

REPORT OF THE

# GENDER DIMENSION

IN THE VALUE CHAIN OF  
SMALL-SCALE FISHERIES AND AQUACULTURE  
IN SOUTHEAST ASIA



Southeast Asian Fisheries Development Center  
(SEAFDEC)

# **REPORT OF THE GENDER DIMENSION IN THE VALUE CHAIN OF SMALL-SCALE FISHERIES AND AQUACULTURE IN SOUTHEAST ASIA**



**Southeast Asian Fisheries Development Center**

# Table of Contents

<b>1. Introduction</b>	7
<b>2. Objectives of the Project</b>	9
<b>3. Data Collection Protocol</b>	9
<b>4. Results of the Study on Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in Southeast Asia</b>	17
<b>5. Conclusions</b>	36
<b>Acknowledgement</b>	37
<b>Reference</b>	38
<b>Annex 1</b>	40
<b>Annex 2</b>	45
<b>Annex 3</b>	50
<b>Annex 4</b>	55

# List of Tables

<b>Table 1:</b> Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in four (4) countries sites _____	9
<b>Table 2:</b> Demographic information on respondents in Pakxan District, Bolikhamxay Province, Lao PDR _____	18
<b>Table 3:</b> Occupation of the respondents in Pakxan District, Bolikhamxay Province, Lao PDR _____	18
<b>Table 4:</b> Problems in the small-scale inland aquaculture in Pakxan District, Bolikhamxay Province _____	19
<b>Table 5:</b> Access, ownership and control over the resources in Pakxan District Bolikhamxay Province, Lao PDR _____	21
<b>Table 6:</b> Demographic information of respondents in Kyauktan, Yangon Region, Myanmar _____	23
<b>Table 7:</b> Occupation of respondent in Kyauktan, Yangon Region, Myanmar _____	24
<b>Table 8:</b> Access, Ownership and Control over the resources in Kyauktan, Yangon Region, Myanmar _____	26
<b>Table 9:</b> Demographic information of respondents in Infanta, Quezon Province, Philippines _____	27
<b>Table 10:</b> Problems related to fishing in Infanta, Quezon Province, Philippines _____	28
<b>Table 11:</b> Access, Ownership and Control over the resources in Infanta, Quezon Province, Philippines _____	30
<b>Table 12:</b> Demographic information of respondents in Surat Thani, Thailand _____	32
<b>Table 13:</b> The occupation of respondents in Surat Thani, Thailand _____	32
<b>Table 14:</b> Access, ownership and control over the resources in Surat Thani, Thailand _____	34

# List of Figures

<b>Fig 1.</b> Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Surat Thani, Thailand (25-27 August 2020)	10
<b>Fig 2.</b> Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Bolikhamxay Province, Lao PDR (15-17 December 2020)	10
<b>Fig 3.</b> Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Kyauktan, Yangon Province, Myanmar (18-20 May 2021)	10
<b>Fig 4.</b> Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Infanta, Quezon Province, Philippines (23-25 June 2021)	10
<b>Fig 5.</b> Study area for inland aquaculture in Bolikhamxay Province, Lao PDR	12
<b>Fig 6.</b> Data collection on Gender Dimension in the Value Chain of Small-scale Inland Aquaculture at Pakxan District in Bolikhamxay Province, Lao PDR (25-29 January 2021)	13
<b>Fig 7.</b> Participants in the Data Validation Workshop in Bolikhamxay Province, Laos PDR (22 March 2021)	13
<b>Fig 8.</b> Study site of inland capture fisheries in Kyauktan, Yangon Region, Myanmar	14
<b>Fig 9.</b> Data collection on Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Kyauktan, Yangon Region, Myanmar (24-28 May 2021)	14
<b>Fig 10.</b> Data Validation Workshop in Kyauktan, Yangon Region, Myanmar (29 June 2021)	14
<b>Fig 11.</b> Study area of marine fisheries in Infanta, Quezon Province, Philippines	15
<b>Fig 12.</b> Data collection on Gender Dimension in the Value Chain of Small-scale Marine Fisheries in Infanta, Quezon Province, Philippines (16-19 November 2021)	15
<b>Fig 13.</b> Data Validation Workshop in Infanta, Quezon Province, Philippines (15-17 March 2022)	15
<b>Fig 14.</b> Study area of marine aquaculture in Surat Thani	16
<b>Fig 15.</b> Data collection on Gender Dimension in the Value Chain of Small-scale Marine aquaculture Surat Thani, Thailand (28-30 August 2020)	17

<b>Fig 16.</b> Data Validation Workshop in Surat Thani, Thailand (2-3 September 2020)	17
<b>Fig 17.</b> Freshwater fish species cultured in Pakxan District, Bolikhambxay Province	18
<b>Fig 18.</b> Reproductive roles of men and women in inland aquaculture of Pakxan District	20
<b>Fig 19.</b> Productive roles of men and women in inland aquaculture of Pakxan District	20
<b>Fig 20.</b> Drift net used by fishers in Kyauktan, Yangon Region, Myanmar	24
<b>Fig 21.</b> Reproductive roles of men and women in inland fishing, Kyauktan, Yangon Region, Myanmar	24
<b>Fig 22.</b> Productive roles of men and women in inland fishing, Kyauktan, Yangon Region, Myanmar	25
<b>Fig 23.</b> Roles in post-harvest of men and women in inland fishing, Kyauktan, Yangon Region, Myanmar	25
<b>Fig 24.</b> Fishing gears used by the respondent fishers in Infanta, Quezon Province, Philippines	28
<b>Fig 25.</b> Reproductive roles of men and women in Infanta, Quezon Province, Philippines	29
<b>Fig 26.</b> Productive roles of men and women in marine capture fisheries in Infanta, Quezon Province, Philippines	29
<b>Fig 27.</b> Percentage of respondents in Surat Thani, Thailand by aquatic species	32
<b>Fig 28.</b> Reproductive roles of men and women in Surat Thani, Thailand	33
<b>Fig 29.</b> Productive roles of men and women in Surat Thani, Thailand	33



# Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in Southeast Asia

## 1. Introduction

Gender is an encompassing issue that refers to how we should look at everything in certain ways, especially on the economic, social, political, and cultural features and opportunities concerning men and women, and on the impacts of those aspects on them. More specifically, gender refers to how we should look at the particular characteristics and roles of men and women at every level, whatever the society or community deems necessary and considers priority.

Taking into account the need to mainstream gender concerns in designing and implementing programs and activities, especially the equality of men and women in accessing resources and opportunities, gender has been treated as a cross-cutting issue in the ASEAN-SEAFDEC Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030. More specifically, in the Strategies of SEAFDEC Towards 2030, Strategy 5 indicates the importance of “Addressing cross-cutting issues, such as labor, gender, and climate change, where related to international fisheries” by giving “cognizance of the importance of small-scale fisheries, welfare of labor in fisheries, safety at sea, and gender equality in the fisheries and aquaculture sector.”

Furthermore, in the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), it is emphasized that the objectives of the Guidelines could be achieved through the promotion of a human rights-based approach, by empowering small-scale fishing communities – including both men and women, to participate in decision-making processes and to assume responsibilities for sustainable use of fishery resources. In order to be able to respond to the provisions of the SSF Guidelines, let us first look at the scenario of the world’s fishers.

Records have shown that 90% of the world’s fishers work in the small-scale fisheries sector and 70% of the global fish catch comes from small-scale fisheries, with a further 200-300 million people, many of whom are women, working in the fisheries value chains (Kolding *et al.*, 2014) and 50% of women globally in processing and trade (FAO, 2011). Within the Asian seafood industry, 60% of the women are involved in small-scale fisheries, especially in such activities as mending of fishing gears, post-harvesting, fish processing, and trading. In addition to carrying out such productive roles in fishing-related activities, women are also primarily performing reproductive roles such as



childcare and other household chores. However, it is also evident that women are not given the opportunities to hold managerial and decision-making posts due to the assumption that women lack confidence in their capabilities to hold such positions and have insufficient time to do so. As a result, women in fisheries particularly in Southeast Asia, are being vulnerable to poverty, health risks, natural disasters, and climate change, as well as experiencing inequitable division of household works, limited access to education, and unequal rights. (FAO, 2011).

Generally, in the Southeast Asian societies, women's roles in fisheries are not well recognized, and usually overlooked or under-represented in the official documents and statistics. Documentation of women's contributions to the fisheries (e.g., value chain in small-scale fisheries and aquaculture) continues to be a challenge because of the informal nature of their work. Thus, the SSF Guidelines recommend that gender mainstreaming should be made an integral part of all small-scale fisheries development strategies, which should take into consideration the different cultural contexts and challenging practices that are discriminatory against women. On the part of SEAFDEC, the "Practical Guide for Gender Analysis in Small-scale Fisheries and Aquaculture in Southeast Asia (Practical Guide)" had been developed to implement the "SEAFDEC Gender Strategy on Integrating Gender in SEAFDEC Programs and Projects (SEAFDEC Gender Strategy)" which provides that gender perspectives should be considered throughout the cycle of fisheries management, especially in the development and implementation of projects and programs. The Practical Guide is therefore introduced as a baseline for fisheries management and project planning to ensure better understanding of the status of women and men in the small-scale fisheries and aquaculture value chain, the roles of women in decision making and in the structural challenges that prevents having equitable opportunities for women and men.

In support therefore of the SEAFDEC Gender Strategy and SSF Guidelines, the Project "Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in Southeast Asia" was conducted from January 2020 to June 2022 in small-scale fishing and aquaculture communities in selected Southeast Asian countries where comprehensive gender studies were deemed necessary. Taking into consideration the various categories of fisheries, the Project was conducted in Lao PDR for the inland aquaculture sub-sector; Myanmar for the inland capture fisheries sub-sector; in the Philippines for the marine capture fisheries sub-sector; and in Thailand for the marine aquaculture sub-sector.

## 2. Objectives of the Project

With the main objective of determining the gender dimension in the value chain of small-scale fisheries and aquaculture in the Southeast Asian region in support of the SEAFDEC Gender Strategy and SSF Guidelines, the Project also specifically aimed to:

- 2.1 Identify gender issues and appropriate interventions in the fisheries value chain
- 2.2 Promote gender equality and equity in decision-making processes and organizations, fisheries technologies, and policies
- 2.3 Empower men and women in small scale fishing and aquaculture in sustaining their livelihood

## 3. Data Collection Protocol

At the start of the Project implementation, it was deemed necessary to prepare the data collection staff by training them to be able to clearly understand the gender concepts and improve their skills in collecting data based on the context of gender in fisheries and aquaculture of the study sites. Thus, the three-day training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators was conducted for the Project focal person and enumerators of each country site to enhance and strengthen their capacities on gender concept and gender analysis, and to promote the SSF Guidelines and the Practical Guide for Gender Analysis in Small-scale Fisheries and Aquaculture in Southeast Asia. As the training was aimed at developing the tools and plan to collect the data from each project site, the protocol of data collecting which comprises the specific area of each country, sampling size, and questionnaire for the survey were the outputs while the knowledge of the staff involved in data collection on gender approaches in small-scale fisheries and aquaculture had been enhanced. The details of the training are shown in Table 1 and Figures 1 to 4.

Countries	Period	No. of Trainees	Study Sites
<b>Thailand</b> (Marine Aquaculture)	25-27 August 2020	13 officers from DOF (4 females and 9 males)	Surat Thani Province
<b>Lao PDR</b> (Inland Aquaculture)	15-17 December 2020	14 officers from DOF (6 females and 8 males)	Bolikhamxay Province
<b>Myanmar</b> (Inland Fisheries)	18-20 May 2021	13 officers from DOF (10 females and 3 males)	Kyauktan, Yangon Province
<b>Philippines</b> (Marine Fisheries)	23-25 June 2021	14 officers from DOF (9 females and 5 males)	Infanta, Quezon Province

**Table 1.** Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in four (4) countries sites



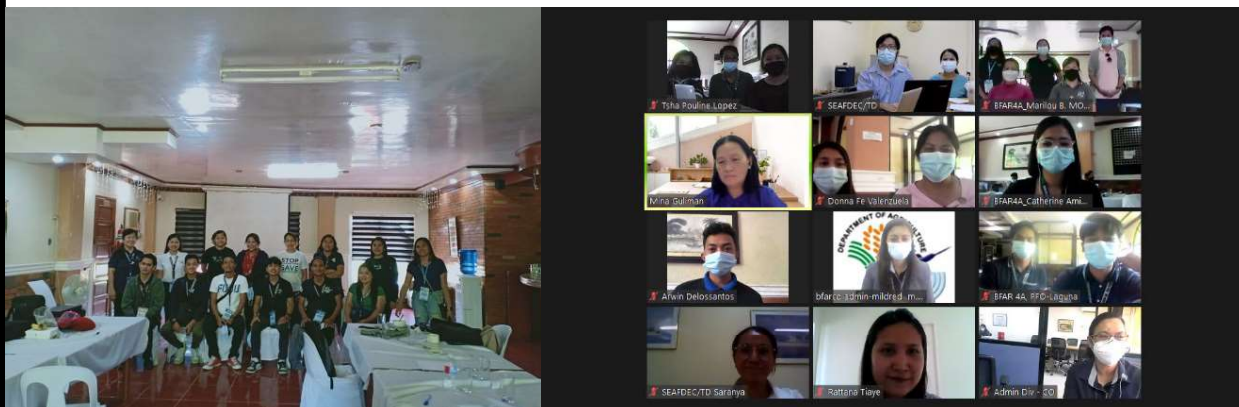
**Fig 1.** Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Surat Thani, Thailand (25-27 August 2020)



**Fig 2.** Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Bolikhamxay Province, Lao PDR (15-17 December 2020)



**Fig 3.** Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Kyauktan, Yangon Province, Myanmar (18-20 May 2021)



**Fig 4.** Training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators in Infanta, Quezon Province, Philippines (23-25 June 2021)

## **Survey tools**

Semi-structured interviews were carried out to determine Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in Southeast Asia. The questions had been created by the enumerators during the training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators, with the guiding questions that were developed from the Practical Guide for Gender Analysis in Small-scale Fisheries and Aquaculture in Southeast Asia.

The questionnaire used for the face-to-face interviews with the respondents had been pre-tested during the interviews that were conducted individually during the training on Gender Concept and Analysis and Development of a Data Collection Protocol for Enumerators. The pre-tested questionnaire was used to practice on data collecting for enumerators and test the effectiveness and efficiency of information in the questionnaire. Specifically, the pre-testing was meant to know the timing, clarity of the wordings in each question, reaction of respondents towards the questions, the unnecessary and repetitive questions, for improving the questionnaire. The actual data collection was then conducted after all enumerators were trained and all questions were tested and improved.

## **Data Validation Workshops**

As one of the processes on data collection, local workshops were conducted to report the results of the study to the stakeholders and for them to validate the information, and obtain comments and recommendations to complete the report of Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in each site. The four trainees from each participating country who are living in the respective sites served as the enumerators for the data collection on Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in Southeast Asia.

## **Data Analysis**

The Gender Analysis concept and statistics that include percentages, average, maximum, minimum, and other information were used as found suitable, to determine the respondents' understanding of the gender context. The respondents made use of their knowledge in identifying the differences in roles and responsibilities, experiences and perspectives, access to and control over resources/assets, representation and participation, decision-making, and rights; examining inequality; and identifying the factors that create and maintain inequality.

### 3.1 Lao PDR

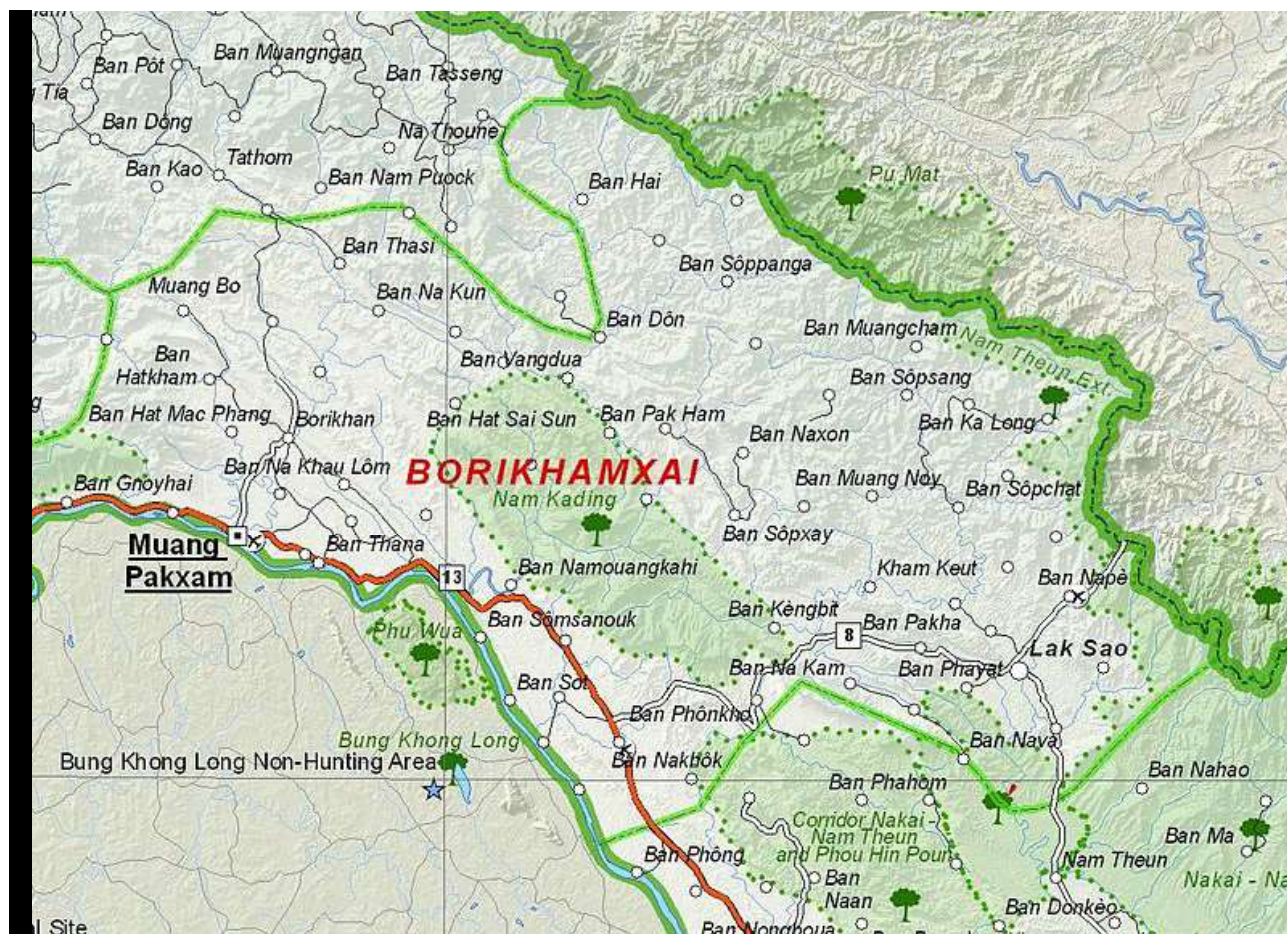


Fig 5. Study area for inland aquaculture in Bolikhamxay Province, Lao PDR

In Lao PDR, the study focused on Gender Dimension in the Value Chain of Small-scale Inland Aquaculture in Bolikhamxay Province, which is in the central part of Lao PDR. North of the Province is connected to the country's Capital City Vientiane, the south is next to Khum Nuam Province, east is next to Viet Nam, and west is next to Thailand. Its Area is 14,083 km<sup>2</sup> with population of 273,691 at population density of 10-18 people/km<sup>2</sup>. Pakxan is the capital city of the province which is divided into 7 districts, namely: Pakxan, Thaphabat, Pakkading, Borikane, Viengthong, Khamkeut, and Xaichamphone. The study site is in Pak San Village and Pak Peung Village in Pakxan District, Bolikhamxay Province (Figure 5).

The Enumerators from the Department of Livestock and Fisheries (DLF) of Lao PDR conducted the data collection during 25-29 January 2021, using the questionnaire (Annex 1) to interview the aquaculture farmers in the inland aquaculture area of Pakxan District (Figure 6). The sampling size used was all the farmers because there are only 26 farmers at the study site. The data validation workshop was conducted on 22 March 2021 at the study site as the process of the study (Figure 7). The workshop had 36 participants (9 women and 27 men).



**Fig 6.** Data collection on Gender Dimension in the Value Chain of Small-scale Inland Aquaculture at Pakxan District in Bolikhamxay Province, Lao PDR (25-29 January 2021)



**Fig 7.** Participants in the Data Validation Workshop in Bolikhamxay Province, Laos PDR (22 March 2021)

### 3.2 Myanmar

For Gender Dimension in the Value Chain of Small-scale Inland Fisheries, the study was conducted at Kyauktan, Yangon Province, Myanmar (Figure 8). Kyauktan is located about ten kilometers south-east of Thalyin and 30 km south of Yangon, with population of 170635 (83,840 male and 86,795 female) who are engaged in various livelihoods

such as rice farming, bean farming, crop farming, industry/factory jobs, aquaculture, and fishing. The number of fishers is 472.

Enumerators from the Department of Fisheries (DOF) of Myanmar used the questionnaire (Annex 2) that were developed from the training to collect the data on Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Kyauktan, Yangon Region, Myanmar on 24-28 May 2021 (Figure 9). The study had 40 respondents as the target sampling size of the study. As in the study process, the activity also included the Data Validation Workshop on 29 June 2021 (Figure 10) with 54 participants (16 women and 38 men).

Enumerators from the Department of Fisheries (DOF) of Myanmar used the questionnaire (Annex 2) that were developed from the training to collect the data on Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Kyauktan, Yangon Region, Myanmar on 24-28 May 2021 (Figure 9). The study had 40 respondents as the target sampling size of the study. As in the study process, the activity also included the Data Validation Workshop on 29 June 2021 (Figure 10) with 54 participants (16 women and 38 men).



**Fig 8.** Study site of inland capture fisheries in Kyauktan, Yangon Region, Myanmar



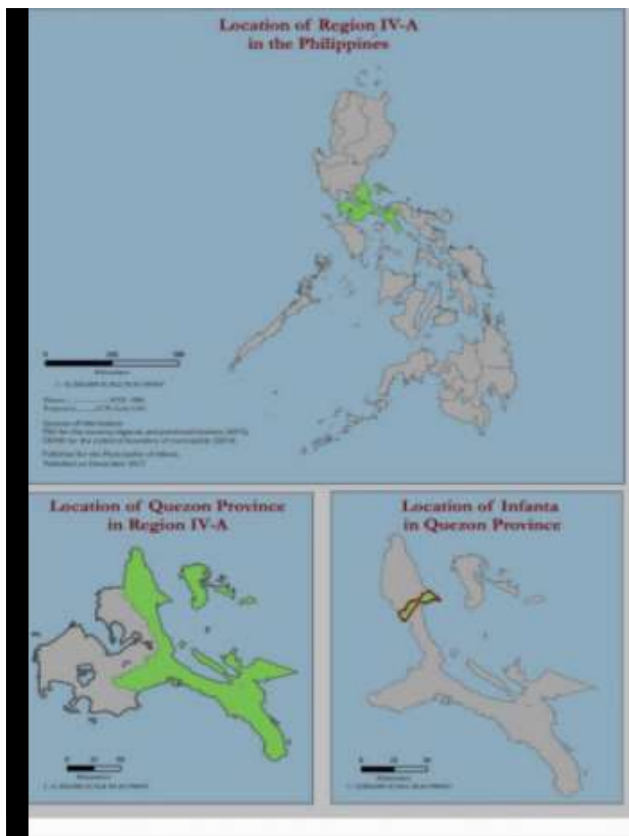
**Fig 9.** Data collection on Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Kyauktan, Yangon Region, Myanmar (24-28 May 2021)

### 3.3 Philippines

The study on Gender Dimension in the Value Chain of Small-scale Marine Fisheries was carried out in Infanta, Quezon Province, Philippines. Infanta is located 144 kilometers northeast of Manila and 146 kilometers north of Lucena City, the capital of Quezon Province (Figure 11). The mainland of Quezon Province lies along the coast of the Philippine Sea, and Infanta faces the Island of Polillo in the east, bounded on the northwest by the Municipality of General Nakar and southwest by the Municipality of Real, Quezon. There are 5,005 registered



**Fig 10.** Data Validation Workshop in Kyauktan, Yangon Region, Myanmar (29 June 2021)



**Fig 11.** Study area of marine fisheries in Infanta, Quezon Province, Philippines

fisherfolk (Female – 1,312 Male – 3,693) engaged in livelihoods such as fish vending (13.56 %), fishing - fish capture (44.00 %), aquaculture (8.38 %), gleaning (15.55 %), and others (18.29 %).

Enumerators from the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) made use of the questionnaire (Annex 3) that were developed during the training to collect the data on Gender Dimension in the Value Chain of Small-scale Marine Fisheries at Infanta, Quezon Province, Philippines. The study was conducted on 16-19 November 2021 with 40 respondents as targeted (Figure 12). The Data Validation Workshop (Figure 13) was conducted on 15-17 March 2022 with 47 participants (21 females and 26 males). The impact of COVID-19 pandemic had caused delays in the data collection processes in the Philippines.



**Fig 12.** Data collection on Gender Dimension in the Value Chain of Small-scale Marine Fisheries in Infanta, Quezon Province, Philippines (16-19 November 2021)



**Fig 13.** Data Validation Workshop in Infanta, Quezon Province, Philippines (15-17 March 2022)



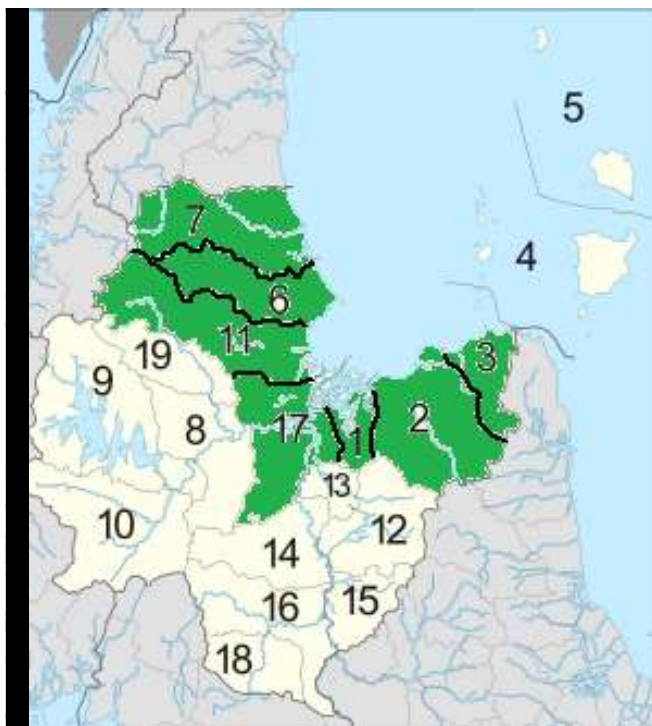


Fig 14. Study area of marine aquaculture in Surat Thani

### 3.4 Thailand

In Thailand, the study on Gender Dimension in the Value Chain of Small-scale Marine Aquaculture was conducted in Surat Thani Province, which is in the southern part of the country. With an area of 12,891 km<sup>2</sup> with and population of 1.06 million, the province is divided into 19 districts, 131 sub-districts and 1,028 villages (Figure 14). The aquaculture commodities in Surat Thani comprise freshwater species (fish and frog) and marine species (shrimp, fish, crab). More than 900 farms are registered (small- to large-scale marine aquafarms).

Marine aquaculture is practiced in 7 districts, namely: Mueang, Kanchanadit, Don Sak, Chaiya, Tha Chana, Tha Chang, and Phunphin. Small-scale marine aquaculture makes use of marine species (crab, fish and shrimp) with culture area of less than 62.5 rai (6.25 rai = 1.00 ha), and productivity of less than 50 t/rai. For the study site, fish cages and cement ponds are excluded, thus, the 736 registered farms are considered as the population for the study.

The SEAFDEC team and fisheries officers from the Department of Fisheries of Thailand conducted the data collection on gender study using the questionnaire (Annex 4) developed during the training to collect the data Gender Dimension in the Value Chain of Small-scale Marine Aquaculture on 28-30 August 2020. The data were collected during the interview of the aquaculture farmers in Surat Thani Province.

$$n = \left[ \frac{z^2 * p * (1-p)/e^2}{1 + (z^2 * p * (1-p) / e^2 * N)} \right]$$

Where

**z** = 1.96 for a confidence level of 95%

**p** = proportion ( Expressed as a decimal ),

**N** = 736 for population size

$$n = \left[ \frac{.962 * 0.5 * (1-0.5) / 0.12}{1 + (1.962 * 0.5 * (1-0.5) / (0.12 * 736))} \right]$$

$$= 96.04 / 1.130 = 84.954$$

$$n \approx 85$$

Using the population size (N) = 736, the sample size (n) was calculated using the formula:

After the data collection and analysis carried out during 28-30 August 2020 (Figure 15), the results were presented to

the stakeholders at Surat Thani during the Data Validation Workshop on 02-03 September 2020 to validate the data collected and to obtain comments and

recommendations from the key stakeholders (Figure 16). The Workshop had 59 participants (35 men and 24 women).



Fig 15. Data collection on Gender Dimension in the Value Chain of Small-scale Marine aquaculture Surat Thani, Thailand (28-30 August 2020)



Fig 16. Data Validation Workshop in Surat Thani, Thailand (2-3 September 2020)

## **4. Results of the Study on Gender Dimension in the Value Chain of Small-scale Fisheries and Aquaculture in Southeast Asia**

### **4.1 Gender Dimension in the Value Chain of Small-scale Inland Aquaculture in Pakxan District, Bolikhamxay Province, Lao PDR**

#### **4.1.1. General information**

##### **1) Demographic information**

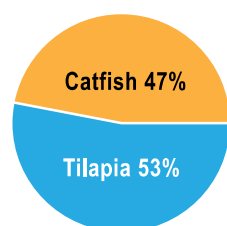
The total number of respondents for the study was 28 persons comprising 20 men and 8 women. The average age of the respondents was 48 years old and all of whom are Buddhists. The average number of family members was 4 persons, while most of the respondents had graduated from high school (32%)

Basic Information	No.	%
No. of men	20	71%
No. of women	8	29%
<b>Total</b>	<b>28</b>	<b>100%</b>
<b>Average age</b>	<b>48 (27-70)</b>	<b>-</b>
<b>Average No. of family</b>	<b>4 (2-8)</b>	<b>-</b>
<b>Religion : Buddhism</b>	<b>28</b>	<b>100%</b>
<b>Marital status</b>		
<b>Single</b>	<b>1</b>	<b>4%</b>
<b>Married</b>	<b>27</b>	<b>96%</b>
<b>Total</b>	<b>93</b>	<b>100%</b>
<b>Education</b>	<b>4</b>	<b>15%</b>
<b>Elementary school</b>	<b>8</b>	<b>30%</b>
<b>Junior high school</b>	<b>9</b>	<b>33%</b>
<b>Vocational</b>	<b>1</b>	<b>4%</b>
<b>Diploma</b>	<b>5</b>	<b>18%</b>
<b>Total</b>	<b>27</b>	<b>100%</b>

**Table 2.** Demographic information on respondents in Pakxan District, Bolikhamxay Province, Lao PDR

Occupation	No.	%
<b>Main Occupation (N=28)</b>		
Agriculture	4	14
Aquaculture	19	68
Officer	3	10
Trading	1	4
Driver (the bus Pakxan to Vientiane)	1	4
<b>Second Occupation (N=28)</b>		
None	1	4
Agriculture	12	42
Aquaculture	8	28
Cropping	3	10
Cultivation and Livestock	1	4
Rearing chicken	1	4
Set up a line Cable TV	1	4
Trading	1	4

**Table 3.** Occupation of the respondents in Pakxan District, Bolikhamxay Province, Lao PDR



**Fig 17.** Freshwater fish species cultured in Pakxan District, Bolikhamxay Province

and junior high school (29%). The details are shown in Table 2.

## 2) Occupation

The main occupation of the respondents is aquaculture (68%), while there are also other jobs that the respondents are engaged in, such as agriculture (14%), officer (10%), trading (4%), and bus driver (4%). Considering that the respondents are involved in agriculture as their main the second job, this indicated that the villagers in Pakxan District are farmers doing aquaculture and agriculture. The details are shown in Table 3.

## 3) Small-scale Inland Aquaculture

The small-scale inland aquaculture in Pakxan District, Bolikhamxay Province is mainly semi-intensive (96%) with only 4% doing intensive culture. Two main freshwater fish species are cultured: tilapia (53%) and catfish (47%) as shown in Figure 17.

The respondents indicated that they have encountered problems related to aquaculture as shown in Table 4. The main problem mentioned was the unstable prices of their produce.

### 4.1.2. Gender Dimension

#### 1) Reproductive roles

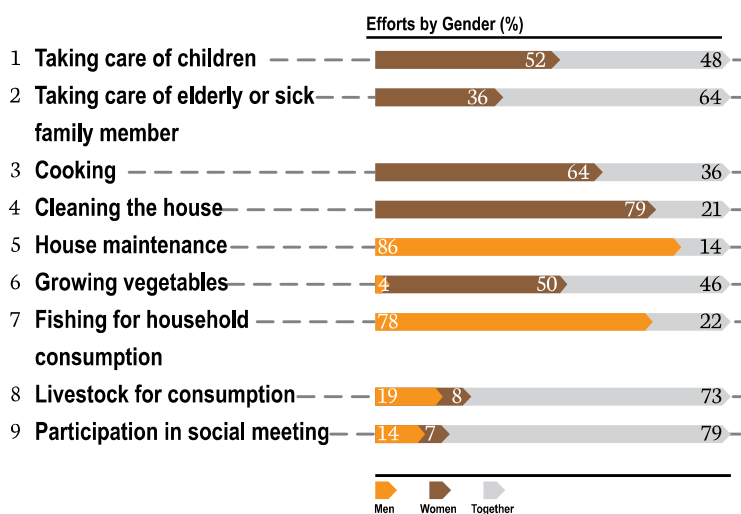
With respect to the reproductive roles of men and women, nine major roles listed were assessed by the respondents as shown in Figure 18. These were: (1) taking care of children; (2) taking care of elderly or sick members of family; (3) cooking; (4) cleaning the house; (5) house maintenance; (6) growing

Problem in Aquaculture	No. of people mentioned the problem
1. Marketing price not stable	12
2. Fish disease	10
3. Fish prices	8
4. Fish dead (hot weather)	7
5. High investment	2
6. Cages damage	1
7. Distribute fish not good smooth	1
8. Fish seed and commercial feed is quite expensive	1
9. Lack of water in dry season	1
10. Limited Fund	1
11. Low water quality	1
12. People steal fish	1

**Table 4.** Problems in the small-scale inland aquaculture in Pakxan District, Bolikhamxay Province

less by women (36 %) as this could involve running errands for the needs of the elderly and the sick, e.g., buying medicines and other things as required, which is mostly done by men. While cooking is mainly the role of women (64 %), it could also be carried out by both men and women (36 %), especially when the men are not fishing. Cleaning the house is clearly the main role of women (79 %) as practiced in many Southeast Asian countries, but in some cases cleaning the house could be performed by both men and women (21 %). House maintenance is mainly done by men (86 %) and also by both men and women (14 %) as women could also provide some helping hands to assist the men while doing maintenance work, but women alone do not perform house maintenance. Growing vegetables in home gardens is a role mainly for women (50 %) as they are mostly at home while men are fishing most of the time, but in some cases this role is done by both men and women (46 %) especially when the men are not fishing. As for fishing for household consumption, this role is mainly done by men (78 %) as the women are at home doing household chores, although this is also done by both men and women (22 %), especially when women have time to spare, although in the value chain women help in post-harvest and processing as well as in mending nets and maintaining fishing gears. In raising livestock for consumption, both men and women are more involved

vegetables; (7) fishing for household consumption (in this case fish culture); (8) raising livestock for consumption; and (9) participation in social meetings. In terms of taking care of children, it seems that this is among the main roles of women in the family (52 %) although both men and women also take care of the children (48 %), especially when the men are at home after fishing or in between while doing house maintenance but this is not done by men alone. As for taking care of the elderly and sick members of the family, this role is more performed by both men and women (64 %), and



**Fig 18.** Reproductive roles of men and women in inland aquaculture of Pakxan District

(73 %), men (19 %), and women (8 %) because the men have to construct the livestock pens while the women assist in the maintenance and raising the animals, like feeding the livestock. In terms of participation in social meetings, the involvement of both men and women is high (79 %) indicating high interest of both men and women in discussions about their community, while that of men alone is 14 % as they are fishing most of the time, and women 7 % only as they represent the men who could not attend the meetings. Nonetheless, as could be observed from Figure 18, the men respondents indicated that they do not perform household chores even if the main respondents of the survey are men. The assessment of the respondents from Pakxan District, Bolikhamxay Province confirms the strong stereotype that women work for household needs while men work for income.

## 2) Productive roles

On the productive roles of men and women, Figure 19 shows that men do most of the tasks related to fish culture, such as drying and preparing the ponds for fish culture, preparing the water and pumping water to the ponds (68-70 %), although both men and women also take part in doing these tasks (30-32 %) while women usually take some part in the planning and negotiating for the supply of fish seeds. Releasing seeds into the ponds is not only done by men (59 %) but also by both men and women (37 %) as the women could easily provide helping hand in this task which is not too heavy for them, but women alone seldom do this task individually. While feeding is usually done by both men and women (78 %) checking the water quality of the pond is done by men (56 %) and seldom done by women. Treatment of the water before pumping this into the pond is done by men (56 %), fish health management is done by both men and women (52 %), as well as planning for the sale of the produce (54 %). Both men and women share the works on accounting, feeding, selling, and harvesting (61-75 %). This rating by the respondents suggests that men are

more adept than women in terms of aquaculture, which could be true because in most cases, men usually participate in training sessions on fish culture. Nonetheless, women also do their job of helping in ways possible the men members of the family, to be successful in their aquaculture endeavors.

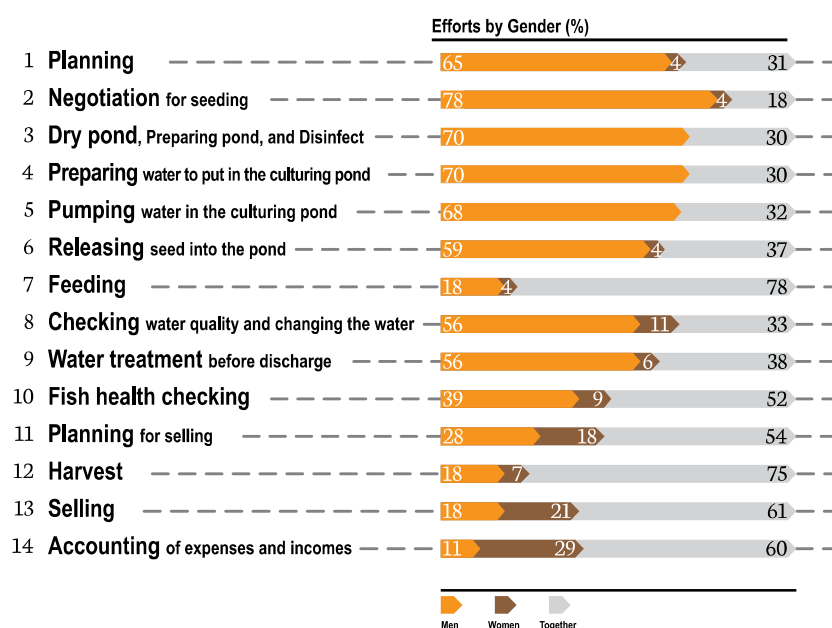


Fig 19. Productive roles of men and women in inland aquaculture of Pakxan District

### 3) Access and Control Over Resources

In terms of access, ownership and control over family resources, the percentage was high for both men and women in the household properties, such as house, farmland, car, and motorcycle (Table 5). Moreover, both men and women can access, be owner and control of the financial investment from banks, microfinance and loan from private entities, and could also lend their own money to other people. Women and men have also equal access to the public services, such as health and can have their own health insurance as well as car insurance. In addition, both men and women get equal opportunity to get employment. In the area of aquaculture equipment and materials, men have more access than women because of the productive roles of men as the main workers in fish culture. However, men and women have equal share in the ownership and control of the aquaculture implements. Generally, both men and women have high control in decision making, and together can claim that

Item	Access				Ownerships				Controls			
	N	Men	Women	Both	N	Men	Women	Both	N	Men	Women	Both
(1) House	28	25%	11%	64%	28	7%	11%	82%	28	11%	7%	82%
(2) Farmland	28	18%	7%	75%	28	4%	14%	82%	28	4%	4%	93%
(3) Car	24	38%	4%	58%	24	21%	4%	75%	24	21%	4%	75%
(4) Motorcycle	28	25%	4%	71%	27	26%	7%	67%	28	21%	4%	75%
(5) Loan from bank for investment	14	21%	7%	71%	14	14%	14%	71%	15	7%	7%	86%
(6) Loan from microfinance	6	17%		83%	6	17%		83%	14	17%		83%
(7) Loan from private	2			100%	2			100%	6			100%
(8) Money lending	3			100%	3			100%	2			100%
(9) Life/health insurance	8	25%	13%	63%	7	14%	14%	71%	3	14%	14%	71%
(10) Car insurance	10	50%		50%	10	30%		70%	7	30%		70%
(11) Public health	18	6%	6%	89%	18		6%	94%	10		6%	94%
(12) Expense in the house	26	8%	4%	89%	24	4%	8%	88%	18		8%	92%
(13) Employment	7	29%	29%	43%	5	20%	20%	60%	24	20%	20%	60%
(14) Equipment for aquaculture	26	50%	8%	42%	25	28%	8%	64%	5	20%	8%	72%
(15) Fish feed	26	42%	8%	50%	23	17%	4%	78%	25	9%	4%	87%
(16) Storage for keeping equipment	26	54%	4%	42%	25	32%	4%	64%	23	24%	4%	72%
(17) Worker dormitory	13	54%	8%	39%	11	9%	36%	55%	25		36%	64%
(18) Seeding	26	28%	8%	35%	24	38%	4%	58%	11	26%	4%	70%
(19) Medical or chemical for aquaculture	26	69%	12%	19%	24	42%	13%	46%	23	30%	9%	61%
(20) Farm register	11	55%	9%	36%	10	30%	10%	60%	11	9%	9%	82%
(21) Decision to select the customer	28	11%	18%	71%	23	4%	13%	83%	23	4%	13%	83%
(22) Decision to select whole buyer and product harvesting	25	12%	12%	76%	20	10%	5%	85%	20	5%	5%	90%
(23) Training/Study tour/Other	24	33%	8%	58%	17	24%	6%	71%	18	22%	6%	72%

Table 5. Access, ownership and control over the resources in Pakxan District Bolikhamxay Province, Lao PDR

they make their own decisions and have equal control over those decisions, which is good as the decisions of women on matters that concern the family and resources are also recognized.

#### **4.1.3. Gender perspectives**

In Pakxan District, Bolikhamxay Province, the farmers have formed into groups, such as the Pakpuang Group, Fish Cage Group, and Pakxan Group. While taking a look at these groups, there appears to be inequality of women and men in participating group meetings. As indicated by the respondents, in most cases, meeting participants comprise 20% women and 80% men because of the following reasons:

- Women have a lot of housework and have no time to participate in meetings (9 respondents)
- Women would not dare to make decisions (8)
- Man is the main person who knows how to culture fish (1)
- Men gave better answers to questions and men are working much (1)
- Aquaculture as a man's job (1)
- Woman is more skillful at taking care of family members (1)
- Women take care of the children (1)

Meanwhile, respondents also made some recommendations to develop their community. These include the following:

- Establishment of health center, and building concrete road to community (9 respondents)
- Establishment of community information center (3)
- Promotion of career development for teenagers in the community (2)
- Close monitoring of the health of people in the community, from time to time (1)
- Assistance in promoting health education for the elderly and medical treatment (1)
- Promotion of career path in the community (1)
- Construction of good road to the school (1)
- Training course on methods in aquaculture production (1)
- Training on breeding techniques and animal health management (1)

#### **4.1.4. Conclusion and recommendations for intervention**

As indicated in the above, the role of men and women in Pakxan District, Bolikhamxay Province, Lao PDR is divided physically in terms of sex. Men perform the productive roles while the women focus on the reproductive roles because of the belief that women are skillful in taking care of their family and the men must work hard for their family. However, in terms of decision making, women and men together have equal opportunities. Access and control over the household properties, public services and public resources are equal. Nonetheless, looking carefully at the reproductive roles, women regularly perform their work daily while men work only occasionally. The daily chores

of women in Pakxan District, Bolikhamxay Province, Lao PDR make them busy and occupied to the extent that women have no time to attend village meetings. Moreover, women also do not participate much in the aquaculture activities because men are well known to be adept in aquaculture operations while the women are busy doing household chores.

The recommendations for intervention, from the case study in Pakxan District, Bolikhamxay Province, Lao PDR include the following:

- As the main problem in Pakxan District, Bolikhamxay Province is the unstable price of the produce, fish processing should be promoted to preserve the produce and wait for the right and fair price, and at the same time, provide job opportunities to women who are usually taking care of fish processing and post-harvest
- As the fish farmers are confronted with problems on fish diseases, training on breeding techniques and animal health management should be conducted, ensuring a balanced participation of women and men to enhance the knowledge and skills of women and men on fish culture techniques and produce high quality products that command good prices
- To reduce the strong stereotype of women having to do mainly household chores, awareness building on gender concepts should be promoted in the country at all levels, especially at local communities

## 4.2 Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Kyauktan, Yangon Region, Myanmar

### 4.2.1. General information

#### 1) Demographic information

The 40 respondents for the case study in Kyauktan, Yangon Region, Myanmar, composing male (71%) and female (29%) were interviewed. Specifically, the data were collected from three villages of Kyauktan, namely: Chaung-Wa, Mee-Pya, and Zawebarkonetan. As shown in Table 6, the average age of the respondents is 44 years old, the average number of family members is 4, most of whom are Buddhists, and are mostly married (97%). The highest educational attainment of the fishers is elementary level (87%).

Basic Information	No	%
No. of men	28	71%
No. of women	12	29%
Total	40	100%
Average age	44 (28-73)	-
Average No. of family	4 (2-6)	-
Religion: Buddhism	38	100%
Marital status		
Single	1	3%
Married	39	97%
Total	40	100%
Education		
Elementary school	35	87%
Junior high school	3	8%
Bachelor	2	5%
Total	40	100%

Table 6. Demographic information of respondents in Kyauktan, Yangon Region, Myanmar



Job	No.	%
<b>Main job (N=40)</b>		
Fisheries/Fishing	38	95.0
Glossary shop	1	2.5
Officer	1	2.5
<b>Second job (N=40)</b>		
Aquaculture	12	30.0
Don't have second job	28	70.0
<b>Total</b>	<b>40</b>	<b>100%</b>

**Table 7.** Occupation of respondent in Kyauktan, Yangon Region, Myanmar



**Fig 20.** Drift net used by fishers in Kyauktan, Yangon Region, Myanmar

## 2) Occupation

The main occupation is fishing (95%), there are others job as glossary shop. The second job is aquaculture. But 70 % of respondent depend on inland fishing only.

## 3) Inland fishing in Kyauktan, Yangon Region, Myanmar

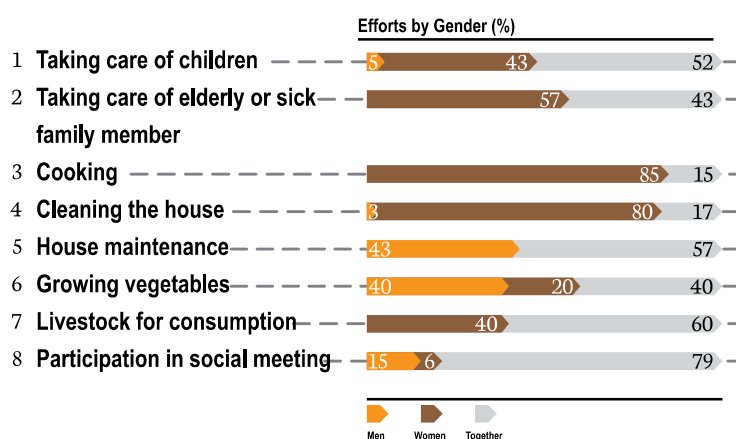
The average income from fishing per year is 232.32 million Burmese Kyats per fisher. In Kyauktan, 100 % of fishers use boats with outboard motor, 100 % of fishing boats are licensed, and 100% of fishers use drift net as their fishing gear (Figure 20). Multispecies of fish are caught (e.g., threadfin (*Polynemus* sp.), catfish (*Arius* sp.), croaker (*Johnius* sp.), hilsa (*Tenualosa ilisha*), and basa fish (*Pangasius* sp.). From the survey, it was found that the problems that confront the people in this area include decreased fisheries resources,

labor shortage, overfishing, impacts of climate change, and conflict between commercial fisheries using multi-species net and small-scale fisheries.

### 4.2.2. Gender Dimension

#### 1) Reproductive roles

In Kyauktan, Figure 20 indicates that the women perform the tasks of taking care of elderly or sick family members (57%), cooking (85%), and cleaning the house (80%). Women and men together take care of children (52%), do house maintenance (57%), grow vegetables (40%), raise livestock for consumption (60%), and participate in social meetings (79%). Men have no dominant work for reproductive roles.



**Fig 21.** Reproductive roles of men and women in inland fishing, Kyauktan, Yangon Region, Myanmar

## 2) Productive roles

The productive roles in this case are those related to inland capture fishing in Kyauktan. Figure 21 shows that men make the decision on the species of fish to be captured or the fishing gear to be used, check boat engine before going to fish, check gear and all equipment needed before they go fishing, drive or steer the boat to fishing ground, set out the fishing gear, and bring fishing gear and boat or engine for maintenance. Meanwhile, the women assist men in the maintenance of fishing gear and net and if necessary, repair fishing gear. Women also help the men by taking charge of checking the weather and tide.

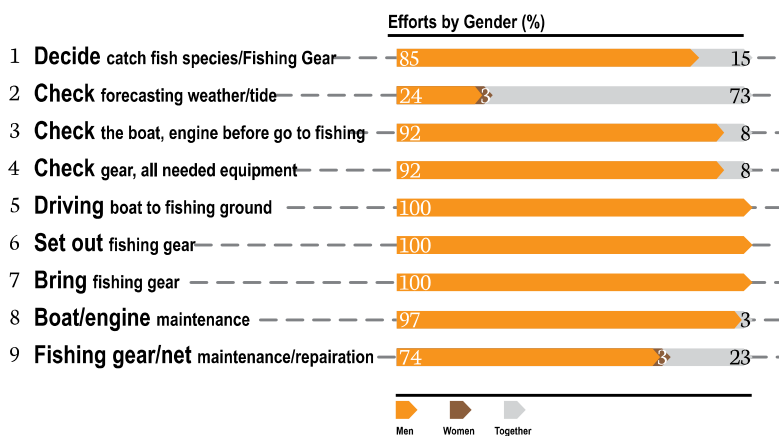


Fig 22. Productive roles of men and women in inland fishing, Kyauktan, Yangon Region, Myanmar

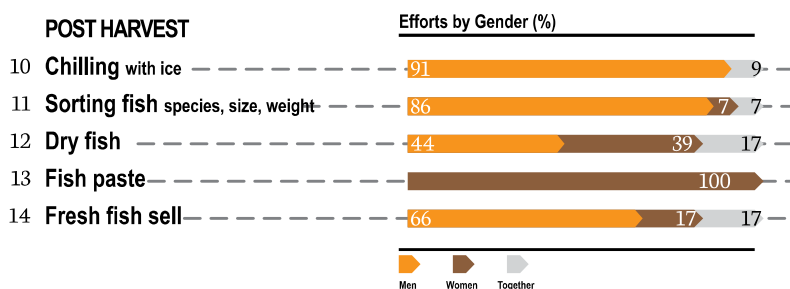


Fig 23. Roles in post-harvest of men and women in inland fishing, Kyauktan, Yangon Region, Myanmar

the maintenance of fishing gear and net and if necessary, repair fishing gear. Women also help the men by taking charge of checking the weather and tide.

In post-harvest, the women take charge of producing fish paste (100 %) and help the men in drying fish (39 %). As shown in Figure 22, men have more roles in fisheries post-harvest than the women, e.g., chilling fish with ice (91 %); sorting fish by species, size, weight (86 %); drying fish (44 %), and selling fresh fish (66 %).

## 3) Access, ownership and control over resources

Both men and women have access and control their household properties such as their house although men have more right to ownership (50 %); both men and women have control over farmland (58 %); men have more control over car (75 %) and right of ownership (67 %) but both men and women have control over their car (40 %). For motorcycle which is the most common form of transportation within the family, men have more access than women, as well as ownership and control over such item. Women have more access to loans from bank for investment and microfinance, but both men and women have more control over loans for microfinance. Only one of the women respondents had non-performing loan and only one man had life insurance. Lending money is mainly accessed from men. The respondents did not mention about car insurance and medical (sickness) treatment. As for expenses in the house, both men and women not only have access but also have control over the expenses (equally at 83 %). Meanwhile, both women and men have the chance to participate in trainings and study trips (79 %) and both can make decisions on their participation (73 %).

Item	Access				Ownerships				Control			
	N	Men	Women	Both	N	Men	Women	Both	N	Men	Women	Both
(1) House	40	3%	3%	95%	14	50%	36%	14%	37	5%	3%	92%
(2) Farmland	14	21%	50%	29%	2	50%	50%		12	25%	17%	58%
(3) Car	4	75%	25%		3	67%		33%	5	20%	40%	40%
(4) Motorcycle	24	92%		8%	14	86%	14%		23	83%	4%	13%
(5) Loan from bank for investment	4	25%	50%	25%					3		33%	67%
(6) Loans for micro finance	27	44%	52%	4%								
(7) Non-performing loans	1		100%	33%								
(8) Lending	6	50%	17%									
(9) Life/health insurance					1			100%	23	4%	13%	83%
(10) Car insurance									15	13%	13%	73%
(11) Sickness treatment												
(12) Expenses in the house	29	3%	14%	83%								
(13) Training/study tour/other	19	16%	5%	79%	5	20%	80%					

Table 8. Access, Ownership and Control over the resources in Kyauktan, Yangon Region, Myanmar

### 4.2.3. Gender perspectives

As for the actual participation in the group meetings, both men and women have more chances to attend than women or men individually. However, it is more likely that the women attend meetings to represent the men who are still fishing during the scheduled meetings, but as observed during meetings, the men are more active in giving comments and recommendations than the women who are shy to make comments. Low income is the main worry (97%) among the respondents from Kyauktan. The recommendations therefore from the respondents include development of their livelihoods, support their job opportunities in fish processing (drying fish), and in maintaining grocery shops. Access to loans with low interest and no collateral for their current job is as fishers and new job opportunities was also suggested by the respondents.

### 4.2.4. Conclusion and recommendations for intervention

For the gender roles in fisheries, men work to prepare and arrange for the fishing operations, however, women are also involved in some tasks such as preparing the fishing nets and selling fish mostly to the middlemen in the village. While women mainly do household works (such as childcare, elderly care, cooking, cleaning, and assuring food security), the men do the work for fishing, including making decisions on fishing matters because they are mainly responsible for the fishing operations. On the other hand, most of the men do laborious tasks such as house repair and maintenance. However, decision making in the household is done by the women and men who always consult

each other. The survey also found that the women had the same chance as the men to attend community activities. Furthermore, the survey also found that men and women make decisions together for important activities.

The recommendation for intervention on inland fishing in Kyauktan, Yangon Region, Myanmar focuses on improving the livelihoods of women and men. Specifically, the following suggestions were also raised:

- For the problem on decreasing fisheries resources, awareness building to women and men and youth on sustainable resource utilization and enhancement through training or study trips or other media campaigns
- In supporting the women in their livelihood on fish processing (drying fish) for income generation and on maintaining grocery shops for convenience in buying goods, a cooperative group should be established for collecting dried fish products and selling other goods for local people
- As for the need to access loans with low interest, a cooperative or microfinance system should be established to support low interest loans to group members in Kyauktan.

### 4.3 Gender Dimension in the Value Chain of Small-scale Marine Capture Fisheries in Infanta, Quezon Province, Philippines

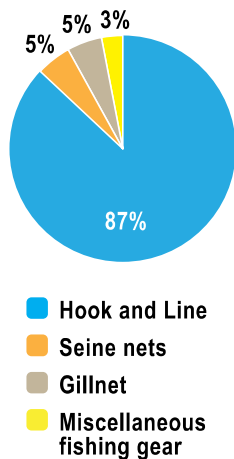
#### 4.3.1. General information

##### 1) Demographic information

The number of respondents was 40 persons, composed of 55 % men and 45 % women, with average age of 47 years old, the youngest and oldest of which were 21 and 71, respectively. The average number of family members was 4 persons, 100 percent of them were Christians, mostly married (80%), and the highest main educational attainment was high school (54%).

Basic Information	No	%
No. of men	22	55%
No. of women	18	45%
Total	40	100%
Average age	47 (21-71)	-
Average No. of family	4 (2-6)	-
Religion: Cristian	40	100%
Marital status		
Single	4	10%
Married	32	80%
Single with live in partner	2	5%
Widowed	2	5%
Total	40	100%
Education		
High school graduate	21	54%
High school undergraduate	8	20%
Elementary graduate	7	17%
Elementary undergraduate	2	5%
College graduate	1	2%
Vocational	1	2%
Total	40	100%

**Table 9.** Demographic information of respondents in Infanta, Quezon Province, Philippines



**Fig 24.** Fishing gears used by the respondent fishers in Infanta, Quezon Province, Philippines

## 2) Small-scale Marine Fisheries in Infanta, Quezon Province, Philippines

Fishing is the main occupation of the respondents from Infanta, Quezon Province, Philippines, using hook and line (87%) as their major fishing gear, although other fishing gears are also used such as set net (5%), gill net (5%), and miscellaneous gears (3%) as shown in Figure 23. The species caught are skipjack tuna, yellowfin tuna, sardines, dolphin fish, herring, red snapper, threadfin bream, clown fish, goat fish, grouper, round scad, big-eye snapper, hardtail mackerel, Indian mackerel, bangus fry, milkfish, and moon fish, among others.

The major problems related to fishing as mentioned by respondents from Infanta, Quezon Province (Table 10) include frequent occurrence of bad weather (49%), damages to motorized boat and fishing gears (14%), decreased fish catch (11%), insufficient capital (11%), strict law enforcement (3%), limited time to fish due to COVID-19 pandemic restrictions (3%), spoilage of fish (3%), competition from other fishers using their own gears (3%), and encroaching of small-scale commercial fishing boats from neighboring municipal waters (3%). Although all the respondents were Christians and as such observe the practice of going to Church on Sundays, this factor did not limit the time of fishers to fish as may be they go to sea after attending their Christian services.

Problems in Fishing	No.	%
Bad weather	14	49%
Damages to motorized boats and fishing gears	4	14%
Decreased fish catch	3	11%
Capital	3	11%
Strict law enforcement	1	3%
Limited time to fish due to COVID-19 pandemic restrictions	1	3%
Spoilage of fish	1	3%
Competition in other fisher using their gears	1	3%
Small-scale commercial fishing boats from neighboring municipal waters	1	3%
<b>Total</b>	<b>29</b>	<b>100%</b>

**Table 10.** Problems related to fishing in Infanta, Quezon Province, Philippines

### 4.3.2. Gender Dimension

#### 1) Reproductive roles

In Infanta, Quezon Province, women work mainly as cleaners as can be seen in Figure 24 where the women take charge of washing clothes (69%) and dishes (50%), and clean the house (59%). Men take care of the house maintenance (84%), fishing (81%), and livestock raising for consumption

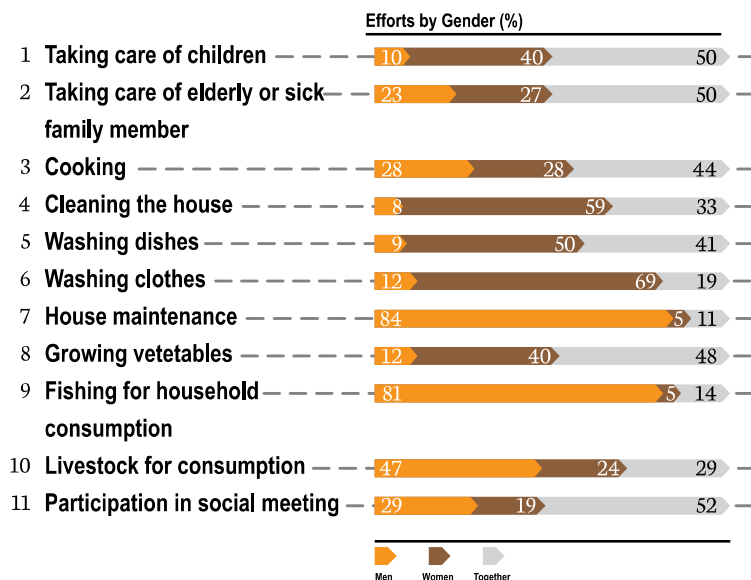


Fig 25. Reproductive roles of men and women in Infanta, Quezon Province, Philippines

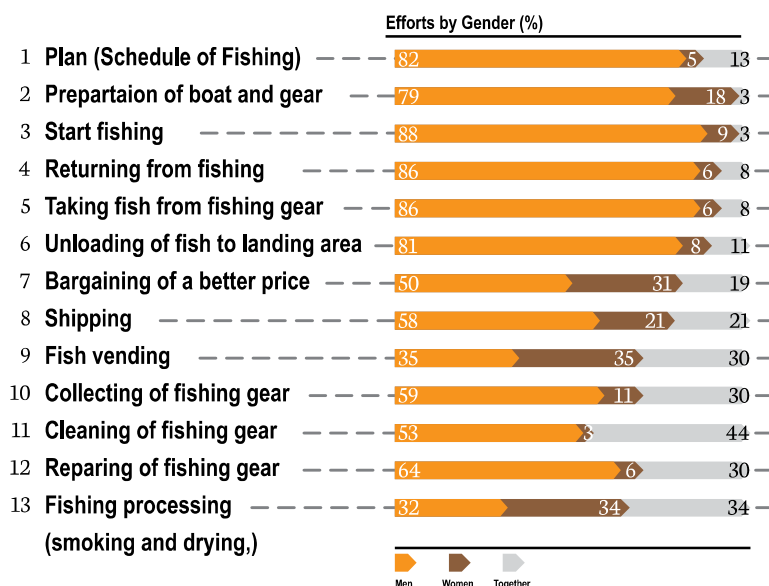


Fig 26. Productive roles of men and women in marine capture fisheries in Infanta, Quezon Province, Philippines

(47%). Women and men work together in childcare (50%), as well as care for the elderly or sick family members of the family (50%), cooking (44%), and participating in social activities (52%).

## 2) Productive roles

Women and men work together in fish processing (34%) and fish vending (30%). Other activities such as planning for fishing (82%), preparing boats and gear (79%), fishing (86%), removing fish from gears (86%), unloading fish to landing areas (81%), bargaining for better prices (50%), shipping (58%), collecting the fishing gear (59%), cleaning of fishing gear (59%), and repairing of fishing gear (64%) are mainly done by men. However, the women also participate in most of the activities, especially in fish processing, fish vending, shipping bargaining for better prices of fish, as well as in the preparation of boats and gears.

## 3) Access, ownership and control over resources

Both men and women can access, be owners and can control over the resources and services with high percentages as shown in Table 11. Works related to fisheries are more accessed and controlled by men for example: employment, boat and gear registration. Women have the power to make decisions in selecting the buyers or customers, and harvesting of the products (47%). However, women have little access to capacity building such training and taking part in study tours.

Item	Access				Ownerships				Control			
	N	Men	Women	Both	N	Men	Women	Both	N	Men	Women	Both
(1) House	37	8%	5%	87%	26	15%	12%	73%	30	3%	3%	94%
(2) Farm land	12		33%	67%	6	50%	50%		9	22%		78%
(3) Car	4		75%	25%	2			100%	5	40%		60%
(4) Motorcycle	19	53%	10%	37%	12	50%	17%	33%	10	40%		60%
(5) Other properties	7		43%	57%	5	60%		40%	8	13%		87%
(6) Loans from the bank for investment	7	29%	42%	29%	3		33%	67%	0			
(7) Loans for micro finance	16	13%	25%	62%	6	17%		83%	11		9%	91%
(8) Non-performing loans	1		100%		1			100%	1			100%
(9) Lending	4	25%	75%		2			100%	2		100%	
(10) Life/ health insurance	3	67%	33%		6	17%		83%	8	12	12%	76%
(11) Car insurance	8		25%	75%	1			100%	2			100%
(12) Sickness (medical) treatment	3		33%	67%					1			100%
(13) Expenses in the house	23	9%	35%	56%	10	10%	30%	60%	25	4%	16%	80%
(14) Employment	5	60%	20%	20%	2	50%		50%	1			100%
(15) Boat and Gear	28	46%	4%	50%					21	43%	5%	52%
(16) Boat and Gear Registration	23	52%	4%	44%	19	47%	47%	6%	18	38%	6%	56%
(17) Decision to select the customers	30	30%	43	27					19	26	32	42
(18) Decision to select wholesale buyer and product harvest	30	30%	47	23					19	16	31	53
(19) Training/ study tour/ others	12	42%	25	33					6	17	17	66

Table 11. Access, Ownership and Control over the resources in Infanta, Quezon Province, Philippines

### 4.3.3. Gender perspectives

Considering that majority of men are members of fishing groups, they are dominant in fishing activities and are therefore more involved in group meetings than the women (40% women and 60% men). Nevertheless, participation in group meetings could be quite balanced because when men are busy at sea the women can represent men in those meetings. The main recommendations raised by the respondents for their livelihood development include access to capital for fishing (40%) and job opportunities (40%). Only small percentage of the respondents mentioned about health (10%) and education (10%) development for the community.

### 4.3.4. Conclusion and recommendations for the intervention

While women and men work together in domestic roles, men are mainly responsible for fishing although women are also involved in all fishing operations, while women are dominant in fish processing and selling. Results of the survey indicated the local prospective that women work for light jobs and men for heavy jobs. Women and men can equally access and control over the resources and avail of social services, but few women had been involved in capacity development programs.

The main problems related to fishing include the frequent occurrence of bad weather conditions and the limited time to fish due to COVID-19 pandemic restrictions which are difficult to manage. The other problems could be manageable, such as decreasing of fish resources, budget and capital, spoilage of catch, and competition from other fishers using their gears. The problems related to encroachment of small-scale commercial fishing boats from neighboring municipal waters, and management and maintenance of motorized boats and fishing gears were also mentioned by few respondents.

The recommendations for intervention in marine fishing in Infanta, Quezon Province, Philippines focused on improving the livelihoods of women and men. Specifically,

- More women should have their voice heard to empower them and strengthen their opportunities in accessing jobs because the women have time to participate in meetings but are not much involved in capacity building programs
- Microfinance system should be established in the area to secure the capital for fishing and other job opportunities
- Engaged women to be involved in other capacity building programs, especially in the aspects of education and health management programs as these are basic matters that would enable them to assist family members and other villagers.

## **4.4 Gender Dimension in the Value Chain of Small-scale Marine aquaculture Surat Thani, Thailand**

### **4.4.1. General information**

The total number of respondents was 93 persons, composed of 64 men and 29 women, whose average age was 50 years old with range of 22 to 77 years old. As shown in Table 12, about 72% of the respondents are married, and all are Buddhists (100%). For their educational attainment, almost all of the respondents graduated from elementary school (45%), high school (19%), and Junior high school (13%).

The main occupation of the respondents is aquaculture (68%), and the second is agriculture (Table 13). However, all of them are farmers and the number one provider of supplementary income is aquaculture (44%).

The number of respondents who operate aquaculture could be categorized by aquatic species, such as crab respondents (47), shrimp respondents (29)

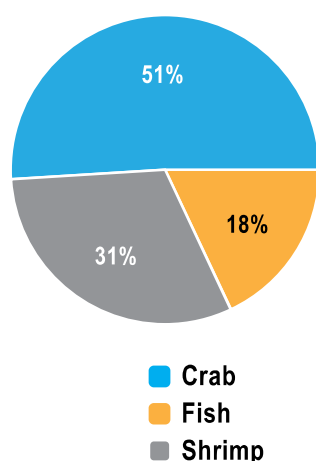


Basic Information	No	%
No. of men	64	69%
No. of women	29	31%
<b>Total</b>	<b>93</b>	<b>100%</b>
<b>Average age</b>	<b>50 (22-77)</b>	<b>-</b>
<b>Average number of family members</b>	<b>4 (2-6)</b>	<b>-</b>
<b>Religion: Buddhism</b>	<b>93</b>	<b>100%</b>
Marital Status		
Single	13	14%
Married	67	72%
Divorced	2	2%
Widowed	10	11%
No response	1	1%
<b>Total</b>	<b>93</b>	<b>100%</b>
Educational Attainment		
Elementary School	41	45%
Junior High School	12	13%
High School	17	19%
Vocational	5	5%
Diploma	5	5%
Bachelor's degree	11	12%
Ph.D.	1	1%
<b>Total</b>	<b>92</b>	<b>100%</b>

**Table 12.** Demographic information of respondents in Surat Thani, Thailand

Occupation	No	%
<b>Main Occupation</b>	<b>(N=93)</b>	
Aquaculture	63	68%
Agriculture	10	11%
(rubber tree or palm plantation)		
Fishing	6	6%
Retailer	4	4%
Local government officer	4	4%
(head of sub-district, head of village, assistant head of village)		
Insurance seller	1	1%
Security guard	1	1%
Self employed	1	1%
Stainless steel business	1	1%
Contractor	1	1%
Researcher	1	1%
<b>Total</b>	<b>93</b>	<b>100%</b>
<b>Second Occupation</b>	<b>(N=68)</b>	
Aquaculture	30	44%
Agriculture	17	25%
(rubber tree or palm plantation)		
Self employed	8	12%
Fishing	6	9%
Livestock	4	6%
Contractor	1	1%
Restaurant owner	1	1%
Company employee	1	1%
<b>Total</b>	<b>68</b>	<b>100%</b>

**Table 13.** The occupation of respondents in Surat Thani, Thailand



**Fig 27.** Percentage of respondents in Surat Thani, Thailand by aquatic species

and fish respondents (17), with their respective percentages shown in Figure 26. The crab respondents culture crab at an average of 1-4 crops/year while 2-4 crops/year for shrimp by the shrimp respondents. The respondents had around 1-14 rai (6.25 rai = 1.00 ha) utilized for aquaculture ponds, where crab and shrimp culture make use of 1-3 ponds. The aquaculture produce is mostly sold to middleman in the province. Some problems had been encountered in their crab and shrimp culture operations such as diseases, poor water quality, and insufficient supply of fish seeds or fry (69 %, 19 %, and 12 %, respectively). In general, the main problem in aquaculture is water quality (55%), followed by aquatic animal diseases (41%), unstable prices of products (18%), and limited supply of seeds or fingerlings (14%).

### 4.4.2. Gender Dimension

#### 1) Reproductive roles

With respect to the reproductive roles of men and women (Figure 27), men do mainly house maintenance, fishing and raising livestock for household consumption. Women do most of the other household chores such as taking care of children, elderly, and sick members of the family, as well as cooking and cleaning the house. However, men and women perform together in some reproductive tasks such as growing vegetables and participation in community events. Since women do all the household chores every day, therefore, women are over-burdened with respect to reproductive tasks. This could be because women are more familiar with many reproductive tasks than men, although men have more knowledge in terms of grazing animals/livestock and fishing as well as house maintenance.

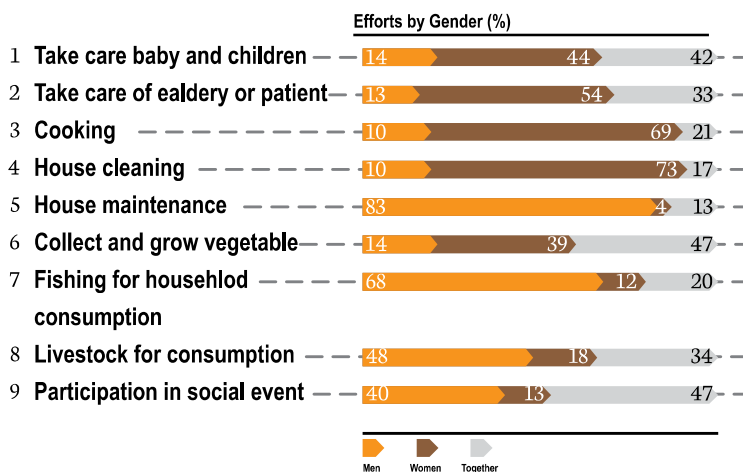


Fig 28. Reproductive roles of men and women in Surat Thani, Thailand

#### 2) Productive roles

On the productive roles of men and women, Figure 28 shows that men do most of the tasks on aquaculture while men and women share the burden when it comes to accounting of expenditures and income. Considering that men are more knowledgeable than women in aquaculture, men are overburdened because the activities usually involve heavy works that are meant for income generation. Meanwhile, women also take part in negotiations for seeds, planning for products sale, and selling of the produce that do not need much heavy works especially that women are already occupied by their reproductive roles.

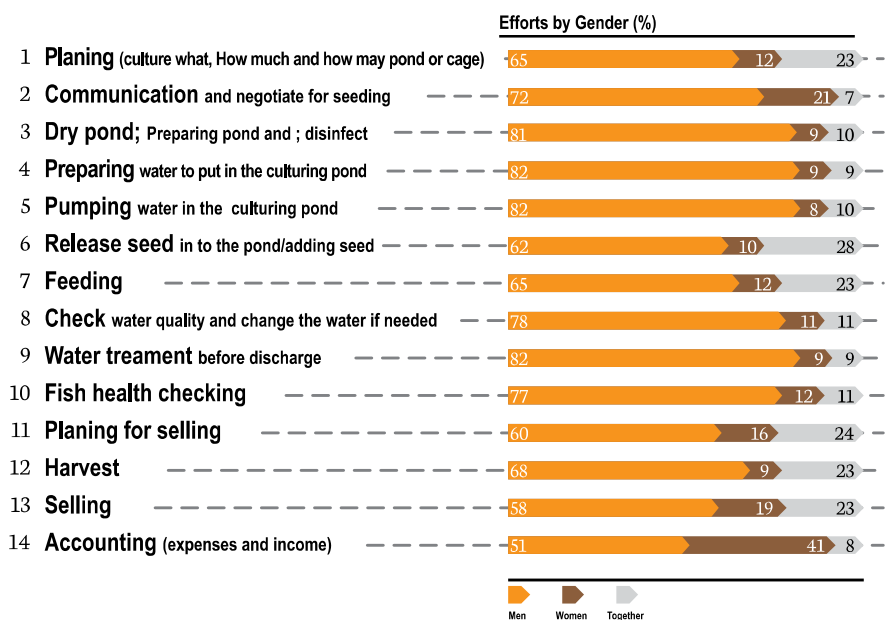


Fig 29. Productive roles of men and women in Surat Thani, Thailand

### 3) Access, ownership and control over resources

Women and men have equal to access to household assets such as house, farmland, car and motorcycle, however men are dominant in the ownership and control over those assets. Loans from bank, microfinance, and private entities are accessible to both women and men. However, in terms of ownership and control, loan from bank is by men, loan from microfinance is by women, and loan from private entities is equally shared by women and men. The loan from bank is done by men and could be linked with the ownership and control of house assets which are mainly by men. Money lending is mostly accessed, owned and controlled by women while life/health insurance, car insurance, public health can be accessed by women and men, but the ownership and control over car is that of men and this is relevant to the fact that men are the main owners of family cars. Women and men equally spend money for household expenditures, but in terms of employment, equipment,

Item	Access				Ownerships				Control			
	N	Men	Women	Both	N	Men	Women	Both	N	Men	Women	Both
(1) House	93	12%	9%	79%	86	63%	35%	2%	86	63%	35%	2%
(2) Farmland	89	19%	11%	70%	81	68%	28%	4%	81	68%	28%	4%
(3) Car	54	24%	4%	72%	55	58%	25%	16%	54	58%	25%	16%
(4) Motorcycle	83	22%	8%	70%	81	47%	30%	23%	79	47%	30%	23%
(5) Loan from bank for investment	51	20%	18%	62%	51	53%	39%	8%	50	53%	39%	8%
(6) Loan from microfinance	24	17%	29%	54%	24	29%	50%	21%	24	29%	50%	21%
(7) Loan from private	4	25%		75%	4	50%	50%		4	50%	50%	
(8) Money lending	4	22%	67%	11%	4	43%	43%	14%	4	43%	43%	14%
(9) Life/health insurance	9	18%	24%	58%	14	18%	24%	58%	14	18%	24%	58%
(10) Car insurance	50	36%	16%	48%	47	49%	24%	27%	28	49%	24%	27%
(11) Public health	59	10%	9%	81%	42	14%	14%	71%	54	14%	14%	71%
(12) Expense in the house	89	12%	9%	79%	89	23%	17%	60%	57	23%	17%	60%
(13) Employment	31	61%	10%	29%	30	63%	20%	17%	30	63%	20%	17%
(14) Equipment for aquaculture	51	60%	7%	33%	63	79%	9%	13%	59	79%	9%	13%
(15) Fish feed	53	58%	8%	34%	57	68%	17%	15%	59	68%	17%	15%
(16) Storage for keeping equipment	41	59%	3%	38%	47	76%	8%	16%	44	76%	8%	16%
(17) Worker dormitory	19	76%		24%	24	96%		4%	20	96%		4%
(18) Seeding	53	62%	8%	30%	58	71%	17%	12%	50	71%	17%	12%
(19) Medical or chemical for aquaculture	51	72%	3%	25%	53	80%	8%	12%	47	80%	8%	12%
(20) Farm register	48	62%	15%	23%	57	71%	24%	5%	49	71%	24%	5%
(21) Decision to select the customer	48	56%	18%	26%	49	69%	18%	13%	39	69%	18%	13%
(22) Decision to select whole buyer and product harvesting	38	66%	17%	17%	36	71%	18%	12%	37	71%	18%	12%
(23) Training/Study tour/Other	34	52%	14%	34%	33	71%	17%	12%	33	71%	17%	12%

Table 14. Access, ownership and control over the resources in Surat Thani, Thailand

materials, and planning related to aquaculture operations men have more access, ownership and control than women considering that men are main manpower for aquaculture.

#### **4.4.3. Gender perspectives**

The percentage of women and men participating in meetings related to aquaculture is the same because men spend their time in the aquaculture operations during the day while the women could attend meetings after doing their household chores. The request from respondents is to help them access to good and cheap fingerlings (22), access to capital sources with low interest (15 persons), development of infrastructures for their convenience in their daily lives and aquaculture (14 persons), creation of job opportunities such as home stay (9 persons), and strengthening of the knowledge of the community members on aquaculture, and also on health and security matters (7 persons).

#### **4.4.4. Conclusion and recommendations for the intervention**

For the gender roles in marine aquaculture at Surat Thani Province, Thailand, men work for preparing and arrangements for the aquaculture operations, however, women are also involved in some tasks such as helping in preparing the ponds, communicating with suppliers of fish seeds or fry, harvesting, selling, and accounting. Moreover, the gender roles in the household showed that women still do the housework such as cooking, taking care of children and the elderly, and backyard gardening, while men do the laborious tasks such as house repair. However, the survey found that women had the same chance of attending community activities as men. Although men may have their main roles in aquaculture and the main role of women is in the household, both men and women could help together in the household chores as well as in aquaculture operations. Furthermore, the results of the survey also showed that men and women make decisions together for important activities.

Gender analysis revealed that gender differentiated roles are based on a strong stereotype of gender division of labor that man must work for hard and heavy tasks while women work for household chores and the not so heavy tasks in the productive roles. The study therefore suggests that men and women should have more understanding of the gender roles that can change their attitude on working, which is to assist each other in the household works because in terms of work time spent, women have more workload than men.

The recommendations for intervention on marine aquaculture in Surat Thani Province, Thailand to improve the livelihoods of women and men are as follows:

- Conduct of training to build the awareness of stakeholders on gender concept to stop the stereotype on gender division of labor
- Establishment of microfinance system to strengthen the financial

capacity of fish farmers and support the low interest rate of loans for their capital for aquaculture operations

- Creation of job opportunities such as home stay and organization of women's groups in the community for women empowerment on income generation

## **5. Conclusions**

The study on gender in the value chain in aquaculture reveals that women and men are involved in almost all processes of fishing and aquaculture, although women are rarely involved with the work at sea on fishing because it is the task of men as gender perspectives. In pond preparation for aquaculture, it is also rare for women to take part because this is a laborious task catered for men. Nonetheless, the roles of women and men in fisheries and aquaculture is strong stereotype of division of labor that women's tasks are light works while men do the heavy work. The participation of women in meetings on gender and aquaculture can be evidence that women have the capability to be engaged in fisheries and aquaculture by contributing their opinions or perspectives to manage fisheries and aquaculture for promoting gender equality and equity in decision-making processes. Therefore, awareness building for women to be recognized as farmers and fishers should be strengthened to enable the women to build confidence in discussions during meetings and contribute to the wellbeing of their communities.

To empower men and women in small-scale fishing and aquaculture in sustaining their livelihoods, capacity building in relevant areas is most crucial. Most women in the study areas request that other job opportunities be created, or the job opportunities related to their main occupation be strengthened. This shows the willingness of women to work for their families because they are oftentimes at home and feel that they are available to work for additional income to support their families.

The study emphasized that women and men are important in the value chain of fisheries and aquaculture based on their physical, knowledge, experiences, and time allocation. These implies change as in gender concept people are changeable. Therefore, to approach the gender equality, the capability of stakeholders should be enhanced through education and communication to empower the women and men in the community based on their needs and the opportunities for their viable livelihoods.

## **Acknowledgment**

We would like to express sincere thanks to FAO in order to support funds for the study and the Bureau of Fisheries and Aquatic Resources (BFAR) in the Philippines, the Department of Fisheries (DOF) in Myanmar and Thailand, and the Department of livestock and Fisheries (DLF) in Lao PDR for supporting information and data collecting. The most grateful acknowledgment to all farmers and fishers who allocate your busy time for interviewing.

## Reference

- FAO. (2011). mainstreaming gender into project cycle management in the fisheries sector: Field manual. RAP Publication 2011/15. Regional Office for Asia and the Pacific. Food and Agriculture Organization of the United Nations. Bangkok, Thailand. Retrieved from <http://www.fao.org/docrep/014/ba0004e/ba0004e00.pdf>
- Kolding, J., Béné, C., Bavinck, M.(2014). Small-scale fisheries: Importance, vulnerability and deficient knowledge. Governance of Marine Fisheries and Biodiversity Conservation: Interaction and Co-evolution.
- SEAFDEC, 2020. Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030. Southeast Asian Fisheries Development Center, Bangkok, Thailand; 23 pp.





# Annex I

## Questionnaire for survey in Laos PDR

### Questionnaire for collect the data on Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Bolikhamxay Province, Lao PDR

No.: \_\_\_\_\_

Date.....Name of Interviewer .....

Village :.....District :.....Province:.....

**1. General information of interviewee and family**

**1.1 Interviewee**

Name:.....Tel.No.....

Sex:.....Age.....,Married

situation:.....Religion:.....education:.....Address,

Village.....District..... province.....

1.2.1. Main job..... 1.2.2. Second job.....

**1.3.1. Family member and main labor in family**

No	Relationship	Sex	Age	Education	ອາຊີບຫຼັກ							Income
					[1] fishery	[2] Aquaculture	[3] Agriculture	[4] worker	[5] Business	[6] officer	[7] Other (mention)	
(1)												
(2)												
(3)												
(4)												

\*[1] No education [2] Primary [3] Secondary [4] High School  [5] ຊັ້ນຕົ້ນ  [6] ຊັ້ນກາງ [7] Bsc [8] Msc [9] PhD

**1.4 Role in family (No income)**

Role in family (No income)	Male	Female	Both	Boy	Girl	Both	Remark
(1) Take of babies							
(2) Take care old people							
(3) Cook							
(4) Clean the house							
(5) Repair the house							
(6) collect and grow vegetable							
(7) Fishing and OAA							
(8) Livestock for consumption							
(9) society activities							

(10 Other

**1.5 Role for culture fish and OAA (has income )**

Activities	Mal	Fe	Both	Boy	Girl	Both	Remark
	e	ma					
(1) Plan(culture what, How much and how may pond or cage)							
(2) communication and negotiate							
(3) Dry pond; Preparing pond and ; disinfect							
(4) preparing water in the pond							
(5) Put water in the pond							
(6) stock the seed							
(7) feeding							
(8) Check water quality and change the water if needed							
(9) Make water more clean							
(10) take care of fish health							
(11) plan for selling							
(12) Harvest							
(13) Selling product							
(14) Accounting (expenses and income)							
(15) Others							
(8) others							

**1.6 Accesses to resources and decision to use for benefit**

Resources	Accesses and can use			Ownership by law			WC			Remark
	F	M	Both	G	B	B	F	M	B	
(1) House										
(2) Farm land										
(3) Car										
(4) Motorcycle										
(5) Other property (mention)										
(6) Loans from the bank for investment										
(7) Loans for micro finance										
(8) Non-performing loans										
(9) Lending										
(10) Life\health insurance										

(11) car insurance											
(12) Sickness Treatment											
(13) Expenses in the house											
(14) Employment											
<b>Aquaculture</b>											
(15) equipment for culture fish											
(16) Fish feed											
(17) storage for keeping equipment											
(18) worker Dormitory											
(19) Aquatic animal feed											
(20) Medicine or chemical (Lime ,Microorganisms, Medicine)											
(21) Farm register											
(22) decision to select the customers											
(23) decision to select whole buyer and product harvest											
(24) Training/study tour /other											

2.1 Kind of aquatic animal .....

2.2 Experience of aquatic animal that you are culturing now? .....year

2.3 method of culture [1] Natural [2] Half natural [3] Business

2.4 How many round per year(from stock to sell out)	2.5 Area (Rai)	2.6 Pond size	2.7 Number of pond( Pond)	2.8 Seed size(cm)	2.9 density (fish/rai)	2.10 size of fish for sell (fish/g)	2.11 Sales	
							(1) quantity of sell (kg/round)	(2) price (kg/kip)

2.12 Minimum Capital

(1) seed /fish , / ក្រប (2) feed \_kip\_ /\_ year\_.....Baht/ year

(3) Medicine/chemical /urea .....kip (4) Pond preparation

(5) Electricity ..... ក្រប\month (6) water .....kip\month or year

(7) For labor ..... kip (8) Land renting ..... kip.

(9) Equipment (for repairing) ..... kip

(10) Equipment ( use only one time) ..... kip.

(11) Other .....kip

2.13 farm standard [1] .....GAP [2] Others

2.14 Labor for aquatic animal culture, Do you hire the workers ? [1] Yes [2] No

(1) How many labor do you have ..... people women .....and men.....

(2) relationship with you labor/workers (can answer more than 1 ).

[1] Family member M?\_ F ?

[2] Relative M?\_ F ?

[3] Friends M?\_ F ?  
 [4] Do not know them before M?\_ F ?

2.15 Any problem for aquatic animal culture?

(1) Problem from this culture [1]  yes [2] No

- Problem .....  
 Level of problem smallness 1 2 3  Biggest (one answer)

- Problem: .....

---

Level of problem smallness 1 2 3  Biggest (one answer)

-- Problem: .....

---

Level of problem smallness 1 2 3  Biggest (one answer)

(2) Do you have any problem about environment in you farm area

[1]  yes [2] No

-- Problem: .....

---

Level of problem smallness 1 2 3  Biggest (one answer)

- Problem: .....

---

Level of problem smallness 1 2 3  Biggest (one answer)

- Problem: .....

---

Level of problem smallness 1 2 3  Biggest (one answer)

4. Social cost, general social attitude and living condition ທັດສະນະຄະຕິທີ່ໄປດ້ານສັງຄົມ ແລະ ຊີວິດການເປັນຢູ່

4.1 Are you a member of any group in your village (province)

[1]  yes [2] No

(1) Aquatic animal stock group, Position ., do you join the meeting .....time/year

(2) Bank group .....\_Position ....., .....meeting \_\_\_\_\_time/year

(3) Micro finance group..... position....., Meeting .....time/year

(4) Other position....., Meeting .....time/year

4.2 Each meeting that you join how many women and men .....F.....M

4.3 How many women and men have comment in the meeting F.....M

4.4 If participant in 4.2 not equal why? .....

4.5 from who you get information of group (friends in the village, Public Relations, social online and others)

4.6 do you give the equal opportunity for education to men and women? [1]  equal [2] not equal

why

.....

.....

**4.7 Will you give an education opportunity to women or men**

**Why**.....

.....

**4.8 Are you worrying about your daily life?** (select one answer)

[1]  yes [2] no ⇒ go to (4.10)

**4.9 why you are worrying about you daily life** (select many answers)

[1]  less income

[2] Desperate

[3] No education (not enough education)

[4] Health of family members

[5] other \_\_\_\_\_

**4.10 Are happy with your business (how much)**

[1] No happy [2] a little happy [3] No feeling [4]  yes happy [5] Very happy [6] Not quite sure or do not know

5. Do you want any help from government.

.....

.....

Interviewee

Interviewer

# Annex II

## Questionnaire for survey in Myanmar

**Questionnaire for collect the data on  
Gender Dimension in the Value Chain of Small-scale Inland Fisheries in Kyauktan,  
Yangon Region, Myanmar**

No.: \_\_\_\_\_

Interviewer's name ..... Date.....

**1. General information of interviewee and family**

1.1 Interviewee

Name:.....Tel.No.....,  
Sex:.....Age.....,status.....  
Religion:.....education:.....Address,  
Village..... **VillageTract**..... **Township**..... District.....

1.2.1. Main job..... 1.2.2 . Second job.....

1.3.1. Family member and main labor in family

No	Relationsh ip	Se x	Ag e	Education	Occupation							Incom e
					[1] fisher y	[2] Aquacu lture	[3] Agri cultu re	[4] wo rker	[5] Busi ness	[6] office r	[7] Othe r (men tion)	
(1)												
(2)												
(3)												
(4)												

\*[1] No education [2] Primary [3] Secondary [4] High School  [5] BSc/BA [6] MSc/MA [7] BE/MBBS [8] PhD [9] BEd [10] Diploma/Certificate [11] Monastery Education

1.4 Role in family (No income)

Role in family (No income)	Mal e	Fem ale	Both	Boy	Girl	Both	Remark
(1) Take of babies							
(2) Take care <b>Old/Adult person</b> Care for elderly and sick family members							
(3) Cook							
(4) Clean the house							
(5) Repair the house							
(6) Collect and grow vegetable							
(7) Livestock for consumption							
(8) Society activities							
(9) Other :							

1.5 Role for Inland Fisheries (has income)

1.5.1 Fishing boat

1. fishing boat	2. In/Out board motor	3. Length (meters)	4. Engine power (horse power)	5. Construction material (wood/FRP)	6. Price of boat when purchased (Kyat)	7. Licensed/ Unlicensed boat	8. No. of crew (Women and men (person))
No.1						<input type="checkbox"/> Yes <input type="checkbox"/> No	W= M=
No.2						<input type="checkbox"/> Yes <input type="checkbox"/> No	W= M=
No.3						<input type="checkbox"/> Yes <input type="checkbox"/> No	W= M=

1.5.2 Type of fishing gear

1. Type of fishing gear	2. No. of fishing gear	3. Target species	4. Fishing Season (month)	5. No. of fishing day per month	6. Fishing hours a day	7. No. of haul per fishing trip	8. Fishing ground (river, reservoir, lake or ect)
(1)							
(2)							
(3)							

1.5.3 Role for Inland Capture Fisheries (has income)

Activities	M	F	Both	Boy	Girl	Both	Remark
(1) Decide catch fish species/ fishing gear use							
(2) Check weather/ tide							
(3) Check the boat, engine before to go fishing							
(4) Check gear, all needed equipment before to go fishing							
(5) Driving boat to fishing ground							
(6) Set out fishing gear							
(7) Bring fishing gear							
(8) Boat/engine maintenance							
(9) Fishing gear/ net maintenance/ repair fishing net							
(10) Other							

Post-harvest

Activities	M	F	Both	Boy	Girl	Both	Remark
(1) Chilling with ice							
(2) Sorting fish species, size, weight							
(3) Dry Fish							
(4) Fish paste							
(5) Fish Swim bladder							
(6) Others: Processing, ....							
(7) Fresh fish Sell							
(8) Other							

1.6 Accesses to resources and decision to use for benefit

Resources	Accesses and can use			Ownership by law			MC/WC			Remark
	F	M	Both	G	B	B	F	M	B	
(1) House										
(2) Farmland										
(3) Car										
(4) Motorcycle										
(5) Agricultural equipment - Rice Thresher - Tractor										
(6) Loans from the bank for investment										
(7) Loans for micro finance										
(8) Non-performing loans										
(9) Lending										
(10) Life\health insurance										
(11) car insurance										
(12) Sickness Treatment										
(13) Expenses in the house										
(14) Employment										
<b>Aquaculture</b>										
(15) equipment for culture fish										
(16) Fish feed										
(17) storage for keeping equipment										
(18) worker Dormitory										
(19) Aquatic animal feed										
(20) Medicine or chemical (Lime ,Microorganisms, Medicine)										
(21) Farm register										
(22) decision to select the										



customers										
(23) decision to select whole buyer and product harvest										
(24) Training/study tour /other										

1.7 Any problem for aquatic animal culture?

(1) Problem from this inland fishing [1] yes [2] No

- Problem .....

Level of problem smallness 1 2 3 4 Biggest (one answer)

- Problem: .....

Level of problem smallness 1 2 3 4 Biggest (one answer)

- Problem: .....

Level of problem smallness 1 2 3 4 Biggest (one answer)

(2) Do you have any problem about environment in your fishing ground

[1]  yes [2] No

- Problem: .....

Level of problem smallness 1 2 3 4 Biggest (one answer)

- Problem: .....

Level of problem smallness 1 2 3 4 Biggest (one answer)

- Problem: .....

Level of problem smallness 1 2 3 4 Biggest (one answer)

2. Social cost, general social attitude and living condition

2.1 Are you a member of any group in your village (province)

[1] yes [2] No

2.1.1 Name of group.....

Your Position .....

Do you join the meeting .....time/year

2.2 Each meeting that you join how many women and men .....F.....M

2.3 How many women and men have comment in the meeting F.....M

2.4 If participant in 2.2 not equal why? .....

2.5 Are you worrying about your daily life? (select one answer)

[1] yes [2] no ⇒ go to (4.10)

2.6 why you are worrying about you daily life (select many answers)

[1] less income

[2] Desperate

[3] No education (not enough education)

[4] Health of family members

[5] other \_\_\_\_\_

**2.7 Are happy with your business (how much)**

[1] No happy [2] a little happy [3] No feeling [4]  yes happy [5] Very happy [6] Not quite sure or do not know

**3. Do you want any help from government or any suggestion to develop your livelihood**

.....  
.....

Interviewee

Interviewer

# Annex III

## Questionnaire for survey in Philippines

### Questionnaire for Collecting Data on Gender Dimension in the Value Chain of Small-Scale Marine Capture Fisheries in Southeast Asia for Each Project Site

No.: \_\_\_\_\_

Date \_\_\_\_\_ Name of Interviewer \_\_\_\_\_

Purok/ Barangay \_\_\_\_\_ Municipality \_\_\_\_\_ Province \_\_\_\_\_

#### 1. General information of interviewee and family

##### 1.1 Interviewee

Name: \_\_\_\_\_ Tel. No: \_\_\_\_\_

Sex: \_\_\_\_\_ Age: \_\_\_\_\_ Civil Status: \_\_\_\_\_

Religion: \_\_\_\_\_ Educational Attainment: \_\_\_\_\_

Address: House No./Street \_\_\_\_\_ Barangay \_\_\_\_\_

Municipality \_\_\_\_\_ Province \_\_\_\_\_

1.2.1 Main source of income \_\_\_\_\_

1.2.2 Other source of income \_\_\_\_\_

##### 1.3 Family members and main economic activities in family

Total No. of Children : \_\_\_\_\_

No	Name	Relationship	Sex	Age	*Educational Attainment	Activities Involved							Income
						[1] Capture Fishery	[2] Aquaculture	[3] Agriculture	[4] worker	[5] Business	[6] Officer	[7] Other (mention)	
(1)													
(2)													
(3)													
(4)													

\*[1] No education [2] Elementary Undergraduate [3] Elementary Graduate [4] High School Undergraduate [5] High School Graduate [6] Vocational [7] College Undergrad [8] College Graduate [9] MSc [10] PhD

##### 1.4. Role in family (no income involved) Check the appropriate box below.

Role in family (no income)	ADULT			YOUNG			Remarks
	Male	Female	Both	Boy	Girl	Both	
(1) Take care of babies							
(2) Take care old/ sick/ disabled people							
(3) Cook							
(4) Clean the house							
(5) Washing dishes							
(6) Washing clothes							
(7) Teaching/Tutor students							
(8) Repair the house							
(9) Collect and grow vegetables							
(10) Fishing for family consumption							
(11) Livestock for consumption							

(12) Society/community activities							
(13) Others, please specify							

**1.5 Role in fishing activities (with income)**

Activities (Sequence from fishing to post harvest)	ADULT			YOUNG			Remarks
	Male	Female	Both	Boy	Girl	Both	
(1) Plan (schedule of fishing)							
(2) Preparation of boat and gear							
(3) Buying materials needed for fishing (ice, bait, kerosine, batteries, etc.)							
(4) Starting Fishing							
(5) Returning from fishing							
(5) Taking fish from fishing gear							
(6) Unloading of fish to landing area							
(7) Bargaining of price							
(8) Shipping/Transport of Fish							
(9) Fish vending							
(9) Collecting of fishing gear							
(10) Cleaning of fishing gear							
(11) Repairing of fishing gear							
(13) Others							

**1.6 Access to resources and decision to use for benefit**

Resources	Access and can use			Ownership by law			Control			Remarks
	Female	Male	Both	Female	Male	Both	Female	Male	Both	
(1) House										
(2) Farm land										
(3) Car										
(4) Motorcycle										
(5) Other property, pls. specify										
(6) Loans from the bank for investment										
(7) Loans for micro finance										
(8) Non-performing loans										
(9) Lending										
(10) Life/health insurance										
(11) Car insurance										
(12) Sickness treatment										
(13) Expenses in the house										
(14) Employment										
<b>Capture</b>										
(16) Gear										
(17) Registration of boat and gear										
(17) Decision to select the customers										
(18) Decision to select wholesale buyer										
(19) Training/study tour/others										

**2. Capture Fisheries**

**2.1 Position**

- (1) Owner \_\_\_\_\_ (3) Tenant/Lessee \_\_\_\_\_  
 (2) Crew (profit sharing) \_\_\_\_\_ (4) Others (please specify) \_\_\_\_\_

**2.2 Type of fishing gear used** (can answer more than 1)

- (1) Gillnet \_\_\_\_\_ (4) Seine nets \_\_\_\_\_  
 (2) Hook and Line \_\_\_\_\_ (5) Jiggers \_\_\_\_\_  
 (3) Pots and traps \_\_\_\_\_ (6) Miscellaneous \_\_\_\_\_  
 (4) Lift nets \_\_\_\_\_ (7) Others \_\_\_\_\_

Please specify gear design \_\_\_\_\_

**2.3 Kind of Species caught**

Please enumerate \_\_\_\_\_

**2.4 Catch and Income**

Particulars	Peak Season	Lean Season
2.4.1 Estimated volume of fish catch per day (kg)		
2.4.2 Estimated capital (Php)		
2.4.3 Estimated gross income per day (Php)		
2.4.4 Estimated net income per day (Php)		

**3. Environment, Safety and Protection**

**3.1** Do you encounter problems in fishing? [1] Yes \_\_\_\_\_ [2] No \_\_\_\_\_

- [1] Natural (typhoon, monsoon, etc) \_\_\_\_\_  
 [2] Environmental hazard (chemicals, waste, etc) \_\_\_\_\_  
 [3] Financial (inputs, capital) \_\_\_\_\_  
 [4] Law enforcement (piracy, extortion, etc.) \_\_\_\_\_  
 [5] Others (please specify) \_\_\_\_\_

**3.2 Climate Change Resiliency**

3.2.1 Is there any initiatives or programs from the local government with regards to climate change resiliency? [1] Yes \_\_\_\_\_ [2] No \_\_\_\_\_  
 If yes, please specify: \_\_\_\_\_

3.2.2 Do you participate in community activities with regards to climate change resiliency?  
 [1] Yes \_\_\_\_\_ [2] No \_\_\_\_\_

**4. Social cost, general social attitude, and living condition**  
**4.1 Are you a member of any group in your barangay/municipality/province**

[1] Yes \_\_\_\_\_ [2] No \_\_\_\_\_

(1) Fisherfolk group \_\_\_\_\_ Position \_\_\_\_\_  
Do you join the meetings? Yes \_\_\_\_\_ No \_\_\_\_\_ Time/year \_\_\_\_\_

(2) Bank group \_\_\_\_\_ Position \_\_\_\_\_  
Do you join the meetings? Yes \_\_\_\_\_ No \_\_\_\_\_ Time/year \_\_\_\_\_

(3) Micro finance group \_\_\_\_\_ Position \_\_\_\_\_  
Do you join the meetings? Yes \_\_\_\_\_ No \_\_\_\_\_ Time/year \_\_\_\_\_

(4) Other groups, pls. specify \_\_\_\_\_ Position \_\_\_\_\_  
Do you join the meetings? Yes \_\_\_\_\_ No \_\_\_\_\_ Time/year \_\_\_\_\_

4.2 In each meeting that you join, how many are women and men? F \_\_\_\_\_ M \_\_\_\_\_

4.3 How many women and men comment in the meeting? F \_\_\_\_\_ M \_\_\_\_\_

4.4 If the participant in 6.2 are not equal, why? \_\_\_\_\_

4.5 Are you worrying about your daily life? (Select one answer)

[1]  yes [2]  No (Go to 4.10)

4.6 Why you are worrying about your daily life? (May select several answers)

- [1]  Small income
- [2]  Desperate
- [3]  No education/not enough education
- [4]  Health of family members
- [5]  Others \_\_\_\_\_

4.7 Are you happy with your business?

[1]  Not happy [2]  A little bit happy [3]  No feeling [4]  Happy [5]  Very happy

[6]  Not quite sure/Don't know

5. Suggestion/s

---

---

---

---

---

6. Do you want any help from government? If yes, what assistance do you need?

---

---

---

Interviewee

Interviewer

Date: \_\_\_\_\_

Time: Start \_\_\_\_\_ End \_\_\_\_\_

# Annex IV

## Questionnaire for survey in Thailand

**Questionnaire for collect the data on  
Gender Dimension in the Value Chain of Small-scale Marine Aquaculture in Surat Thani  
Province, Thailand**

แบบสอบถามสัมภาษณ์ เพื่อศึกษาวิถีชีวิต สภาพสังคม และบทบาทของหญิงชายในภาคการเพาะเลี้ยงสัตว์น้ำชายฝั่ง  
ขนาดเล็กในจังหวัดสุราษฎร์ธานี

หมายเลขแบบสอบถาม: \_\_\_\_\_

วันสัมภาษณ์: ...../...../..... ผู้สัมภาษณ์.....

**1. ข้อมูลทั่วไปของผู้ถูกสัมภาษณ์และครอบครัว**

**1.1 เกี่ยวกับผู้ให้สัมภาษณ์**

ชื่อ.....เบอร์โทร.....เพศ.....อายุ.....สถานะ.....ศาสนา.....  
การศึกษา.....ที่อยู่ปัจจุบันหมู่ที่.....ตำบล.....อำเภอ.....จังหวัดสุราษฎร์ธานี

1.2.1 อาชีพหลัก..... 1.2.2 อาชีพรอง.....

**1.3.1 เกี่ยวกับสมาชิกในครัวเรือน และแรงงานในครัวเรือน**

ที่	เพศ, ความสัมพันธ์	อายุ	การศึกษา	อาชีพหลัก							รายได้
				[1] ประมง	[2] เพาะเลี้ยง	[3] เกษตร	[4] รับจ้าง	[5] ธุรกิจ	[6] รับราชการ	[7] อื่นๆ (ระบุ)	
(1)	[1]ช [2]ญ										
(2)	[1]ช [2]ญ										
(3)	[1]ช [2]ญ										
(4)	[1]ช [2]ญ										
(5)	[1]ช [2]ญ										

\*[1] ไม่ได้รับการศึกษา [2] ประมง [3] นัธยด้น [4] นัธยปลา [5] ปวช [6] อนุปริญญา [7] ปริญญาตรี [8] ปริญญาโท [9] ปริญญาเอก

**1.4 บทบาทในครัวเรือน (ที่ไม่สร้างรายได้)**

บทบาทในครัวเรือน (ที่ไม่สร้างรายได้)	ผู้ชาย	ผู้หญิง	ทั้งคู่	เด็กชาย	เด็กหญิง	ทั้งคู่	หมายเหตุ
(1) ดูแลลูก							
(2) ดูแลคนชราหรือคนป่วย							
(3) ประกอบอาหาร							
(4) ทำความสะอาดบ้าน							



(5) ซ่อมแซมบ้าน							
(6) เก็บผัก/ปลูกพืชผักไว้กินในครัวเรือน							
(7) จับสัตว์น้ำเพื่อบริโภคในครัวเรือน							
(8) เลี้ยงสัตว์เพื่อบริโภคในครัวเรือน							
(9) กิจกรรมในชุมชน							
(10) อื่นๆ.....							
.....							
.....							

1.5 บทบาทในงานเพาะเลี้ยงสัตว์น้ำ (ที่สร้างรายได้)

กิจกรรมในการประกอบอาชีพ	ผู้ชาย	ผู้หญิง	ทั้งคู่	เด็กชาย	เด็กหญิง	ทั้งคู่	หมายเหตุ
(1) วางแผนการเลี้ยง(เลี้ยงอะไร เท่าไหร่ ที่ป่อ )							
(2) ติดต่อกู้พันธุ์							
(3) ตากบ่อ เตรียมบ่อ ฉ่ำเชื้อโรค							
(4) เตรียมน้ำในบ่อพัก							
(5) สูบน้ำเข้าบ่อเลี้ยง							
(6) นำลูกพันธุ์ลงบ่อเลี้ยง/เติมลูกพันธุ์							
(7)ให้อาหาร							
(8) ตรวจสอบภาพน้ำระหว่างการเลี้ยง/เปลี่ยนถ่ายน้ำ							
(9) การบำบัดน้ำทิ้งจากบ่อเลี้ยงสัตว์น้ำ							
(10) ตรวจสอบฝ้าระวังสุขภาพสัตว์น้ำ							
(11) วางแผนการจำหน่ายสัตว์น้ำ							
(12) เก็บเกี่ยวผลผลิต/จับสัตว์น้ำ							
(13) จำหน่ายผลผลิตสัตว์น้ำ							
(14) สรุปบัญชีรายรับ-รายจ่าย							
(15) อื่นๆ.....							
.....							
.....							

1.6 การเข้าถึงทรัพยากรและการตัดสินใจในการใช้ประโยชน์

ทรัพยากร	การเข้าถึง (สามารถใช้ได้)			ความเป็นเจ้าของ (เป็นเจ้าของในครอบครัวและทางกฎหมาย)			การควบคุม/การตัดสินใจ (สามารถตัดสินใจได้อย่างอิสระ เช่นมีสิทธิในการแบ่งปัน/ขาย/บริโภคปรับปรุงซ่อมแซม)			หมายเหตุ
	ผู้หญิง	ผู้ชาย	ทั้งคู่	ผู้หญิง	ผู้ชาย	ทั้งคู่	ผู้หญิง	ผู้ชาย	ทั้งคู่	



ครึ่ง(ตั้งแต่ ปล่อยพันธุ์สัตว์ น้ำจนสามารถ จับขายได้)	ฟาร์ม (ไร่)	(ไร่/บ่อ)	(บ่อ)	(ชม.)	สัตว์น้ำที่ ปล่อย(ตัว/ ไร่)	(ตัว/กิโลกรัม)	(1) ปริมาณสัตว์ น้ำที่จำหน่าย(กก./ รอบ)	(2) ราคาขาย (กก/บาท)

2.12 ต้นทุนต่อรอบ

- (1) ถูกพันธุ์..... บาท
- (2) อาหาร.....บาท
- (3) ยว/สารเคมี/จุลินทรีย์.....บาท
- (4) ค่าเตรียมบ่อ..... บาท
- (5) ค่าไฟฟ้า.....บาท
- (6) น้ำประปา.....บาท
- (7) ค่าจ้างคนงาน.....บาท
- (8) ค่าเช่าที่ดิน.....บาท
- (9) เครื่องมือ(ใช้แล้วเสื่อมสภาพ).....บาท
- (10) วัสดุอุปกรณ์(ใช้แล้วหมดไป) .....บาท
- (11) อื่นๆ.....บาท

2.13 ปัญหาด้านการเพาะเลี้ยงสัตว์น้ำ

- (1) คุณมีปัญหาจากการทำการเพาะเลี้ยงสัตว์น้ำหรือไม่ [1] มี [2] ไม่มี
- ปัญหาที่พบคือ

ระดับของปัญหา น้อยที่สุด 1 2 3 4 5 มากที่สุด (คำตอบเดียว)

- ปัญหาที่พบคือ

ระดับของปัญหา น้อยที่สุด 1 2 3 4 5 มากที่สุด (คำตอบเดียว)

- ปัญหาที่พบคือ

ระดับของปัญหา น้อยที่สุด 1 2 3 4 5 มากที่สุด (คำตอบเดียว)

- (2) คุณมีปัญหาเกี่ยวกับสิ่งแวดล้อมในพื้นที่เพาะเลี้ยงสัตว์น้ำหรือไม่ [1] มี [2] ไม่มี
- ปัญหาที่พบคือ

ระดับของปัญหา น้อยที่สุด 1 2 3 4 5 มากที่สุด (คำตอบเดียว)

- ปัญหาที่พบคือ

ระดับของปัญหา น้อยที่สุด 1 2 3 4 5 มากที่สุด (คำตอบเดียว)

- ปัญหาที่พบคือ

ระดับของปัญหา น้อยที่สุด 1 2 3 4 5 มากที่สุด (คำตอบเดียว)

3. ต้นทุนทางสังคม ทักษะคติทั่วไปด้านสังคมและชีวิตความเป็นอยู่

3.1 ท่านเป็นสมาชิกกลุ่มใดๆ บ้างในชุมชน(จังหวัด)

- [1] เป็น [2] ไม่เป็น

(1) กลุ่มสหกรณ์ผู้เพาะเลี้ยงสัตว์น้ำ.....ตำแหน่ง..... ท่านเข้าร่วมประชุม.....ครั้ง/ปี

- (2) กลุ่มวิสาหกิจชุมชน.....ตำแหน่ง..... ท่านเข้าร่วมประชุม.....ครั้ง/ปี
- (3) กลุ่มลูกค้า ธกส,.....ตำแหน่ง....., ท่านเข้าร่วมประชุม.....ครั้ง/ปี
- (4) กลุ่มแม่บ้าน..... ตำแหน่ง....., ท่านเข้าร่วมประชุม.....ครั้ง/ปี
- (5) อื่นๆ.....ตำแหน่ง....., ท่านเข้าร่วมประชุม.....ครั้ง/ปี
- 3.2 ในการประชุมที่ท่านเข้าร่วมแต่ละครั้งมีจำนวนผู้หญิงร้อยละ.....ผู้ชายร้อยละ.....
- 3.3 การเสนอความคิดเห็นในที่ประชุมมีผู้หญิงร้อยละ.....ผู้ชายร้อยละ.....
- 3.4 ในกรณีข้อ 4.2 มีสัดส่วนไม่เท่ากัน อะไรคือสาเหตุ.....
- 3.5 ท่านได้รับข้อมูลข่าวสารของกิจกรรมกลุ่ม/องค์กร จากที่ใด (เพื่อนบ้าน เสียงตามสาย รถประชาสัมพันธ์ สื่อออนไลน์อะไร นึกหมาย อื่นๆ).....
- 3.6 ท่านรู้สึกไม่สบายใจหรือมีความวิตกกังวลใดๆ ในชีวิตปัจจุบันหรือไม่ (เลือกได้เพียงหนึ่งคำตอบ)
- [1] มี [2] ไม่มี ⇒ ข้ามไปข้อ (4.10)
- 3.7 อะไรคือสาเหตุที่ทำให้ท่านรู้สึกไม่สบายใจหรือวิตกกังวล (เลือกได้หลายคำตอบ)
- [1] รายได้น้อยและไม่แน่นอน
- [2] ความสิ้นหวังในการทำงานหรือหมดกำลังใจในการทำงาน
- [3] การศึกษาของบุตรไม่เพียงพอ
- [4] สุขภาพของคนในครอบครัว
- [5] อื่นๆ.....
- 3.8 ท่านมีความสุขในการประกอบอาชีพการเพาะเลี้ยงสัตว์น้ำมากน้อยแค่ไหน
- [1] ไม่มีความสุข [2] ไม่ค่อยมีความสุข [3] เฉยๆ [4] มีความสุข [5] มีความสุขมาก [6] ไม่แน่ใจหรือไม่ทราบ
4. ข้อเสนอแนะในการเสริมสร้าง โอกาสและศักยภาพให้ชุมชนได้เกิดการพัฒนาอย่างยั่งยืน.....
- .....
5. สิ่งอยากได้รับความช่วยเหลือเพิ่มเติมจากภาครัฐ.....
- .....