they produce.” (Interview with FiA official in Kampong Thom)*

*“The problem is that sometimes I cannot get enough fish to smoke.” (Interview with woman processor in Kampong Thom)*

The survey shows that among the interviewed businesses, the majority claim to have no problem with market access

(53% of women-owned businesses and 72% of joint-owned businesses). The main challenges mentioned by producers are competition with other local producers (33% of women-owned and 17% of both joint-owned businesses) and meeting the scale of demand from markets (Figure 33). This again supports the contention that demand is significant, but producers face limiting factors such as fish availability, technical capacity and access to technology.

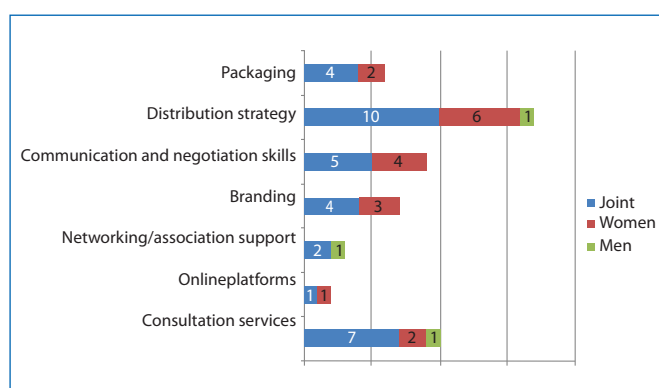
**Figure 33. Market challenges**



(Unit: % of total observation in each owner type)

Marketing support needs, raised by 25% of respondents, are summarised in Figure 34.

**Figure 34. Market support**



(Unit: % of total observation in each owner type)

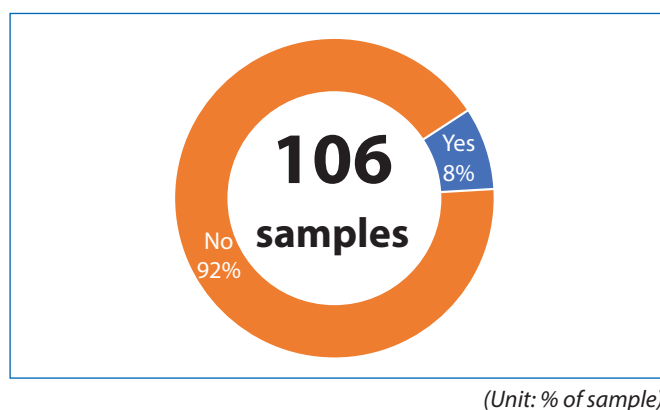
Only processors and exporters were asked about product promotion and among them only 8%, or nine businesses out of 106 processors, actively promoted their products (Figure 35). Product advertising is done through various channels such as social media, television, websites and leaflets, with women mostly responsible for it; four business owners thought that women were better skilled at communicating and marketing.

The remaining processors (56% of women-owned, 33% of men-owned and 55% joint owned businesses) reported that marketing was not necessary because they have regular customers; other reasons for not conducting marketing are lack of knowhow (more relevant for men and joint owned businesses) low production capacity and concerns over inability to fulfill orders, and a lack of budget (Figure 36).

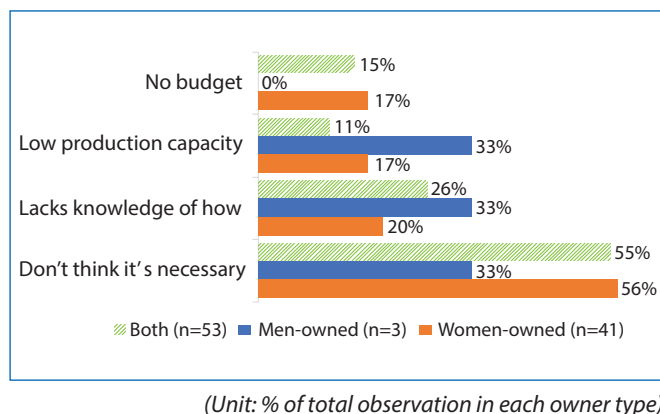


Only 10 out of 88 processors are members of associations, six women-owned businesses and four joint-owned ones. Associations are predominantly community-based, either registered or informal. Some producers advertise their products through the association. Survey numbers are too small and ambiguous to determine gender issues in associations, however women are usually non-executive members of these organisations; one woman is an accountant at one association, but management positions are otherwise exclusively staffed by men.

**Figure 35. Marketing implementation**



**Figure 36. Reasons for not conducting marketing by owner type**



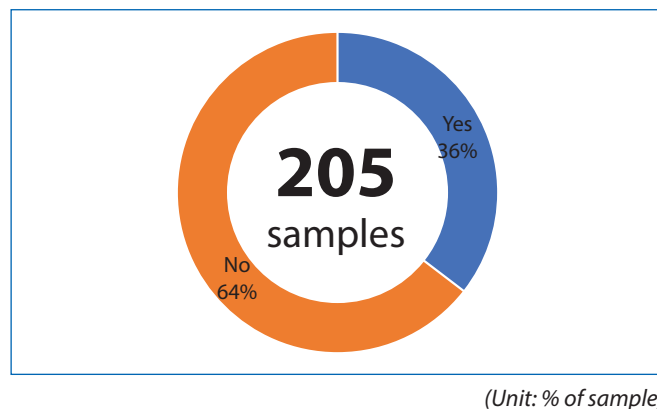
## 5.7. GENDER IN FINANCIAL MANAGEMENT, BUSINESS PLANNING AND ACCESS TO LOANS

### 5.7.1. Financial management and accounting

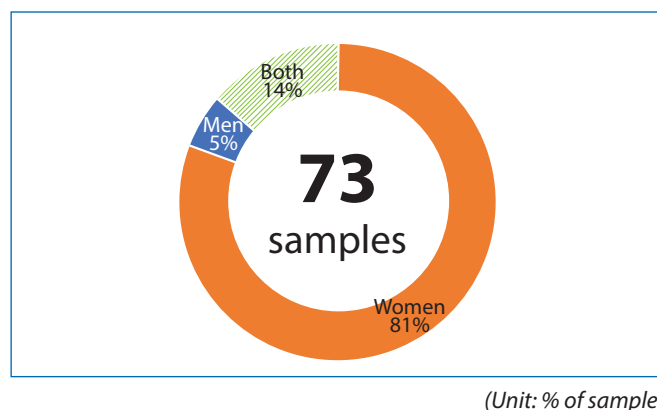
More than two-thirds of surveyed businesses did not keep transaction records. When records are kept, in 81% of the cases women were the ones who handled record keeping, 14% were handled by both women and men, and only in 5% of the cases were men solely in charge (Figures 37

and 38). It is worth noting that the records are not formal financial accounts, as required by the registration system, but paper notes.

**Figure 37. Transaction record keeping**

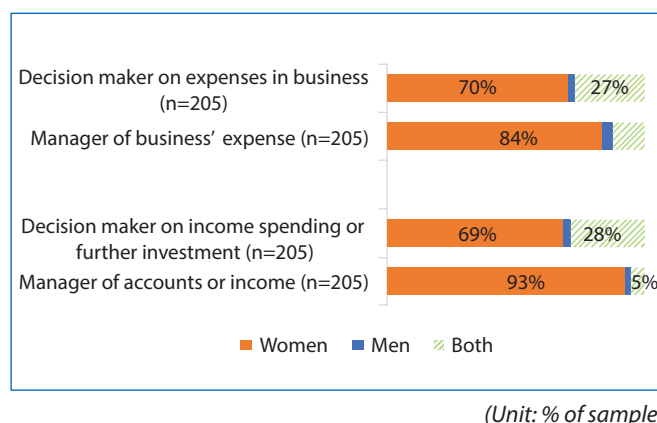


**Figure 38. Transaction record keeper**



Among surveyed businesses, women dominate many aspects of business operations. About three-quarters of the surveyed MSMEs reported that women made decisions on income spending and business expenses. Moreover, more of the majority of respondents claimed that women were the manager of business' expense (84%) and managers of accounts and income (93%), as in Figure 39.

**Figure 39. Decision maker and manager of business matters**



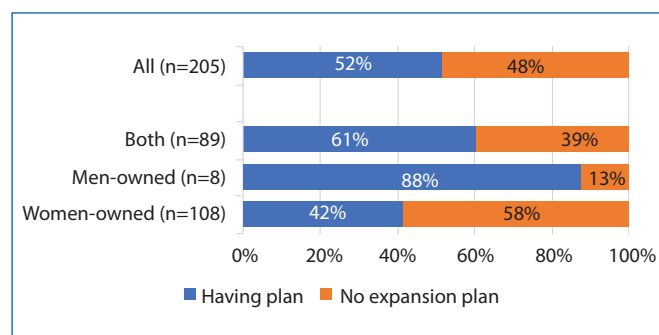
## 5.7.2. Business Planning

The majority of surveyed businesses (52%) plan to expand their business, but percentages vary among business categories: processors are keener to expand (66%) than retailers (25%) (Table 11). Gender data shows that men owners are more interested in expanding, followed by joint-owned businesses, while only 42% of women are interested in expansion (Figure 40).

**Table 11. Expansion plan by sample category**

Category	Having expansion plan	No expansion plan
Collector (n=19)	53%	47%
Exporter (n=1)	0%	100%
Processor (n=106)	66%	34%
Retailers (n=56)	25%	75%
Wholesalers (n=24)	54%	46%
<b>Total (n=205)</b>	<b>52%</b>	<b>48%</b>

**Figure 40. Plan to expand business**



Among women-owned businesses, processors are most likely to have plans for expansion (58%), while retailers (32%) are least likely (Table 12).

**Table 12. Expansion plan among women-owned businesses, by category**

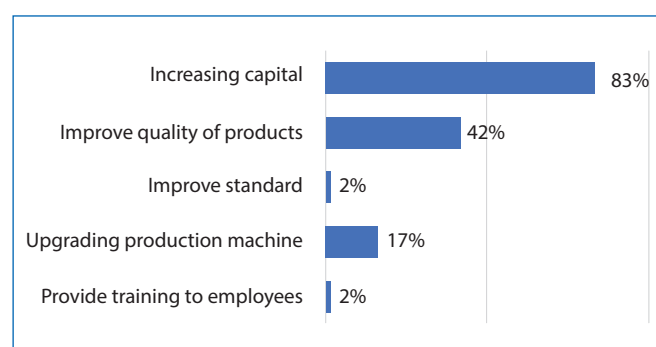
Category	Having plan	No expansion plan	Sample
Collector	50%	50%	6
Retailer	32%	68%	45
Wholesaler	42%	58%	12
Processor	58%	42%	45
All	42%	58%	108

This data may indicate that joint-owned businesses have advantages over women-owned business, and this is reflected by their expansion plans. Limitations faced by women such as work burdens, home responsibilities and a lack of mobility may help determine their reluctance to expand their business activities.

Decision-making in relation to business expansion plans is usually taken jointly by joint owned businesses and for two men-owned businesses out of seven, but only in a small percentage of women-owned businesses.

Key business expansion plans include increasing capital (83%), improving the quality and standard of products (42%), and upgrading processing technologies (17%).

**Figure 41. What type of expansion plan**



(Unit: in % of sample by each category)

Among other planned improvements, the majority of respondents would like to improve their facilities (46% of women-owned businesses, 76% of joint-owned business and 42% of men-owned businesses). Branding and marketing are also seen as a necessary improvement by around 25% of all owners. Other plans include buying land or expansion of selling locations (mostly women-owned businesses), access to more stable power connections and buying a car for transportation (mostly men-owned businesses). Some planned improvements such as electricity access were not mentioned among business challenges, but likely represent a limitation for producers.

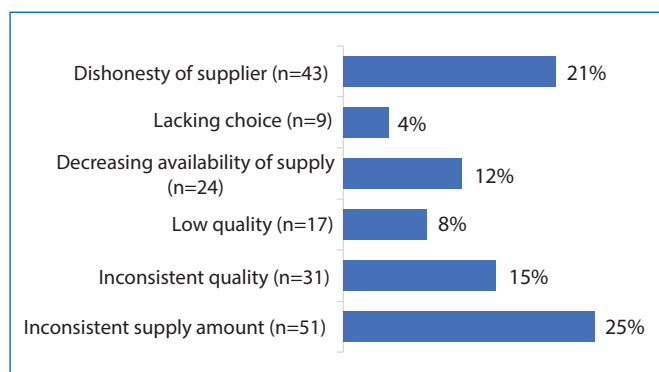
Fish supply represents an obstacle for expansion plans. The quantity and quality of supplies, and their regularity, along with supplier honesty, were the most commonly faced problems across businesses, regardless of ownership (Table 13 and Figure 42). Lower availability of fish reflects a growing problem in the country, reported by many studies and affecting the entire sector from capture to commercialisation (Schwartz, Gätke, and Baran 2016; Kusakabe 2019).

Most raw material suppliers in this survey are women, and women play a predominant role among business operators in decision-making over sourcing.

**Table 13.** Cross tabulation of issues related to raw materials and business expansion plans

Having issues related to raw material	Have a plan	No expansion plan	Total
Yes	57%	51%	54%
No	43%	49%	46%
Sample	106	99	205

**Figure 42.** Specific issues related to raw materials

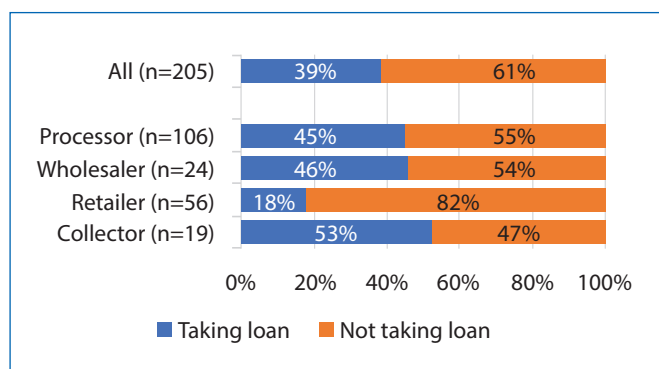


(Unit: in % of observation)

### 5.7.3. Access to loans

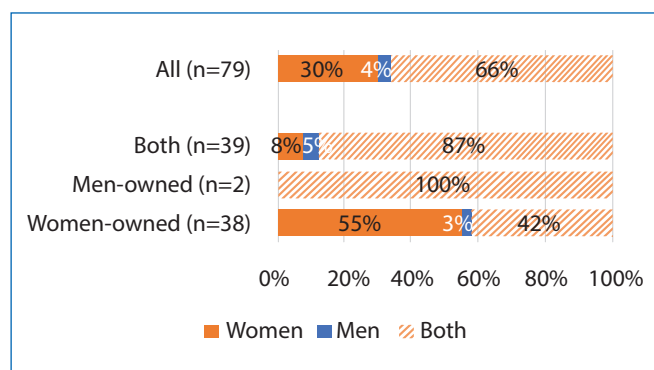
Despite the fact that lack of capital is considered by most business' operators as a key limiting factor, the majority of surveyed businesses were not taking loans (only 39% of surveyed businesses reported taking loans). This ratio was higher among collector businesses and lowest among retailers. In the processing and wholesaling businesses, those taking loans accounted for 45% and 46%, respectively (Figure 43). Joint-owned businesses and women-owned businesses are more likely to take loans.

**Figure 43.** Taking loans or not, by value chain actor



(Unit: in % of sample by category)

**Figure 44.** Gender dynamics on loan access, by MSME ownership



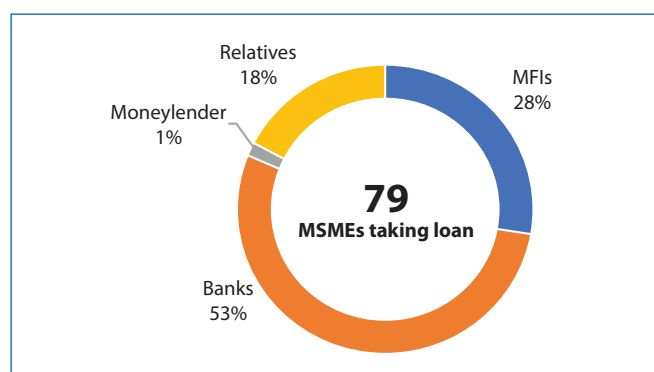
(Unit: in % of sample by category)

Key reasons for not taking loans include fear of default (40%), lack of sufficient capital (33%) and having small or unstable incomes (13%). Other reasons include being already engaged with loans for land and house purchases, cultural issues (such as religious beliefs forbidding loans), borrowing from relatives, lack of collateral, and fear of complicated procedures.

For those having borrowed, banks were the source of loans in 53% of cases; followed by micro-finance institutions (MFIs) in 28% of cases and relatives in 18% of cases (Figure 45). Women tend to borrow money first from banks, then from relatives, and less from MFIs.

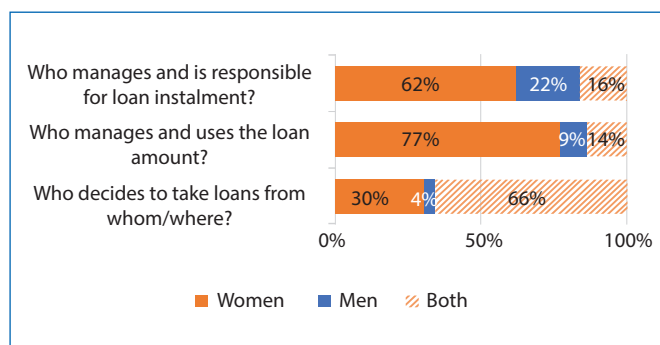
Most business operators taking loans found them easy to access (85%). The remaining 15% of operators who found it difficult, mentioned two main reasons: the requirements of loan guarantors or collateral, and complicated procedures (requiring many documents and time consuming processes). There seems to be no gender related difference in terms of access to loans and perception of obstacles.

**Figure 45.** Sources of loans



(Unit: in % of sample by category)

**Figure 46. Gender dynamics on loan access, loan management and use**



(Unit: in % of sample taking loan, n=79)

While the decision to take a loan was mostly made jointly (66%), women are mainly responsible for the management and the use of loans (77%), and for loan repayment

(62%). A joint decision-making process on loans was evident across all three types of ownership (Figure 46).

This data suggests that most operators are afraid of taking loans for reasons mainly related to the business limitations they face, primarily raw material supply and a decrease in catches (Kusakabe 2019). The same study shows that women are usually in charge of negotiating loans, especially from middle-people, which can be a degrading experience that exposes them to shame in cases of delinquent repayments. Another aspect highlighted by the same study is the link between loans and migration: households negotiate loans with MFIs or other sources when they are receiving remittances, which means that there are family members able to engage in economic activities outside of the fishing industry.

## 5.8. CASE STUDIES IN THE TARGETED PROVINCES

### Case Study 1. Fermented fish processor in Kampong Thom

The case refers to a women-owned fermented fish business in Kampong Thom province. The owner started the business in 2017 after learning the technique from her parents. She opted for this business, because she had no alternative work. Her business is small, is not formally registered and she does not employ workers. The product is directly sold to low-end customers, either traveling people passing by or nearby villagers. The profit from the business is very small and not enough for her whole family to live on.

Although she is the owner of the business, she makes decisions jointly with her husband. She can process 10-15 kilograms of fish each day. She and her husband collect fish from rice fields or buy them from the market. Her husband is responsible for buying and transporting fish. She is responsible for cleaning and sorting; sometime her husband helps. She also prepares the ingredients to ferment the fish. Flood season is the peak time for fish processing, particularly in September and October.

Besides processing fish, she has another business: roasting pounded rice and raising pigs for sale. Both these activities are small scale. These businesses help her to support her family and pay back debts incurred when she gave birth to her twin children. She processes fish in the morning and pounds and sells rice and fermented fish in the afternoon.

In addition to her work responsibilities, she also performs household chores such as washing clothes, cooking, buying food and cleaning the house. Sometimes her husband helps by washing the dishes or taking care of their 13-year-old child. She does not think household responsibilities are a burden or affect her business; she thinks that these are women's responsibilities and that she has to do them. She also believes that men cannot do fish processing well, because they are not skilful and have no interest in such tasks. She also thinks that men are not good at selling products and lack flexibility in price negotiations.

She hopes to become a trader of fermented fish (prahok and paork) because being a processor is tiring and only provides a relatively small profit. She does not take loans for her business, because her enterprise makes a tiny profit and she is afraid of being unable to pay back the interest if she incurs a loss, especially given that the amount of fish available to her is gradually decreasing.



## Case Study 2. Small retailer in Kampot

I sell crab, octopus, and shrimp, and sometimes fish, if available. I sell anything available to buy at the market. Actually, I don't have working capital; I just reach the market and pick a variety of fish to sell from sellers there [sellers seem to fit with the description of semi-wholesalers that are located at markets and sell fish to retailers]. At the end of the day I pay back the money to the sellers, but sometimes I cannot sell all the fish and I don't have enough money to pay back the sellers.

I have done this work for more than 10 years, since I got married. Initially my family used to fish and we sold what we got; we had a small boat and fishing nets. Then I realised that selling to retailers meant low profit, so I decided to sell by myself. Nowadays, my husband is sick, he is paralysed and cannot walk. Every day, he eats only porridge because his stomach has a heavy lesion and we don't have money to treat it. My mother-in-law and my mother are sick too, so I alone play the roles of a good wife, good mother, and good child at the same time.

The main problem for me is the lack of money to buy fish: if I have money to give them when I buy it, the sellers give me good fish, but if I don't have money and have to pay them later, they sell me low quality fish. Sometimes I come to the market without money.

I work hard, from early in the morning to 7pm and I take care of three sick people; my life is a struggle. I would like to expand my business, but I do not have capital. Moreover, I have a lot of debts. When I take the fish from the market's sellers, and I cannot sell it, I end up owing a lot to the sellers. Sometimes, I use the money from my business to buy medicine. So expanding my business is impossible; there is no money for that.

My family is like that. If you don't believe me, you can ask my family members. I'm selling at the sidewalk, which is illegal, it is not guaranteed, and sometimes the police come and I have to rush to move away. I am afraid the police will seize my fish, shrimp, and selling materials, and I don't have money to deal with them and bring it back. But if I go to sell in the market, there is no space for me. So, I still take a risk to sell along the road. If there was an association, I would like to participate. I just want a legal occupation that I can make income to support my family. If I could participate in an association, I think I could improve my business and make more profit to pay the money back to my creditors.



View of a local market showing women fish sellers selling freshly caught fishes from the sea. Photo: UNIDO

### Case Study 3. Fish processor in Siem Reap

I produce smoked fish and also lay fishing nets to catch fish by myself when there is no fish to buy. I started the business when I was young, 15 years ago. I cannot make any income from fish besides smoking them. I buy fish from others, and process them at home. I do not have to go far, it is easy, and customers come to buy the smoked fish at my house.

When I cannot get enough fish to smoke, I will prepare fish for prahok instead. Just cut the heads and clean. Prahok is easier than smoked fish. Smoked fish needs to be cleaned, and then you attach them with the skewers (chongkak) and dry. After that, smoke them, not just one side, but both sides. There is a specific process for smoking fish. If I smoke only one side, no one would buy my fish. Prahok is easy, but we make less profit. It takes a long time to smoke fish, but we can make more income from it. With 50 kg of fish for prahok, I can generate 20,000 Riels (USD 6). But with 50 kg of fish for smoking, I can generate 40,000 to 50,000 Riels (USD 10-12.5). Of course, it is hard work and to make better profit I will end up exhausted. I don't have a husband yet; I am still single, but I can look after my niece and nephew like other people who have a husband and children. I look after them like my children. Nowadays, they have already grown up, so it is not difficult, they are 10 and seven years old. When they were younger, it was a little bit hard. I don't want to expand my business because I don't have enough budget and I lack the facilities: my smoking hall is too small, but smoking halls cost a lot, the bigger you build the higher the cost. I never participate in training but I would like to in case there are programs to train us about how to smoke fish better. I also would like to be part of an association. I think it would be good, they will advise me and help me to find customers.

# 6. ASSESSMENT OF GENDER CAPACITY AND NEEDS OF STAKEHOLDERS

This part of study set out to provide an overview of gender expertise and capacity and identify the training needs of primary stakeholders in local government, particularly the FiA and financial institutions.

## 6.1. GENDER EXPERTISE AND TRAINING NEEDS OF FIA OFFICIALS

Interviews conducted with key informants from the FiA in the three provinces selected for the study have highlighted a number of limitations.

All provinces have a lack of female staff. While officials are aware of the need to increase the number of female staff, this issue is not being solved at the local level.

There are no Gender Focal Points within the FiA cantonments. Gender Focal Points are only found at the Provincial Agriculture Fishery and Forestry Departments (PDAFF), and are mainly involved in agriculture. According to an FiA cantonment official in Kampot, contact with Gender Focal Points at PDAFF is less frequency, except for sending reports with gender disaggregated data, and even that is not done systematically. FiA cantonment officials has limited communication and interaction with FiA Gender working group and limited knowledge of gender activities and plans of FiA.

Gender training seems to have not been consistently available: some officials in Siem Reap have attended gender training, but none have in Kampong Thom. However, some FiA officials in the latter area have gained gender knowledge and experience by working with NGOs. Some officials in Kampot received training on gender by the FiA line department and are more aware of the MAFF gender policy and strategic plans; therefore, they have better integrated gender in their planning activities. For example, they managed to have at least 70% female participants in food safety training and 40% female participants in fishery law awareness training. As for Kampong Thom, gender expertise also comes from collaborations with NGOs, which organise gender training initiatives.

These findings suggest significant gender training needs as well as the need for specific gender expertise related to the post-harvest fishing industry, and skills to support women's participation and decision-making in related institutions.

FiA officials raised the following recommendations:

- The need for gender focal points in each local institution, able to influence project design and implementation;
- Regular gender training for all staff that provides input for gender analysis in the sector, supported by gender expertise from the central government;
- More female staff and more female officers in managing roles; and
- Annual assessments and M&E to identify existing challenges and find solutions that enhance gender progress.

Due to the limited number of printed curricular in which currently in use by the FiA, the cantonment officials did not receive the training modules or curricular. According to the FiA official, the Gender Working Group, the ToT on Gender conducted for only FiA staff. However, some of cantonment officials were engaged in gender awareness conducted five years ago, but due to staff movement, the cantonment officials still lack of Gender resources. It is worth noting that research on fish processing in Cambodia is relatively limited and focuses on livelihood and nutritional relevance, with very little systematic data concerning processes, biochemistry and organic aspects including hazardous microorganisms and substances, quality standards, or viability of improved techniques (Nam et al. 2009 Chakriya 2010, LeGrand et al. 2020 for fish fermentation techniques, quality and content; Slámová et al. 2017 for drying fish tools; Hubackova et al. 2014 for fish smoking techniques and toxicity). Among the sector constraints highlighted by one of these studies on fermented fish products (Nam et al. 2009), the authors mention absent or misguided technology dissemination programs: "In many cases, public sector programs for promoting mechanization or agro-industries have resulted in an attitude of "we know best what is good for the farmers". In this sense there is a need for bottom-up inventories of techniques, focused on what processors and women already know, aimed at facilitating processes that allow them to improve quality and outcomes at the minimum cost of inputs, including labour. There is an urgent need to create this manner of gender sensitive extension programs, and to bridge these interventions with research and development of adapted technologies.



## 6.2. GENDER IN AVAILABILITY OF CREDIT

None of the interviewed financial institutions have ever conducted any staff training related to gender, and none have gender expertise available to mainstream gender in their operations. Their internal human resource policies do however provide benefits to female employees above the requirements of the Labour Law of Cambodia. All of the interviewed financial institutions also have an internal policy to tackle sexual harassment issues.

Gender roles within financial institutions show that the credit officer positions are dominated by men, while counter positions are largely filled by women. There are very few women in top management positions: out of 33 managers, there was only one woman, and out of hundreds of branch managers, only 15% were women.

When financial institutions provide loans to customers, sex is not considered as an assessment criteria related to customer capacity. The interviewed financial institutions report that their data suggests women were better customers compared to men:

*“We observe that male customers are riskier compared to women. Considering the percentage of Portfolio at Risk (PAR), men are higher compared to women.” (Interviewed Financial Institution)*

Data from MFIs in Cambodia shows that women take more loans than men. This may be related to their higher participation in MSMEs. The gender approach of financial institutions should take into consideration a number of variables and issues, including the fact that accessing loans is not an instrument of empowerment unless supported by other initiatives aimed at increasing women’s agency within and outside households. Among the options now considered by development agencies and programs, there is the development of financial products that respond to specific women’s limitations or needs; or the development of loans for collective initiatives targeting women, such as associations or cooperatives. These options need to be investigated by the project in order to deliver empowerment and financial access to women.



A women processor checking the quality of shrimp dried using solar energy in Kampot province. Photo: UNIDO



# 7. CONCLUSION AND RECOMMENDATIONS

The study findings were independently presented to the FiA Gender focal point and the Director of DFPTQ, and their views were taken into consideration for the preparation of the final report. The results were compiled and presented in validation workshops attended by a wide range of stakeholders, including private sector participants, NGOs and development partner agencies. Based on the recommendations of the validation workshop, more qualitative data was collected to address the limitations of the study. The conclusion and recommendations are drawn from the validated results of the study.

## 7.1. CONCLUSION

This gender analysis should be considered as general rather than definitive guidance because the sector is extremely complex, with many actors involved at various stages, an informal business environment and a diversity of products.

Nonetheless, a number of important issues relating to gender have emerged from the current analysis.

- Women are key actors in the fishery processing sector in Cambodia. Women and men's valuable contributions represent a fundamental component of the country's productive output in fisheries and in nutrition and livelihood for millions of Cambodians. Women play a crucial role in all value chain stages.
- Analysis of the gendered division of labour across the different sector activities has highlighted women's crucial role in decision-making in the purchase and selection of raw material, in the processing phases, and in commercialisation transactions, such as bookkeeping and financial management. This implies that women are the main repositories of the knowledge and skills related to the post-harvest sector.



Ms. Houg Dalya, FiAC official from Kampong Thom province, sharing her views during Gender Analysis Validation workshop. Photo: UNIDO

- Men participate in the post-harvest value chain, but their tasks appear less related to process knowledge: most of them are involved in transport or tasks that require particular physical strength, or support women in their work. Complementarity is an advantage for businesses and women only enterprises may be disadvantaged because they lack manpower and mobility.
- Despite the characterisation of the industry as dominated by micro enterprises, women are also present and own larger businesses (the only fish exporter in the study is owned by a woman). This warrants a multi-tiered approach to examining gender in the fishery processing sector, because the needs and constraints of women micro retailers differ from those of women heads of large enterprises.
- A significant number of women in the study are household heads. Post-harvesting fisheries apparently offer a source of income to vulnerable women, which is adaptable to limitations in mobility and access to resources; however, this is counterbalanced by high labour investments and limited incomes.
- All actors in the post-harvest fishing value chain suffer constraints due to the combined lack of capital, technology and inputs, and advanced technical knowledge, especially women.
- Those limitations are accrued in the case of women-owned business, due to gender-based constraints in terms of mobility, time availability, access to education and capacity building. Women, despite their high labour investment in productive activities, remain bounded to and mainly responsible for unpaid home care work, which strongly limits their agency and stretches their labour investment.
- The businesses analysed in this study show that the sector is becoming less attractive for younger generations. This is due to various factors, including scarcity of raw materials, but also labour intensity and low returns. There is a need to develop strategies to ensure generational renewal and increasing the attractiveness of a sector where women can play a major role.
- An important number of both female and male operators do not plan to expand their business. Among the negative factors of influence are the depletion of resources and the lack of inputs including technology and capital.
- Although the lack of capital is mentioned as a main challenge, access to loans does not represent the main limiting factor. A significant number of both female and male operators are worried about their ability to pay loans back in the current context.
- The sector has not yet received the research and development attention it deserves, which results in a lack of technical inputs for producers. None of the study participants, most of whom are women, have been given the chance to receive extension and vocational training or participate in capacity building initiatives.
- The reduction of quantity and quality of fish capture, lamented by many operators, is going to increase producers' and customers' stress, among them, in particular women due to their role in productive activities to ensure food security in their homes, and their insertion in the fish value chain as processors in the post-harvest sector. This underlines the need to improve techniques and develop gender-responsive adaptation technologies to reduce post-harvesting losses.
- The offer of specific gender capacity building and training by FiA provincial staff is still limited. FiA teams are not yet equipped to provide gender inclusive extension and training programs that respond to the needs of women actors in the supply chain.
- There are indications that associative processes are seen by operators as a possible strategy to improve their capacity and negotiating power. Data from community fishery experiences seems to indicate that post-harvesting activities embedded within community structures can provide recognition, empowerment, and enhanced decision-making power to women in the sector.

## 7.2. RECOMMENDATIONS

### Related to the project

- 1) Value Chain Investment Support (VCIS) should be shaped to respond to the different types and needs of women-led enterprises (size, investment, capital). While women own most of the sector enterprises, there are significant differences in business size, investment, technology and outputs.
- 2) A majority of women run/manage seasonal or micro-businesses and are worried about taking loans to expand their businesses. Interventions should take into consideration the limitations faced by these operators, and consider grants tied to access to capacity-building, technical knowledge, access to simple equipment, and support to collective initiatives.
- 3) VCIS should consider providing an additional level of incentives while supporting fishery MSMEs, including women-owned/managed businesses, in developing sustainable business plans (supply chain management, market development, product development). This includes the adaptation of food safety standards or requirements where applicable.
- 4) Consider developing value chain investment guidelines for the upgrading of MSMEs, focused on the simplification of bookkeeping and registration processes for micro and family enterprises, especially those owned by women.
- 5) Inclusion of post-harvest fisheries within the Communities Fishery Committees portfolio of activities appears to be a viable approach for women's empowerment. Other associative forms, such as women producers' cooperatives, should be investigated.
- 6) Improvements on quality and safety standards need to consider micro-producer's needs, in majority women, to apply homogeneous and simplified safety standards and producers grading,
- 7) Special labels for organic products and food safety and products respecting environmental standards should be considered and procedures made available to micro and small producers operated by women, along with women producers associations (see for example the FAO Participatory Guarantee System for community and local producers). This can add value to niche products that are unlikely to achieve a large economy of scale.
- 8) A National Action Plan for inspection and control of quality should also consider including women-led or owned MSMEs.
- 9) A sound value chain analysis of exportable products should be conducted. Not all Cambodian fish products are exportable or have the chance to gain market share. Charging micro producers, most of them women, with the extremely complex and costly standardisation and labeling processes required by the EU or the US, when their export prospects are limited, may only weigh down the sector and create exclusion among women business-owners.
- 10) Pursue and systematise the acquisition of gender data into all levels of the fishery value chain.
- 11) Consider participatory research as a tool for inventorying women's knowledge and skills, in particular related to processing aspects, which can form the basis of technological upgrades (solar fish drying, adapted smoking halls, grading fermentation processes and product standardisation).
- 12) Applied research and development is crucial for the development of the sector, and should be incentivised through links with academia, development agencies or other stakeholders. Raw material scarcity and environmental constraints may strongly impact the sector, and technical solutions to reduce losses, improve inputs and simplify labour are urgently needed.

- 13) Study mechanisms such as tax exemptions for micro enterprises owned by women, or other incentives to support micro enterprises, especially those owned by women. The significant number of women household heads in the sector suggests the need to consider vulnerability and the risk of poverty while restructuring the sector and promoting its industrialisation.
- 14) Technical training on post-harvest management for the value chain operators should be reformulated, taking the Farming Field Schools as a model. Training should be practical and delivered at field sites. Training modules should respond to operator needs and structured to bypass gender constraints, primarily the time poverty, lack of mobility and other gender biases facing women.

#### **Related to institutional stakeholders**

- 15) National policies provide significant potential for substantial gender mainstreaming into the post-harvest fisheries; the key stakeholder for implementation is the FiA and its Gender Technical Working Group. We suggest conducting a joint review of this study's results and identify points of convergence with the under-development FiA Gender Action Plan for 2021-2030.
- 16) Establish M&E systems for gender disaggregated data collection in collaboration with institutional actors such as the FiA, National Statistics Institute, MAFF and MoWA.
- 17) There is an urgent need for official post-harvest and gender training modules to be mainstreamed for FiA staff, especially at the provincial level, as well as for operators. Various actors, including civil society groups and development agencies, should be involved, in order to share their expertise and knowledge.
- 18) The COVID-19 pandemic has impacted all economic sectors in the country. There is a need for an urgent evaluation of the difficulties and needs faced by operators all along the post-harvest fisheries value chain, with a specific focus on women, to identify alleviation and support measures.

#### **Related to financial institutions**

- 19) Access to finance for women should be improved and tailored towards their needs, such as considering collateral requirements, supporting formulation of business plans and collective loans to women's associations or cooperatives.



# 8. GENDER MAINSTREAMING ACTION PLAN

**Table 14.** Matrix of gender mainstreaming action plan

Activities	Responsible	Indicator	Means of Verification
1) Develop system for data collection concerning gender into the different fishery value chains	UNIDO and FiA	Data collection concerning gender recorded and compiled	- Annual progress reports - M&E reports
2) Conduct participatory research as a toll for inventorying women's knowledge and skills, in particular related to processing aspects, which can stand as a basis for technological upgrading (solar fish drying, adapted smoking halls, grading fermentation processes, products standardization)	UNIDO and FiA	Women's knowledge and skills related to processing are collected and compiled. - # of women with improved access to technology for upgrading their production	- Inventory on women's knowledge and skills reports - Project progress reports
3) Support post-secondary and higher education institutions for knowledge enhancement on post-harvest food technology	UNIDO and FiA	- # of scholarship opportunities to female and male teachers/students for higher education - # female and male students /interns involved in project activities.	- University reports - Project support list and records
4) Enhance research and development services for promoting innovation to reduce losses and inputs, and ease labour demands	UNIDO and FiA	- # of new and/or improved products and technologies developed and adopted by women owned businesses, including startups - # of new women businesses or startups supported	- List of projects start ups supported - Project records/ reports
5) Strengthen the capacity of financial institutions and business development service providers	UNIDO	# of women trainers with improved skills for business upgrading and development services	- Training reports - Project progress reports
6) Support value chain investments based on their needs and type of enterprises (including different sizes).	UNIDO/ BDS	# of women owned MSMEs that received investment support	- Number of business plans developed and supported - Project progress reports
7) Support VCI focusing on women-owned/ managed businesses in developing sustainable business plans (supply chain management, market development, product development).	UNIDO/ BDS	# women owned/managed businesses improved business operations	- BDS reports

8) Develop value chain investment guidelines for the upgrading of MSMEs.	UNIDO/ BDS and FiA	# of MSMEs owned by women upgrading post-harvest operation	- Project monitoring and progress reports
9) Conduct awareness raising about business registration processes among women-owned businesses.	UNIDO and FiA	# of women-owned business achieving registration	- Project progress reports
10) Develop minimum standards that easily allow products' grading, quality and safety.	UNIDO and FiA	# of women-owned MSMEs that improve production and adopted food safety standards (Quality Seal and/or HACCP) through certification	- Project progress reports
11) Support special labels for products (source of origin) that also possess safety standards in processing.	UNIDO and FiA	# women-owned MSMEs that get special labels for their products	- List of MSMEs owned by women - Project progress reports
12) Create a National Action Plan for inspection and control of quality or minimum requirements of MSMEs and large businesses	UNIDO and FiA	# women-owned businesses selected as part of the sample for inspection and quality control	- Project progress reports
13) Develop simple training modules and conduct training on post-harvest management for value chain operators in response to gender related constraints, primarily time poverty, lack of mobility and other gender biases	UNIDO and FiA	# women attended training and improved knowledge and skills	- Training reports - Progress reports
14) Jointly with FAO and AFD review this study's results and identify convergences when updating the FiA Gender Action Plan for 2021-25	UNIDO and FiA	Post-harvest sector will be integrated in Gender Action Plan for FiA	- Upgraded Gender Action Plan of FiA for 2021-2025 - Progress reports
15) Establish M&E systems for gender-disaggregated data collection in collaboration with institutional actors, such as the FiA and MAFF	UNIDO	Data collection system will be developed with gender disaggregated indicators and data collection	- Project M&E reports
16) Develop gender training modules for the post-harvest sector and conduct training to project staff and stakeholders including provincial level	UNIDO and FiA	# gender trainings conducted to both female and male officials # participants attended gender training	- Training reports - Project progress reports
17) Coordinate with MFIs to promote/develop loan products with a gender focus to promote and encourage women enterprises and respond to their needs	MFIs	# of MFIs that developed loan products focusing on women's enterprise	- MFIs reports - Project progress report

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## WHAT WE DO:

### CAPFish-Capture: Post-harvest Fisheries Development project

The CAPFISH-Capture: Post-Harvest Fisheries Development is designed with the specific objective to contribute to the development of post-harvest fisheries through upgrading the regulatory and institutional system, as well as the adoption of better practices and innovation by the private sector under the following major interventions:

1. Institutional support for establishing an efficient food safety official control system in post-harvest fisheries to harmonize Cambodian products with global market requirements including the EU.
2. Support to private sector businesses through value chain financing support along fishery value chains for upgrading the operations and market compliance to enhance business competitiveness.
3. Support for research and development through networking of Universities and research institutes, improving capacities for product development, innovations and entrepreneurship.

The project is co-funded by the European Union

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