

Who are the B40 Maturated and Older Rural Women Related to Freshwater Fisheries Economic Sector in Kuala Krai, Kelantan?

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Abstract

This paper mainly aims to predict socioeconomic indicators of matured and older rural women (MORW) (≥ 40 years old) in Kuala Krai, Kelantan, from the B40 household income category. The respondents were involved in three types of value-chain activities in the freshwater fisheries economic sector (type of FFES) – trader, processor, and operator. The data consist of $n=223$ and 31.39 percent MORW respondents in the B40 household income category. Among MORW respondents, the mean age=52.57 years old (SD=8.153 years old). The highest distribution rate among females is trader type of FFES (29.46%), and the highest distribution rate among male respondents is operator type of FFES (42.34%). Three significant ($p < 0.05$) predictors were obtained - educational background, types of FFES, and marital status. The 'no schooling and primary school', married status, and trader type of FFES predict 6.431-time, 3.326-time, and explain less than 98.8 percent likelihood, respectively, of MORW in the B40 household income category. The predictors of MORW in the B40 household income category are 'no schooling and primary education', married, and trader type of FFES. In Kuala Krai, married and MORW in the B40 household income category must be given extra focus in the poverty eradication programs.

Keywords: Gender, Ageing, Poverty, Freshwater Fisheries Aquaculture, Value Chain

Introduction

Kuala Krai district is a district in Kelantan that is landlocked, hilly, and with tropical rainforest. Two major rivers converge in this area, Lebir and Galas Rivers, used for many activities,

including aquaculture and fisheries, because Kuala Krai is a Kelantan district for poverty alleviation under the 1AZAM program under freshwater fisheries economic sector (FFES). The FFES is a vital cheap protein source for the rural population (Boyd et al., 2022). Thus, it must be managed sustainably. There is a highly gender-segregated division of labour in FFES, where men are responsible for fisheries and women are responsible for processing and trading FFES products due to the masculinity of the economic sector (Satapornvanit, 2018; Krushelnytska, 2015). Nevertheless, women still play a critical role in every link of the freshwater aquaculture value chain (Ameyaw et al., 2020; Lentisco & Lee, 2015): trader, processor or operator. Therefore, women's participation in the FFES in Kuala Krai is essential for the success of the 1AZAM program.

The socioeconomic information is baseline data to understand the dynamic of women's involvement in FFES, especially the participation of women in poverty eradication programs. Seventy per cent of productive-age (40-60 years old) people are affected by chronic poverty in Kuala Krai (ICU JPM, 2021). The Ministry of Agriculture and Food Security (MAFS) is implementing *myAgropreneur Perikanan* (myAP), a fisheries entrepreneur development program led by the Department of Fisheries Malaysia that focuses on implementing enterprise programs along the fisheries value chain, such as production, processing, marketing, and fisheries support industries, including agro-tourism and recreational fishing (Department of Fisheries Malaysia, 2022). This program is offered to participants aged 18 to 60 who are registered in the e-Kasih system and have a household income of less than RM2,650 in Malaysia. In addition to eradicating poverty (SDG1) and increasing the earnings of the target groups considered extremely poor or poor, especially in rural areas generally (Department of Fisheries Malaysia, 2022), this program specifically may give opportunities to nearly 23,430 households in Kuala Krai (DoSM, 2020) to improve the socioeconomic situation of the fisheries community, with most of the population being B40.

In addition, My Agropreneurs Perikanan (myAP) program can also help to promote gender equality (SDG5) and to empower women in the fisheries community, as women continue to be marginalized in the society related to masculine FFES (World Bank, 2018; Osman et al., 2015). At the same time, their workload and responsibilities have increased in the family and the community (FAO, 2016). In each type of FFES value chain, women's socioeconomic status influences their power and roles, as women comprise about half of the population involved in fisheries development activities (U.N. Women, 2020; Jennifer, 2016). In some developing regions, women have become essential fisheries entrepreneurs, controlling significant amounts of money, financing various fish-based enterprises, and generating substantial returns to households and society (FAO, 2016; Ninawe & Diwan, 2005). However, there is always a risk to women's involvement in FFES; for example, the value chain activities were traditionally done by women; once profitable, men began to get in, and women were pushed out of the FFES (Ramachandran, 2011).

Several studies have examined poverty in different types of the value chain (Grema et al., 2020; Kamaylo et al., 2021; Alemu & Azadi, 2018; Ingram et al., 2014; Fröcklin et al., 2013). However, none of these studies focused on mature and older rural women (MORW) in each type of FFES value chain who are more vulnerable to poverty. Therefore, to introduce some poverty alleviation policies and programs in the FFES, there is a need to examine the baseline data in terms of the nature of the FFES value chains, gender, age group, poverty, and the relationship between these variables so that the program can be targeted to the needs of these MORW. Therefore, this paper aims to answer the following research questions (RQ):

RQ1: what are the profiles of the respondents?

RQ2: what are the relationships between age categories, sex of respondents, and types of FFES?

RQ3: What socioeconomic determinants predict MORW respondents in the B40 household income category?

The research objectives (RO) are as follows

RO-1: to profile the respondents.

RO-2: to measure the relationship between age categories, sex of respondents, and types of FFES.

RO-3: to identify the socioeconomic determinants that predict MORW respondents in the B40 household income category.

Literature Review

Rural Women and Poverty

Rural women are essential in any economic sector (ILO, 2019). At the same time, they are also responsible for the well-being of their family members through traditional gender roles, for example, food preparation and nurturing children and carer for older family members (Sharma et al., 2016). They contribute to many unpaid activities in FFES, especially in processing fish-based processed foods and post-harvest services (Ahmad et al., 2003; Yahaya, 2001) or supporting their husbands (Choo, 2005). However, rural women are facing many constraints in engaging in any economic activities due to gender discrimination, traditional gender roles, social norms, disproportionate participation in unpaid work, and unequal access to education, health care, property, and financial resources (Ismail & Jarji, 2012; Govender & Penn-Kekana, 2008). Thus, rural women, especially older people, are vulnerable and consistently associated with feminism poverty (Baiyegunhi & Fraser, 2011).

Rural women workers earn less than their men counterparts (FAO, 2011). According to William et al (2012), women who contribute to FFES earn less than men and have less access to decision-making and resource management in FFES. Therefore, the role of rural women is always in less male-dominated activities, such as fish-processing food enterprises, which causes them to be more vulnerable and less empowered than men in FFES (Salim et al., 2017; Porter, 2012), primarily single mothers with many dependents and older women who lack social protection and financial security (Yuliandi et al., 2018; Ahmad et al., 2016). According to ILO (2019), women in rural areas are paid, on average, one percent less than men and tend to work long hours. Besides, many earn a low income, make nothing, and only be housewives who serve the family and FFES activities for free (ILO, 2019; Ogunlela & Mukhtar, 2009; Ahmad et al., 2003). Thus, many studies support that women in rural areas, especially older women and heads of household, are prone to poverty (OECD, 2019; Ahmad et al., 2016; Masud et al., 2015; WHO, 2010).

Women contribute to agricultural production, food security and nutrition, land and natural resource management, and climate resilience building (ILO, 2019). Thus, their roles are increasingly being recognized (Zhao, 2019). Nevertheless, according to Shahbaz et al. (2017), rural women still have limited or no access to livelihood assets such as education, credit, infrastructure, and health facilities, and they lack nutritious food, safe drinking water, poor sanitation, and little input into household decision-making. Morrison and Morrison (2007) found a significant link between gender equality and poverty reduction and growth. Thus, gender equality has been observed in rural areas; if rural women are economically

empowered, they can ultimately be empowered in political, social, and institutional aspects of life (Shahbaz, 2017). In other words, women's social status greatly impacts the empowerment process. Moreover, rural women who are free to move outside the four walls of the home were more empowered and involved in paid work, significantly impacting their household income and poverty to improve or enhance their status in fisheries society (Torre et al., 2019).

Effects and Development of Type of Fisheries Value Chain Activities towards the Population's Economy

The FFES creates a new opportunity for people in poverty or to benefit low-income households and becomes one of the determinants in identifying activities, relationships, constraints, and possible upgrading of operator, processor, and trader activities (Kamaylo et al., 2021; Alemu & Azadi, 2018; Marsden et al., 2000). However, Morris et al. (2011) noted that literature often focuses on the economic rather than the social aspects of upgrading the value chains, such as improved working conditions, functional skills, and better-pay jobs. According to Rota and Sperandini (2010), this could be due to gender-related obstacles such as barriers to mobility, access to inputs, productive resources, and market information, which makes it particularly difficult for women to access profitable market niches and economic gains in value chains. In addition, micro-rural enterprises are often unable to achieve economies of scale and scope; due to their size and lack of bargaining power (ILO, 2011). Therefore, the entrepreneurial skills of rural women should be strengthened by facilitating their access to financial and business management training, as in Kapoor (2019), where entrepreneurial skills were increased to diverse business activities and impacted women's economic development and self-esteem.

Many micro-rural enterprises also face difficulties with safety and quality concerns on their fish-base products (Santoso et al., 2020) which are due to poor cold chain systems that link refrigeration and cooling (Heap et al., 2013), as well as low capital and not able to buy more supporting infrastructure in fish production centers (Arvitrida et al., 2019). The consequences of these constraints are the inferior quality of fish products and high-cost differentials (Bai et al., 2019), and a lack of innovation (Santoso et al., 2020). The primary goal of innovation is to create new value propositions for the systems (Ali & Haseeb, 2019; Haseeb et al., 2019; Haseeb et al., 2019; Suryanto et al., 2018). According to Ordanini and Parasuraman (2011), innovation is the most crucial aspect of any industry. Thus, it may limit the potential of the business to grow. Therefore, research and educational institutions, companies, government, non-governmental organizations, funding agencies, and networks should all be involved in increasing the FFES and rural economy. It is for economic growth, food security, rural development, women empowerment, and good life well-being.

Methodology

This paper is a correlational design study through a survey conducted among males and females involved in three types of FFES value chains in Kuala Krai, Kelantan. Kuala Krai was selected from 10 Kelantan districts because of the lowest median income of RM2,541 compared with the state's median income of RM3,079 (Department of Statistics, 2016) and the 1AZAM program through FFES. The aquaculture outputs in this study are fresh freshwater fish and processed fish-based products (i.e., fresh salted fish, dried fish, smoked and fermented fish). Therefore, three critical terminologies of respondents' categories in this paper are – 1) the operators who involve in producing fresh fish through aquaculture

freshwater farming, 2) the processor who involve in processing fresh fish-based products, and; 3) the traders who are the entrepreneurs selling FFES products or processed fish-based products in the market.

Sampling and Data Collection

This paper focused on the population of the operators (N=78) of aquaculture farming in Kuala Krai. The population of operators are those registered under Kuala Krai Department of Fisheries (DOF) office and were approached with the assistance of a few DOF officers to answer the questionnaire. N=440 traders and processors are registered under Kuala Krai District Office (Table 01) (local government business permit) related to fish-based products. According to Krejcie and Morgan (1970), for N=440, the n=205. Table 01 demonstrates the sampling of processors/traders by sub-district: Batu Mengkebang, Dabong, Manek Urai, and Guchil.

Table 01

Sampling and Data Collection Table (n=283)

Type of Respondents Sex/District or Sub-district	Operator N=78		Entrepreneurs/Traders N=440	Total n
	male		female	
Manek Urai	16		65	81
Batu Mengkebang	24		35	59
Guchil	12		40	52
Dabong	26		65	91
Total n=283	78	205	283	

Note:

- 1) The sample size (n) distribution in each sub-district was according to the number of villages.
- 2) N=78 for operators registered under DOF Kuala Krai (population)
- 3) By Krejcie and Morgan n=205 for N=440

Null Hypothesis

Two null hypotheses were tested

Ho₁: no relationship between age categories, types of FFES, and sex of respondents.

Ho₂: no socioeconomic indicators predict MORW respondents in the B40 household income category.

Data Analyses

In this paper, the profiles of respondents are presented through descriptive statistics to achieve RO-1. A Chi-Square test was used to achieve RO-2, and the binary Logistic Regression Model (BLR Model) was used to achieve RO-3. The dependent variable (DV)=1 in BLR Model is MORW in the B40 category, and DV=0 is the 'other' category of respondents. The independent variables or predictors in BLR Model (IVs) are academic background, marital status, and types of FFES.

BLR Model 1 - $\ln Y_{\text{MORW in B40 Category}} = a + b_1_{\text{marital status}} + b_2_{\text{academic background}} + b_3_{\text{FFES value chain activities}}$

Notes

- i) Dependent variable (DV) is MORW in B40 Category = 1, Other Category = 0
- ii) B40 category of household income (income RM4850 and below)

Findings and Discussion

Table 02 demonstrates data of $n=223$ (50.20% female, 49.80% male). About one-third of the data, $n=65$ (29.15%), is MORW which are 40-59 years old (78.5%) and older (≥ 60 years old [21.5%]). The rest of the respondents (70.85%) are either younger (less than 40 years old) (male & female) or mature and older male respondents. Among MORW respondents, the mean age=52.57 years old (SD=8.15 years old). For all respondents, the mean age=40.88 years old (SD=14.74 years old) implies that all respondents are on average mature and older men and women. Therefore, the involvement in FFES in Kuala Krai may decline due to old-age factors because FFES is a masculine economic sector (Satapornvanit, 2018; William et al., 2012; William, 2008) which needs the involvement of able-body, fit and young individuals. From sample $n=205$ of traders/processors, $n=168$ (81.95%) of data was collected, and from population $N=78$ of operators, $n=60$ (76.92%) was collected. In total, $n=223$ of collected data, 26.91 per cent are operators, 37.22 per cent are traders and 35.87 per cent are processors types of FFES (Table 02). Among $n=65$ (28.51%) MORW, only one operator, 33 traders and 31 processors type of FFES. The majority (50.8%) of the MORW respondents in this paper are traders, 47.7 per cent are processors, and only 1.5 per cent are operators (Table 02). Many studies state that women are actively involved as traders (Fröcklin et al., 2013; Weeratunge et al., 2010; Walker et al., 2008). However, men tend to control the profitable large-scale operations of high-value fish, while most women focus on the local market and low-value fish (Ingram et al., 2014; De Silva et al., 2012; De Silva, 2011). About 83.1 percent of MORWs are married, while a few are single (Table 2). The 'married' status is a 'not poor' indicator among rural women (Zainalaludin et al., 2022; Kramer et al., 2016). Nevertheless, marital status can dampen women through the additional burden of traditional gender roles (U.N. Women, 2015) while working in FFES (Toff & Palmer, 2019) because, in most cases, women involved in the FFES value chain are for free (Yahaya, 2001) because they are considered as helping their male family members.

Among MORW respondents, a high percentage had a secondary or higher level of academic background (58.5%), and 41.5 percent had 'no schooling or primary education' as their academic background (Table 02). In other words, around half of MORWs had either a common educational experience or no schooling, and this could be another reason for the low productivity of their business in the FFES value chain because of innovative practices need knowledge to increase or improvise the business products from time to time (Obetta et al., 2020). Due to poverty and marginalization (Solaymani & Kari, 2014; Béné & Friend, 2011; Béné, 2003), the startup capital is low, and there is no additional capital to develop the business. Thus, it is hard for them to grow. Moreover, some may be illiterate, so they cannot access information related to entrepreneurship development in their places. In summary, good academic backgrounds are essential to escape poverty (Giovetti & McConville, 2020; Awan et al., 2011).

Table 02

Profiles of the Respondents (n=223)

Socioeconomic Profile		Variables	MORW		Others	
			n	%	n	%
Type of FFES		Operator	1	1.5	59	37.3
		Trader	33	50.8	50	31.6
		Processor	31	47.7	49	31.0
Marital Status		Married	54	83.1	106	67.1
		Single	11	16.9	52	32.9
Academic Background		Primary and lower	27	41.5	35	22.2
		Secondary and higher	38	58.5	123	77.8
Poverty Status (B40)		Non B40	3	4.6	13	8.2
		B40	62	95.4	145	91.8
Age		Mean	52.57		40.88	
		SD	8.15		14.74	
Household Income		Mean	RM1857.20		RM2145.81	
		SD	RM1761.73		RM3396.35	

Women related to FFES are usually associated with full-time housewives and are entirely dependent on their husbands for their livelihood (Bahtiar et al., 2021; Wei et al., 2021; Wahab et al., 2018; Islam, 2008), and half of the rural women did not belong to a cooperative society (Mukaila et al., 2022). The high majority (95.4%) of the MORW in the B40 group of household income category have a mean household income of RM1857.20 (SD= RM1761.73) (Table 02). They had an income below the Malaysia Poverty Line Income (2019) = RM2208, and much below the range of the B40 Malaysian monthly household income category (\leq RM4850). This result implies that most MORWs are poor or low-income earners. This may severely affect household poverty because of the masculine FFES, being women, and being mature and older adults (Mohd, 2014). Through R01, this paper concludes that most MORW respondents are traders, a high percentage of them had a secondary level of academic background or higher, are married and are in the B40 group of the household income category. The average monthly household income is below (Malaysia PLI, 2019).

Relationship between Types of FFES, Sex of Respondents and Age Groups (RO-2)

Table 03 presents the relationship between types of FFES, the sex of MORW respondents and their age groups. Three types of FFES value chains are freshwater fish farm operators (Operator), businesses selling fish-based products (Trader), and companies producing fish-based products (processors). The 40-year-old was a cut-off point for the age categories, which are \geq 40-year-old is MORW, and $<$ 40-year-old is a younger age group. The H_{01} (there was no relationship between types of FFES, sex of respondents and the age groups among MORW) was tested to achieve the RO-2 through the Chi-Square test. It had been rejected because of the significant ($p < 0.05$) relationship obtained between types of FFES, sex of respondents and age groups. The highest percentage among MORWs (older female group) is trader type of FFES (29.46%), and among older males, the highest rate of distribution is operator type of FFES (42.34%) (Table 03) value chain. A high rate (25%) among younger female respondents is processor type of FFES, and among younger males (16.22%) is trader type of FFES value chain.

The female traders get fresh fish from their husbands, the operators (William et al., 2012), fish-based enterprises processing raw fish to proceed with food products, or directly from the landing sites (FAO, 2015). The areas where they will sell their fish will depend significantly on their mobility and access to ice and processing techniques for making the product last longer without perishing (Lentisco & Lee, 2014). Due to they are micro-scale enterprises, they need a commercial freezer to assist them in their business.

Table 03

Distribution of the Respondents by Types of FFES, Sex of Respondents and Age Group (n=223)

Type of FFES Value Chain	Matured and Older				Younger			
	Female		Male		Female		Male	
	n	%	n	%	n	%	n	%
Operator	1	0.89	47	42.34			12	10.81
Trader	33	29.46	13	29.46	19	16.96	18	16.22
Processor	31	27.68	12	27.68	28	25.00	9	8.11

Note

- $p < 0.05$ (Chi-Square)
- 40 years old age-category cut of point.

However, involved in a masculine FFES, the MORW need different approaches. For example, mobility methods are influenced by the MORW capacity, availability, and the environment and their decision-making process (Gorman et al., 2019). The mobility decisions are, in turn, shaped by the built environment, safety, the attitudes of the MORW and others in FFES, and having both a motivation and the means to be mobile as an example using assistive devices or transportation (Lentisco & Lee, 2014; Camping et al., 2012), and this may be due to MORW usually experiencing the geographical barrier of their home is far from the FFES areas (Collins et al., 2014), the market, and the need for women-friendly and MORW-friendly accommodation and facilities (Zhao et al., 2013). However, since women are associated with reproductive work, gender inequalities in access to fisheries resources affect women's livelihoods and the entire household (Fröcklin et al., 2013; Weeratunge et al., 2010). Although MORW may not have babies to care for, they are usually caregivers to their grandchildren and older parents. Through RO-2, this paper concludes that most MORW is traders while the men are the majority operators. These findings may support the masculinity of FFES, and women's involvement in FFES through the value chain activities, especially as fish-based traders or fish-based food entrepreneurs, which are less masculine.

Predictor of Matured and Older Rural Women (MORW) in B40 Category in Kuala Krai, Kelantan

This sub-topic presents the findings on RO3 (to identify the socioeconomic determinants that predict MORW respondents in the B40 category of household income). Thus, the Ho₂ (no socioeconomic determinant predicts MORW respondents in the B40 household income category) was tested through BLR Model 1. The BLR Model 1 fit and is significant ($p < 0.05$). All IVs in the model explained 37.2 percent of the variance in the DV - thus, Ho₂ was rejected. Three predictors significantly ($p < 0.05$) explain the DV. They are academic background (no schooling/primary school=1), marital status (married=1), and type of FFES (trader=1), which respectively predicts 6.431-time, 3.326-time, and less than 98.8 percent likelihood of MORW respondents in the B40 household income category (Table 04).

Table 04

Wald Chi-Square Statistics Predictor of Matured and Older Rural Women (MORW) in B40 Category in Kuala Krai (n=223)

	B	S.E.	Wald	df	Sig.	Exp(B)
Marital status (Married=1)	1.202	0.429	7.842	1	0.005	3.326
Academic Background (no schooling/primary school=1)	1.861	0.445	17.509	1	0.000	6.431
Operator			19.431	2	0.000	
Trader	-4.397	1.081	16.541	1	0.000	0.012
Processor	0.458	0.373	1.505	1	0.220	1.580
Constant	-1.928	0.460	17.596	1	0.000	0.145

In conclusion, a 'no schooling/primary school' of academic background predicts MORW in the B40 household income category. This finding is supported by Saidi et al. (2021) and Zainalaludin (2012), who found that rural women are usually associated with low academic backgrounds and fisheries communities are in rural areas. Many studies also support this finding that fisheries community members have a common educational experience (William et al., 2012; CRFM, 2012; Bene & Friend, 2011; William, 2008). The low academic background of people in rural areas may cause poverty (Cahaya, 2015; Calson & Buttram, 2004), which may result in both boys and girls in fisheries communities not receiving a proper education (McWilliam et al., 2021; Abdullahi et al., 2013; Mitra et al., 2008). The factors that contribute to low academic backgrounds in rural localities are poor education services (Shah et al., 2010; Singh et al., 2010), lack of various resources (World Bank, 2010), and remote geographical location (Nagaraj et al., 2017; Maddox, 2007).

Table 04 shows that married status predicts 3.326 times the likelihood of MORW respondents in the B40 household income category. According to Thandar et al (2020), women usually participate in agriculture activities and the formal and informal sectors. However, their roles are often ignored and undervalued, and they are mainly not employed and work for free because they depend on their husband for a living (Wahab et al., 2018; Yeo, 2007). Consequently, many women are poorer than men in fisheries society (Siason et al., 2002). Some past studies focused on what women do in FFES (Alonso-Población & Siar 2018; Eder, 2005) in that most activities are unpaid or the women only receive small pay. One of the reasons is that they cannot get directly involved in FFES because of gender challenges (Kleiber et al., 2017), the feminine abilities of women (An & Kim, 2007; Chaiken & Pliner, 1987) and traditional gender roles (Salmi & Sonck-Raotio, 2018; Reantas, 2012) especially as married women. Therefore, it is hard for women to compete with masculine men in FFES (Frangoudes et al., 2019; Geheb et al., 2008). Usually, more patriarchal families with fewer women are involved in decision-making than in other societies with less masculine economic sectors. According to Boateng et al. (2014), married women are significantly non-poor and more likely to be involved in household decision-making if the family and the society are fewer patriarchs and the economic sector is less masculine. Much literature obtained married as an indicator of not being poor among women, but this paper concludes otherwise.

Among three FFES value chains but only trader is significant ($p < 0.05$) and predicts less than 98.8 per cent likelihood of MORW respondents in the B40 household income category (Table 04). In other words, being a trader is a good solution for poverty eradication among women in fisheries society. According to Medard et al (2002), women participating in fish trade

marketing have been spurred by cultural, social, economic, and political factors, where most of them do not come from fisheries society but had married fishermen (Widihastuti & Zulham, 2019). Thus, they have taken up fish trading and processing as a source of income due to easy accessibility to fish, easy storage, divisibility, the profitability of the enterprise and low initial capital requirements (Medard et al., 2002; Medard & Geheb, 2001). In addition, according to Medard & Geheb (2001), women are more involved as a trader because they have a direct supply of fresh fish in their family lineage, so they can easily store at their homes and satisfy their customers with small quantities but good qualities.

Conclusion AND Recommendation

This study focused on MORW in FFES at Kuala Krai, Kelantan, from the B40 group of household income category who were mainly involved as trader types of value chain activities. Most women are traders, while the men are the majority operators. The predictors of B40 MORW are 'not schooling/primary education', married, and trader type of FFES value chain activities. Therefore, in Kuala Krai, married and poor MORW must be given extra focus in the poverty eradication program. The recommendation to eradicate poverty among MORW is to focus on a family business or farm-preneur – the wives process and market the fish while the husbands produce fresh fish. There must be segregation between husband and wives' activities for the women to be empowered – have control over their resources and decision-making power, and not involve in aquaculture farming activities with no pay. The MORW must be involved in capacity-building programs, especially in GIG Economy, to sell fish or fish-based products and financial assistance programs.

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