

Characteristics and Roles of Fisherwomen During The Fishing/ Non-Fishing Season: A Case Study in Banyuasin Regency

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Abstract: Sungsang is a coastal area in the Banyuasin Regency where most populations depend on the livelihoods of fishing resources. Women's involvement in fishing activities in this area started with pre and post-fishing activities. Therefore, this research aims to analyze the role of fisherwomen in reductive, productive, and social activities during the fishing and non-fishing seasons. This research used qualitative and quantitative methods, with data obtained through questionnaires and in-depth interviews with fisherwomen. Productive activities that support work are fisherwomen's role that experiences the highest intensity compared to fishing and non-fishing seasons. Therefore, based on the results and discussions on fisherwomen's characteristics in the five villages of Sungsang Coast, most of them only have an elementary school education, as opposed to others. Furthermore, they are mostly in the productive age and their husbands or parents carry out the majority of their business. Some fisherwomen work as wage workers, while others are self-employed, with family dependents of one to four people. The fishing season does not change their role intensity, although there is a slight decrease. Meanwhile, the significant difference from changes in role intensity occurs in social and productive roles. The intensity of social roles in the fishing season increases during the non-fishing season, which rises twice in terms of productive roles.

Keywords: *Characteristic, The Role of Fisherwomen, Reproductive, Productive and Social Activities*

Introduction

Most regions around the world involve women in various pre- and post-harvest fishing activities (Fitriana & Stacey, 2012) Sogbesan et al., 2016; Febri et al., 2017; Artijoshi et al., 2016). Therefore, in order to continuously carry out their reproductive and social roles in the community, women involved in fishing and aquaculture in land waters that also work productively to earn additional income need to spend more time than sea fishermen (Ameyaw et al., 2020; Ands, 1993; FAO WorldFish, Cynthia McDougall, Irna Sari, Afrina Choudhury, 2017; Gopal et al., 2020; Rini, 2018).

The role of fisherwomen is crucial in fisheries activities, especially in marketing and processing catches, however, they still lacked adequate empowerment. Based on the Data and Information obtained from the People's Coalition for Fisheries Justice (KIARA), approximately 56 million people in 2014 were involved in fishery activities starting from fishing, processing to marketing of catches, and about 70 percent of that number were women (KIARA, 2015). Although

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their potential roles are crucial, it is often limited, neglected, and only recognized in academia and research. Over the last few decades, there has been a large literature on topics related to women and fisheries, particularly highlighting substantial efforts to raise their profile and roles (Brugere, 2019; Frangoudes & Gerrard, 2018; Harper et al., 2017; Kabir et al., 2012; Shaleesha & Stanley, 2000).

The coastal area of Sungsang includes coastal villages in Banyuasin II Sub-district, South Sumatra Province, including Sungsang I, Sungsang II, Sungsang III, Sungsang IV, and Marga Sungsang. According to the spatial guidelines for Banyuasin Regency, the Sungsang coastal area is a region for capturing, managing, and marketing fishes. It is also a strategic area in terms of interest and a fishing village based on socio-cultural aspects.

Presently, the utilization of the capture fisheries in South Sumatra is not optimal due to the inadequate, inefficient, and ineffective provision of information on resources around the management area. This is in addition to the highly competitive rate of using fishing gears in active and passive areas. Furthermore, supervision and law enforcement have not been implemented effectively, port infrastructure is inadequate, the ability of fishermen to invest in themselves is still weak, with poor bargaining position during marketing (Monintja et al., 2010). According to Jamilah & Mawardati (2019), the non-optimal utilization of sea and capture fisheries is estimated because of limited human resources, technology, and infrastructure.

Banyuasin Regency is the biggest contributor of capture fisheries production in South Sumatra Province every year due to its strategic position. In 2018, the total production was 53,327 tons or 41.83 percent of the total capture fishery production in South Sumatra Province by 127,492 tons. This research aims to determine the characteristics and roles of fisherwomen in five villages of Sungsang Coast during the fishing and non-fishing seasons.

Literature Review

Fisherwomen is a term used to describe women that live in a fisherman's family environment, both as a wife or child, and involved in activities to earn some income (Febri et al., 2017; Raodah, 2016).

This category of women is an important component in coastal development because of their strategic position in carrying out fishery and marine-based activities as retailers, fish collectors, wholesalers, wage workers, and fishery product processing workers (Di & Perikanan, 2013). According to Moser (1993), there are three gender roles associated with fishing, namely productive, reproductive, as well as social and political management. Productive roles refer to the various roles carried out by women and men to get paid (Desa et al., 2015)

There is an undeniable fact that the fisheries management and conservation community needs to emphasize a gender perspective for any research or management ostensibly carried out at a community or ecosystem scale. Therefore, to understand fisheries, it is important to involve fisherwomen (Kleiber, 2014). This is because the implications of ignoring their contributions are tantamount to biodiversity and the well-being of human communities (Ogden, 2017)

Empowering fisherwomen also increases their knowledge to help develop community fisheries management plans (Anon, 2014). Presently, they are widely accepted in significantly contributing to fisheries management because it is estimated that they make up nearly half of the workforce in activities related to small-scale capture fisheries (Needham, 2010).

Women on the coast play a strategic role in the development and management of marine resources. For instance, in the capture fishery business, they play a significant role in the preparation stage by preparing fishing rations, supplies, gears and repairing damaged nets.

Furthermore, they also play a role in sorting out and marketing fish catch. According to Nurlaili & Muhartono (2017), women play a role in financial management and ensuring the sustainability of the fisheries business carried out by their husbands, including the availability of business inputs. Williams (2012) stated that women's role is closely related to resource conservation.

The role of women as economic actors cannot be ignored, therefore capacity strengthening is needed to support their role in carrying out productive economic activities (Djunaidah & Nurmalia, 2019). They play a role in domestic, productive, and social activities (Febri et al., 2017; Kurniadi et al., 2017) by earning additional income through productive activities, in addition to maintaining their household and children. The increase in life needs make fisherwomen have to work to fulfill their family needs (Fitrisia, 2019)

Fisherwomen that work productively to earn additional income need to spend more time than fishermen (Evi & Laila, n.d.). This is because they play an important economic role in the fisheries sector and in maintaining their families. Therefore, their roles and needs at the scale of operations and fish distribution networks need to be integrated with the intervention and policy development process (Ameyaw et al., 2020).

There are many systems and networks of programs related to the development of coastal women, however, they do not have coherence with their development goals and benefits (Kurniadi et al., 2017). Research on women in fisheries is contextual and needs to be carried out in specific places, with possible follow-up to reach out to other influential actors politically and administratively, in the long term and not through a one-time attempt (Frangoudes & Gerrard, 2018).

Research Methods

This research uses qualitative and quantitative methods to provide a more accurate reality useful in predicting and controlling the fisheries sector. Data obtained from the qualitative and quantitative methods are descriptive and quantified and used to obtain values or numbers from some variables (Mulyadi, 2013; Indrawan, R., Yaniawaty, 2016).

The findings obtained from the qualitative research results improve the quality of work and are basically useful for academic interests. Furthermore, the quantitative research results are an effort to collect data in the form of numbers or questionnaires processed using statistics. Data on fisherwomen's daily activities during the fishing and non-fishing seasons were collected through questionnaires, interviews, field observations, and documentation.

The research was carried out in 5 (five) villages of Sungsang I, Sungsang II, Sungsang III, Sungsang IV, and Marga Sungsang in Sungsang II Sub-district, Banyuasin Regency. A total of 116 fisherwomen respondents consisting of wives and children of fishermen, aged between 15 and 65 years and living in the five villages were involved in this research. The data was obtained from the Indonesian Ministry of Marine Affairs and Fisheries website (Handajani et al., 2015).

Analysis of women's role at the household level of coastal communities was carried out using the Moser analysis tool developed by Caroline Moser in 1993. The core of the Moser analysis framework includes domestic, productive, and social concepts. It also comprises the ability to assess, evaluate, and formulate proposals at the technical policy level for implementing programs that are more sensitive to elements of gender equality (Istiqomah et al., 2019; Sociology et al., 2019)

Based on their role, women's work is divided into three parts. The first is productive roles, which is associated with the reward obtained from participating in order activities, such as tailoring, farming, and teaching. The second is reproductive roles, which cannot be valued in money or

goods, such as pregnancy, childbirth, and breastfeeding. The third is social roles related to wives' ability to participate in community activities (Aswiyati, 2016). According to Fitriasia (2019), women's role is optimized when the inhibiting factors are appropriately identified.

In this research, reproductive or domestic activities were measured by shopping for household needs, accompanying children to study, ironing, cleaning the house, washing clothes and dishes. It is also measured by repairing the house, caring for children, taking them to school, and the mosque to learn the Qur'an. Furthermore, productive activities are measured by repairing nets, shopping for supplies, fuel oil, and merchandise before fishing, sorting fish, selling catches, cleaning workplaces, washing work equipment, processing catch (fish), selling processed products, and lifting fish catches. Meanwhile, social activities are measured in activities of social gathering, recitation, death, parties, weddings, village meetings, mutual cooperation, traditional events, institutions, thanksgiving events, counseling, integrated services post (Posyandu), and cooperative meetings.

Findings & Discussion

Banyuasin II sub-district has an area of 3,707.40 km² and is divided into 17 villages. The largest village is Sungsang IV Village with an area of 1,769.07 km² or about 25.61% of the area of Banyuasin II Subdistrict. The village with the smallest area is Karang Sari Village with an area of 11.60 km² or about 1.33% of the area of Banyuasin II Subdistrict. With geographical conditions surrounded by the sea and river Banyuasin II subdistrict has a very large potential in the fishery sub-sector, especially catch fisheries, especially villages in the coastal part of The Breech, among others, the villages of Muara Sungsang, Sungsang I, Sungsang II, Sungsang III and Sungsang IV. To answer the purpose of research on the characteristics of female fishermen and their role in the season or not fishing season is analyzed and reviewed as follows:

Respondent's Identity

Respondents selected by the women fishermen consisted of the wives and children of the fishermen in 5 (five) villages aged between 15 to 65 years. For more details can be seen in the following table

Table 4.1: Characteristics of Fisherwomen

Characteristics	Average	n	%
Marital status	Single	14	(12,1)
	Married	99	(85,3)
	Widow	3	(2,6)
Education	Not going to school/ not completing elementary school	17	(14,7)
	Elementary school	54	(46,6)
	Junior high school	10	(8,6)
	Senior High School	32	(27,6)
	Diploma	3	(2,6)
Main job	Fishermen's wife	102	(87,9)
	Fishermen's child	14	(12,1)
Side job	Unavailable	85	(73,3)
	Available	31	(26,7)
Job status	Self-employment	71	(61,2)
	Wage workers	45	(38,8)
The number of dependents	1-4 (People)	100	(86,2)
	5-9 (People)	16	(13,79)

Education

The results showed that 29.3 percent of women respondents in five Sungsang Coast, Banyuasin Regency villages, South Sumatra did not go to school, while 48.3 percent had elementary school education. Meanwhile, the remaining 22.4 percent had diplomas, junior and senior high school education. This indicates that the level of education is still low, which leads to limited ability to manage the land and resources around them optimally (Widodo et al., 2011). The ability of these coastal women is relatively low compared to those outside these areas. Only 5 - 10% of coastal communities have the initiative to continue their children's education to a higher level (Kurniadi et al., 2017)

Education is one of the factors that determine a person's mindset or actions. The factors of poverty and minimal family income are the main priority of basic needs, hence children and parents are not motivated by education. Therefore, this causes children on the Sungsang Coast to earn income from an early age, making them reluctant to go to school because they are comfortable with their condition. Evi & Laila, n.d. (2015) stated that the higher the level of education, the lower the possibility to optimize family resources. According to Subaidi et al. (2015), the low level of education ultimately makes people of this region unable to manage natural resources.

The policy needed to improve fisherwomen's quality is access to education and technical training (Williams, 2012; Djunaidah & Nurmalia, 2019). This policy is carried out because most women involved in fishing do not have access to equipment and credit, a voice in decision making, and the opportunity to receive training (Sriputinibondh et al., 2005; Salim, SS; Antony, B.; Geetha, 2011).

The development of women in the fisheries sector needs to be through training, extension, and skills acquisition programs. Furthermore, credit, business, health, and education facilities are needed to increase their participation in special development programs according to location and based on needs (Rajeshbhai, 2020; Sathiadhas et al., n.d, 2003). Desa et al. (2015) reported that training on quality and modern fishing, processing, and cultivation is needed to increase the output generated from each fishery business type. The big role of coastal women in fishery activities is to be recognized as agents of change and provide them with space and opportunity to become aware of themselves.

Age

Based on age, out of the total number of respondents, 85 were 15-40 years old (76.72%), while the remaining 27 were over 40 years (23.28%). Therefore, most of the respondents are still of productive age and are strong to work to help improve fishermen's activities. Dewi, P. (2012) stated that physical strength in adulthood and youth varies, therefore it is likely to affect the level of income received. On average, Sungsang fisherwomen carry out the fishery activities in their teens by starting the business at a younger age, which is continued to even in their late 60s. Furthermore, through various acquired experiences, fisherwomen have developed their ways to buy and market products (Salim, S.S.; Antony, B.; Geetha, 2011).

Source of Income

Based on the source of income, 87.9 percent of the women in fishermen families only rely on captured fisheries, while the remaining 12.1 percent have side businesses such as grocery trading, sewing, and selling processed fish products such as *kemplang* crackers, shrimp paste, *petis*, etc. By processing the sea products caught by their husbands, Sungsang women become a new force in building the family's economic resilience to a much better level (Zainuddin, 2020). In

managing fisheries resources in Sungsang, 91.38 percent of fisherwomen in 5 villages stated that they had never received counseling and training associated with processing of captured fishery. Therefore, the products are still far from standard, and most of them do not have business permits and Home Industry Food license (PIRT) certificates. According to Girei et al. (2018), fisherwomen's fishery operations activities are hampered due to inadequate extension services, poor storage facilities, meager marketing arrangements, and lack modern fish processing facilities, their income low.

Generally, women on the Sungsang Coast try to develop businesses by opening shops or food stalls. However, these efforts are often unsuccessful due to numerous competitors, lack of experience, and limited capital. Therefore, it is necessary to form a fishermen's wife group as a training forum to improve skills and carry out new activities individually or in groups to increase income (Khairiyah & Sunito, 2018).

Job status

Based on job status, 38.8 percent of fisherwomen are wage workers, while the remaining 61.2 percent are self-employment. In low-income families such as those of fishermen, women or wives generally play a role in the public sphere by assisting their husbands in fulfilling the community needs. Wives are responsible for taking care of the household and also for helping their husbands to earn some income for their family's needs, therefore, they play a dual role (Subaidi et al., 2015; S, 2012; Resources et al., 2012). However, there are still many factors responsible for fisherwomen's dual role, such as the difficulty in fulfilling the various necessities of life. Therefore, this motivates fishermen's wives in Sungsang I, Sungsang II, Sungsang III, Sungsang IV, and Muara Sungsang villages to make additional income families.

Interventions to improve women's livelihoods through better marketing of fishery products need to be appropriately designed to overcome the barriers associated with market entry and the tools and skills needed to succeed while ensuring the vitality of fish stocks (USAID and IUCN et al., 2019). The need for a transportation system and distribution network is one of the obstacles faced in all development areas for fisherwomen (Salim S.S., Antony B., Geetha, 2011). Therefore, to address the digital divide and the lack of access to information and communication technology, women and fishermen communities generally need to be engaged and empowered with digital services capable of improving their livelihoods and facilitate ownership (Misk et al., 2019).

The number of dependents

The results showed that the number of fisherwomen on the Sungsang Coast with total dependents of 1-4 people are 79 families (68.10%) and are included in the small family category. Meanwhile, fisherwomen with total dependents of more than four are 16 families (13.79%) and are included in the big family category. This data explains that some fishermen's wives have relatively little household consumption expenditure, while those with high expenditure work to increase their family's income. According to Purwanto & Taftazani (2018), family size and spending on health have a negative effect on the husband's subjective welfare.

The Role of Fisherwomen

The results also found that women in five villages of Sungsang Coast, Banyuasin Regency, South Sumatra, Indonesia not only play the role of housewives, rather they also carry out reproductive, productive, and social activities. In the capture fishery business in Sungsang, fisherwomen play a significant role in the fishing community's economic activities, repairing

fishing gear and marketing their catch. The involvement of women in the preparation stage includes providing equipment and supplies to go to sea. In one day, they can repair one to three nets, which is mostly carried out after being used for fishing activities.

Statistically, the fishing season status does not change the intensity of fisherwomen's reproductive role, although there is a slight decrease by -3.09% based on the mean value. Meanwhile, the significant difference from changes in intensity occurs in social and productive roles. The intensity of the social role in the fishing season increased in the range of 37.34%, while the productivity increased by almost twice (92.71%), as shown in Table 1. This indicates that fisherwomen and women in general view reproductive roles as their main task. Therefore, the existence of economic activity during the fishing season cannot be used as a reason to reduce the intensity of the role in managing the household. Conversely, this research also indicates an imbalance in the division of roles in managing the household among family members, which needs further analysis.

Fostering fishermen's families needs to be improved to realize motivation for better children's education, improved family health, and gender justice and equality (Handajani et al., 2015).

Table 1: Differences in the intensity of fisherwomen role based on the season status

Intensity Score *	Season Status		Independent Samples Test	
	Fishing	Non-Fishing	t	Sig. (2-tailed)
Reproductive Role	16,78	17,32	-0,826	0,410
Social Role	13,28	9,67	4,453	0,000
Productive Role	11,16	5,79	5,443	0,000

Note: * the intensity score is obtained from the sum of all activities in the role category with the conditions: never = 0, rarely = 1, and always = 2

The research findings indicate that activities related to consumption, such as cooking, shopping, and washing, increase intensity during the fishing season compared to the non-fishing season, although it is not statistically proven. This finding is in line with the economic law, which states that an increase in income leads to a rise in consumption and social activities, closely related to cost expenditures.

Activities that support works are the productive roles of fisherwomen, which experience the highest intensity compared to fishing and non-fishing seasons. The role of women as economic actors cannot be ignored, hence capacity strengthening is needed to support their role in carrying out productive economic activities and advancing households (Djunaidah & Nurmalia, 2019; Adiwaty, 2019; Rahim, 2018).

The absence of policies and programs for fisherwomen affects fishermen and their households. Therefore, fishermen and fisherwomen's regulatory role needs to be recognized and empowered proportionally in the implementation of policies covering several areas such as individual ability, economic decision-making, access and control over resources, and organizational capabilities (Alami & Raharjo, 2017). According to Berkes & Nayak (2018), it takes the development of new institutions and technology to develop fishing communities to avoid bad practices that cause environmental degradation and reduce resources.

Therefore, based on the research results and discussion, it is concluded that 48.3% and 29.3% of fisherwomen completed and did not complete their elementary school education. The majority of these women are in the productive age range of 15 to 40 years. Furthermore, most of them only rely on the capture fisheries business of their husbands or parents. A total of 38.8% are wage

workers, while 61.2% are self-employed. Then, fisherwomen with 1-4 dependents are 79 families (68.10%), while those with more than four dependents are 16 families (13.79%).

Table 2: Fisherwomen,s role based on the season status

Women Role	Activity based on the Season Status
Reproductive Role	This role is not greatly influenced by the fishing season
Social Role	This role is influenced by changes in the fishing season
Productive Role	This role is influenced by changes in the fishing season

In conclusion, the fishing season does not change fisherwomen's reproductive role intensity, although there is a slight decrease by -3.09%. Meanwhile, the significant difference between role intensity changes occurs in social and productive roles at intensities of 37.34% and 92.71%, respectively.

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