*Original Research Article*

SOCIAL MAPPING OF MINI PURSE SEINE FISHERMEN AT NUSANTARA FISHING PORT PEKALONGAN

.

ABSTRACT

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| **Aims:** This research on social mapping aims to provide an overview of the community's conditions and identify data-based characteristics to support the development of mini purse seine fishermen around the Nusantara Fishing Port in Pekalongan and inform local development and empower small-scale fishing communities. **Study design:** This study was designed as a descriptive qualitative research using a survey approach. **Place and Duration of Study:** The study was conducted in Panjang Wetan, North Pekalongan District, Pekalongan City, from December 2023 to August 2024. **Methodology:** The primary method of data collection was a survey using questionnaires. Respondents were selected through purposive sampling based on several criteria. A total of 30 respondents were involved, including fishermen, fishermen's wives, and stakeholders in Dadap Village. The collected data were analyzed using qualitative descriptive analysis. **Results:** The social variables found include: 118 mini purse seine fishermen in Panjang Wetan Sub-district are of Javanese ethnicity and speak the Javanese language; there is an associative relationship among the fishermen; most of the fishermen have only completed primary school; and one of the existing fishing traditions is the Sadranan ceremony. **Conclusion:** This manuscript offers valuable insights into the everyday lives and socio-economic structures of small-scale fishing communities, particularly mini purse seine fishermen in Pekalongan. The topic is rarely explored in academic research, especially from a social mapping perspective. By presenting detailed findings on kinship, education, gender roles, and community dynamics, the study contributes meaningfully to the broader discourse on coastal development and grassroots-level policy. Its relevance extends to scholars, practitioners, and policymakers working in fisheries, rural sociology, and community empowerment. |

*Keywords: Social Mapping, Mini Purse Seine, Fishermen, Nusantara Fishing Port, Community Development, Low Education Level.*

INTRODUCTION

Social mapping is a form of description or portrait of the state of society in an area. Social mapping is a process of identifying community characteristics based on data and information about community conditions (Sukaris 2019). The activity of understanding the social conditions of society is important in development planning efforts because different social conditions in each region can affect the needs of a community.

Fishing gear or fishing equipment is a tool used by fishermen to carry out fishing activities, namely catching and taking marine products. Based on its type, fishing gear is divided into two categories, namely traditional fishing gear and modern fishing gear. Traditional fishing gear is a fishing gear that is simple to use but has low productivity, while modern fishing gear is a fishing gear that is more sophisticated, efficient, and has high productivity. Measuring the modernity of a fisherman does not always depend on the size of his fishing gear, but also the size of the motor and the size of the boat used in fishing activities. In practice, fishermen who use traditional fishing gear usually have limited cruising ability and capacity, while fishermen with modern fishing gear have large ship capacities and cruising abilities up to offshore. This causes the income from traditional vessels that can be classified as smaller than modern vessels to be smaller.

*Mini*Purse seine is a type of fishing gear used to catch fish in bulk. This tool is a smaller version of the regular purse seine, designed for use by small fishing boats or boats with lower catch capacity. Mini purse seines are usually used to catch small pelagic fish in coastal and shallow waters. Mini purse seines offer an affordable option for small fishing vessels, making them a preferred alternative to larger purse seines.This fishing gear is effective in catching small pelagic fish in shallow waters and near the coast.

The port is an important facility for sea transportation, especially as a place for ships to anchor, for passengers to board and disembark, and for intra- and inter-mode transfers (Putra 2016). According to Putra (2016), a seaport is a water area protected from waves, currents, and storms so that ships can anchor and dock, disembark passengers, drop anchor and carry out loading and unloading properly. Fishing ports are included in a public organization that works to serve the community, especially fishermen. Fishing ports are used as centers for capture fisheries activities, including sailing permits, serving sea needs, landing catches, auctioning catches, processing catches, handling the quality of catches, and distributing catches (Nugroho 2012).

Development is a pattern of growth, changes that are carried out gradually and slowly. Development is concluded with a planned, directed, and conscious effort to create or improve the quality of something or a product as an effort to create better quality. Fishermen's development is important in efforts to achieve fishermen's welfare. Government assistance programs can be a comprehensive development of fishermen's lives, both in terms of social, economic and environmental aspects (Wibowo 2022). Coastal community development can start from small-scale fisheries by looking at the desires of the community through social and economic mapping. Therefore, it is important to carry out social mapping with the aim of understanding the characteristics and socio-cultural economic conditions, as well as knowing what socio-economic factors influence the development of mini purse seine fishermen at the Pekalongan Nusantara Fisheries Port.

2. methodologY

The social mapping research of small fishermen is located in Panjang Wetan, North Pekalongan District, Pekalongan City. This research was conducted from December 2023 to August 2024. The research method used is a survey method through qualitative data analysis. The survey method is a form of approach activity between researchers and respondents to obtain data, not in the form of the author's opinion but rather natural data (Sugiyono 2017). The types of data used are primary data and secondary data. Primary data collection techniques are carried out through filling out questionnaires, interviews, observations, and documentation. Secondary data are collected through related agencies including the Regency BPS, Related Technical Services (Indramayu Regency Fisheries and Marine Service, UPTD, KUD), and the District Office or Village/Sub-district Office.

The sampling technique to fulfill primary and secondary data is using purposive sampling. Criteria for respondents "Fishermen": (1) Residing around PPN Pekalongan, (2) Working as small fishermen, owners or crew members, (3) Operating vessels measuring ≤ 10 GT with mini purse seine fishing gear, (4) Fishermen owners or laborers, (5) Willing to be interviewed and fill out the questionnaire. Criteria for respondents "Fishermen's Wives": (1) Residing in Residing around PPN Pekalongan, (2) Female, (3) Wives of small fishermen, (4) Willing to be interviewed and fill out the questionnaire. Criteria for respondents "Stakeholders": (1) Head or community staff in the management field (Lengahan Wetan stakeholders, managers, and port administrators), (2) Willing to be interviewed and fill out the questionnaire.

In this study, the determination of the minimum number of samples was 30 samples including small fishermen, related stakeholders (Village administrators, KUD, KUB, UPTD), fisheries processing managers, and fishermen's wives. In line with Sugiyono's statement (2017) the reference for a feasible sample size in research is between 30 and 500 samples. Followed by Singarimbun and Effendi's statement (2006) that the number of respondents to the questionnaire test with a value distribution approaching the normal curve is at least 30 people.

Data analysis used in this study, namely qualitative descriptive analysis and quantitative descriptive analysis. Quantitative descriptive is carried out to determine the value of independent variables without making comparisons using numbers, starting from data collection, data interpretation, and data display (Jayusman 2020). Qualitative descriptive analysis is used to obtain results from social mapping at the research location. Research analysis to determine social factors that influence the development of small fishermen uses a qualitative approach. The qualitative approach uses field analysis techniques with the Miles and Huberman Model. Miles and Huberman (1984) are carried out interactively and continue continuously until the data is saturated. Activities in the data analysis used, namely data reduction, data display, and conclusion drawing/verification.

3. results and discussion

**3.1 General Condition Of The Research Area**

Pekalongan Nusantara Fisheries Port (PPN) has a fairly large fishing community. Based on data from the Pekalongan City Marine and Fisheries Service in 2020, the number of fishermen in PPN Pekalongan reached 3,714 people, with details of 2,857 laborers and 857 fishermen who own ships or skippers. Most of the fishermen are in the productive age between 30-50 years, although there are also fishermen who are over 50 years old to 65 years old (Sitorus et al. 2019). The level of education of fishermen in PPN Pekalongan is relatively low, with the majority only completing basic education (elementary and junior high school) and only a small number having received education up to high school or equivalent (Rosyid & Effendi 2018). Fishermen operating in PPN Pekalongan do not only come from Pekalongan City, but also from surrounding districts/cities such as Pekalongan, Batang, and Pemalang Regencies (KKP Research and Development Agency 2017).

Although the fisheries and trade/services sectors are the main livelihoods, a small part of the community around PPN Pekalongan also works in other sectors such as the processing industry, transportation, and other informal sectors. According to data from the Central Statistics Agency of Pekalongan City (2021), around 12% of the population in the area around PPN Pekalongan works in the processing industry sector, while 8% works in the informal sector such as casual laborers and street vendors. In line with Damayanti's statement (2005), the city center or regional center is interpreted as a business center or government area.

The demographic conditions of the community around the Pekalongan Archipelago Fisheries Port (PPN) show the typical characteristics of coastal areas. Based on data from the Pekalongan City Central Statistics Agency (2022), the population in the area around the Pekalongan PPN, which includes Pekalongan City, reached 317,993 people with a population density of around 6,527 people per km². The composition of the population by gender is relatively balanced, with 50.63% male and 49.37% female. The diverse society of Pekalongan City also consists of several ethnic groups such as Javanese, Arab, Chinese, and several immigrants from the Madurese, Padang, and Batak tribes.

The area around the Pekalongan Nusantara Fisheries Port (PPN) has abundant natural resources, especially from the marine and fisheries sector. The Java Sea, which directly borders the coast of Pekalongan, is the main resource for the surrounding community. According to data from the Pekalongan City Marine and Fisheries Service (2020), the potential for capture fisheries in the waters around the Pekalongan PPN reaches more than 150,000,000 tons per year, with dominant fish species such as Layang Deles (Decapterus macrosoma), Layang Cempluk/ Benggol (Decapterus ruselli), and Kembung Lelaki (Rastrelliger kanagurta).

In addition to marine wealth, the area around PPN Pekalongan also has a mangrove ecosystem that plays an important role in maintaining the balance of the coastal environment. Based on research by Widagdo et al. (2018), the area of ​​mangrove forest around PPN Pekalongan reaches 75 hectares with dominant mangrove species such as Rhizophora mucronata, Avicennia marina, and Sonneratia alba. This mangrove ecosystem not only functions as an abrasion barrier, but also as a habitat for various types of fish, crabs, and shrimp that have high economic value.

Other natural resources around PPN Pekalongan are the potential for renewable energy from wind and ocean waves. According to a study conducted by the Center for Research and Development of Marine Geology (2019), the coastal area of ​​Pekalongan has the potential for wind energy with an average speed of 3-5 m/s and ocean wave energy with an average height of 1-2 meters. This potential opens up opportunities for the development of wind and ocean wave power plants in the future, which can support the energy needs of the community around PPN Pekalongan.

**3.2 Profile Of Pekalongan Archipelago Fisheries Port**

Port profile is needed to know the potential and level of port development. Pekalongan Port was built in 1852, and inaugurated in 1859 which was part of the colonial policy. Then in 1873 this port was designated as a limited import port. In 1882 it had export-import status. In the early 20th century it had the status of a medium port, and then in 1924 as a small port. Before being designated as a special fisheries port in 1974, Pekalongan Port was used by barges. Its development continues in line with being designated as the Pekalongan Archipelago Fisheries Port since 1978. (Widodo 2009).

Pekalongan Archipelago Fisheries Port also has a Legal Basis that regulates all operations at the Port, including:

* Republic of Indonesia Law No. 31 of 2004 concerning Fisheries
* Government Regulation of the Republic of Indonesia No. 11 of 1983 concerning Port Development
* Decree of the Minister of Transportation of the Republic of Indonesia No.KM.35/AL/106/Phb.85 concerning Fishing Ports
* Decree of the Minister of Maritime Affairs and Fisheries No. Kep.10/MEN/2004 concerning Fishing Ports
* Government Regulation of the Republic of Indonesia No. 19 of 2006 concerning PNBP Tariffs
* Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia
* No. PER.06/MEN/2007 concerning the Organization and Work Procedures of Fishing Ports
* Regional Regulation of Central Java Province No. 10 of 2003 concerning Fish Auction Places

Development around the Pekalongan Nusantara Fisheries Port (PPN) has experienced significant development in recent years. According to the Pekalongan City Government Agency Performance Report (LKIP) (2022), the focus of development in this area is directed at improving port infrastructure and supporting facilities for the fishing industry. This development includes expanding the pier, improving cold storage facilities, and modernizing the Fish Auction Place (TPI) which aims to increase the capacity and operational efficiency of the port. In addition to port infrastructure, development around the Pekalongan PPN also includes the residential sector and public facilities. Based on research by Widodo et al. (2021), there has been an increase in the construction of fishermen's housing and improvements in environmental sanitation in coastal areas. This program aims to improve the quality of life of fishing communities and reduce population density in slum areas. The development of public facilities such as health centers, schools, and traditional markets is also a priority for the local government to support the socio-economic activities of the community.

Another important aspect in the development around PPN Pekalongan is disaster mitigation efforts and climate change adaptation. According to the PPN Pekalongan Annual Report (2018), the construction of sea walls and better drainage systems has been carried out to overcome the problems of tidal flooding and coastal abrasion. In addition, mangrove planting programs and coastal ecosystem rehabilitation are also an integral part of the sustainable development strategy in this area. Functional facilities are a consideration for development in PPN Pekalongan. According to Lubis (2012), functional facilities or superstructures are facilities that function to increase the utility value of basic facilities so that they can support activities at the port. PPN Pekalongan facilities can be said to be in adequate condition such as the TPI Building, Port office, Integrated service building, laboratory, workshop and slipway. This is detailed in the PPN Pekalongan Annual Report (2018) functional facilities also include electrical installations, parking lots and area fences. For auction activities, currently only the old TPI is used and the Hygienic TPI has not been used because many Port users have not complied with the rules.

**3.2.1 Village Culture**

Pekalongan as one of the cities in Central Java has the largest port on the island of Java, especially in Central Java, there are several managers of diverse marine products, this encourages the entry of various cultures and influences that have been present in the area since the kingdom era. The culture that is very attached to this city is batik, which is why Pekalongan is nicknamed "The World's City of Batik" which has special characteristics that are unique and different from batik in other places. Pekalongan batik is one of the oldest batiks in Indonesia, and this batik has also undergone several adaptations due to other external influences, namely China and also Hindu-Buddhist and Islam. The city of Pekalongan also has a Batik Museum which is usually visited by tourists and students to be able to see and learn the history and everything related to batik in the Pekalongan Residency.

Pekalongan's signature batik, Jlamprang, which is the identity of Pekalongan batik, is usually worn every Friday by elementary to high school students in the city. The characteristic of Jlamprang batik motif is its pattern consisting of dots, circles, squares, geometric and has a composition of more than 2 colors. Generally, in the middle of the circle there is a picture of a padma flower. According to history, this motif emerged due to the influence of Hindu and Buddhist beliefs and is sacred. So the Jlamprang batik motif is used as a complementary object for Hindu religious ceremonies in the Pekalongan area. The meaning of using Jlamprang batik is to connect the human world (underworld) and the world of the gods (upper world or heavenly world). The number of home businesses or factory outlets is one of the drivers of economic growth in Pekalongan City.

The development of batik culture was also adapted by the surrounding community, especially dance artists by creating the Jlamprang Dance. Dance. The Jlamprang Batik Dance is presented and danced with various movements that improvise with the structure of the batik movements. The Jlamprang Batik Dance is danced by women only. In the Jlamprang Batik Dance there are two types of dance movements, including meaningful movements, namely dance movements in their expression contain a certain meaning or intention and pure movements, namely dance movements that do not contain a certain meaning and intention because pure movements are only for the beauty of the dance movements. The movements in the Jlamprang Batik Dance have the meaning of movement as a form of visualization of people who are making batik. With graceful body movements in accordance with the soul of women and there are also broken movements that describe the topography of the Pekalongan City community.

This area is also known as the city of santri with its religious nuances because the majority of the population is Muslim, there are several traditional customs in Pekalongan such as syawalan, janji and so on. However, not only Islam, this diversity provides space for other groups to carry out their respective traditions so as to form the diversity of traditions of Pekalongan City. One of the cultures that is still closely related, especially to fishermen, is Sadranan or Nyadran. Sadranan is a ceremony of throwing offerings of sea alms in the form of miniature ships which is carried out every Syuro Month or after the fasting month. Buffalo heads and offerings such as market snacks, fruits, and children's toys are dropped into the sea from the coast of Pekalongan when the distance is late reaching 3 miles from the coastline.

From this diversity, it encourages socio-economic development in Pekalongan City. The utilization of natural and cultural resources makes it easier for people to do business in supporting their daily needs. For example, fisheries business actors can take advantage of the existence of the sea because it is located on the coast of Java Island and is given sufficient needs such as the Indonesian port, besides that the existence of cultural identities such as batik can increase the livelihoods of the Pekalongan community to become laborers in textile companies that are growing in Pekalongan City.

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| **Fig. 1. Sadranan Procession and Jalamprang Batik**  **(Source: batiktv.pekalongankota.go.id)** | |

**3.2.2 Characteristics Of Small Fishermen**

The characteristics of mini purse seine fishermen at the Pekalongan Archipelago Fisheries Port include several things, namely age, education level, employment status, experience at sea, number of family members, and work outside of fishing are shown in Table 1.

**Table 1. Data on characteristics of small-scale fisherman respondents**

| **Characteristics of Small Fishermen** | **Number of people)** | **Percentage (%)** |
| --- | --- | --- |
| Age (years) |  |  |
| Less than 30 | 4 | 13.33 |
| 30 – 50 | 18 | 60 |
| More than 50 | 8 | 27.67 |
| Level of education |  |  |
| SD | 12 | 40 |
| JUNIOR HIGH SCHOOL | 11 | 36.67 |
| SENIOR HIGH SCHOOL | 7 | 23.33 |
| Employment Status |  |  |
| ABK | 20 | 60 |
| Ship Owner | 10 | 40 |
| Sea Experience |  |  |
| Less than 5 | 4 | 13.33 |
| 6-15 | 13 | 43.33 |
| 15-30 | 8 | 26.67 |
| 30-50 | 5 | 16.67 |
| Number of Family Members |  |  |
| 1-2 | 4 | 13.33 |
| 3-4 | 19 | 63.33 |
| 5-6 | 7 | 23.33 |
| Jobs outside of Fisherman |  |  |
| Trader | 21 | 70 |
| Taxibike | 5 | 16.67 |
| Farming | 1 | 3.33 |
| Project Worker | 3 | 10 |
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**Source: Researcher Questionnaire Data 2024**

Human age has an important influence on the sustainability of fishing activities (Ariska 2019). Based on Table 1, fishermen with productive age (30 to 50 years) are 18 people (60%), followed by fishermen over 50 years old as many as 8 people (27.67%), and finally 4 people (13.33%) fishermen with a young age. Age is closely related to the physical strength and energy of fishermen in carrying out fishing activities at sea. The productive age of 20 to 54 years is considered to have prime physical conditions and abilities so that they can work optimally (Astiyani 2022). The high number of productive age mini purse seine fishermen provides benefits for fishing at the Pekalongan Nusantara Fisheries Port.

Education level influences the mindset of fishermen (Parma 2018). There are 40% of small fishermen who are elementary school graduates (12 people), junior high school graduates (36.67% people), and high school graduates (23.33% people) (Table 1). Based on Table 1, the education of mini purse seine fishermen at the Pekalongan Nusantara Fisheries Port is relatively low. The low level of education of fishermen can affect fishermen's understanding in receiving the latest information (Indasari 2017). This makes it difficult for fishermen to understand the latest fisheries information without the help of extension workers. In addition, the weak understanding of fishermen regarding the determination of fish selling prices makes it difficult for fishermen to get profits commensurate with the efforts they make.

Employment status affects the position and income of fishermen. Mini purse seine fishermen at the Pekalongan Archipelago Fisheries Port are divided into three groups, namely business fishermen, mixed fishermen (ABK), and full fishermen (owner fishermen). Based on employment status, many fishermen who own ships rely on langgan as the main supporter of fishing activities, due to the high cost of supplies for fishermen. In line with Muninggar's statement (2013), fishermen's dependence on langgan is one of the facts found at fishing ports and almost all traditional fishermen experience a lack of capital. So that many small fishermen or ship owners take out loans from langgan.

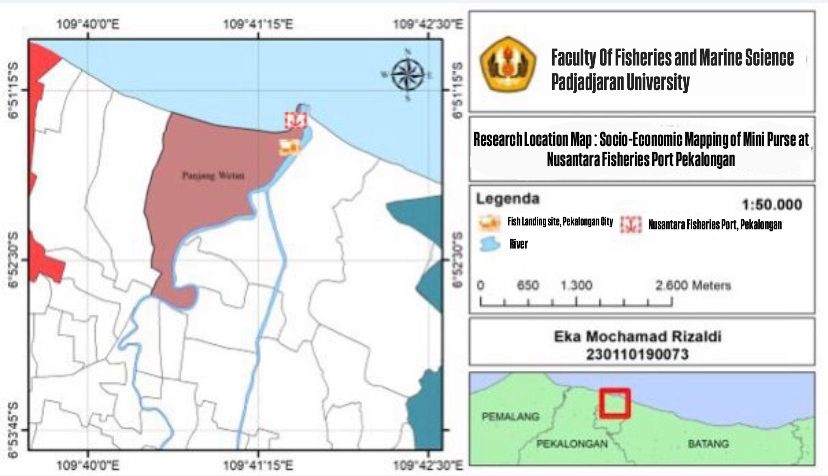
Experience at sea affects the performance of fishermen in fishing (Konoralma 2020). The longer the experience at sea, the more knowledge and skills the fishermen will have in recognizing the characteristics of fish and terrain at sea (Konoralma 2020). Most mini purse seine fishermen have been fishing for more than 15 years (Table 1). This explains that mini purse seine fishermen at the Pekalongan Nusantara Fisheries Port are very experienced in fishing.

The number of family members affects the economy of fishermen's households. Looking at Table 1, out of 30 respondents, 4 fishermen have 1-2 family members, 19 fishermen have 3-4 family members, and 7 fishermen have 5-6 family members. Based on the interview results, the largest monthly expenditure of small fishermen's families reaches 4,000,000 rupiah. The number of fishermen's family members is relatively large, so it affects the expenditure of money in meeting daily life needs. The more household members, the greater the burden of household costs needed (Adiana 2012). This makes it difficult for fishermen to save money. Likewise, the fewer family members are able to provide smaller responsibilities so that there is an opportunity for fishermen to set aside money or save.

Working as a laborer fisherman is often unable to meet daily living needs. Many laborer fishermen do more than one job to meet their needs. Working as a fisherman is often unable to meet daily living needs. Finding other jobs is a form of effort made by fishermen to meet their living needs (Chandriyanti 2020). The choice of more than one job among laborer fishermen in Dadap Village shows that fishermen have a strategy in fulfilling their lives.

**3.3 Social Mapping Of Dadap Village**

Social mapping is a form of depiction of the state of society in an area. Social mapping in this sub-chapter includes socio-cultural conditions, kinship relations, gender roles, social fisheries organizations, social stratification and social conflict. The following is a depiction of Dadap Village in a smaller size including several facilities and important locations of the village (Figure 2).



**Fig. 2. Map of Panjang Wetan Subdistrict**

**(Source: Personal documentation)**

**3.3.1 Tribes**

Ethnicity is defined as a social unit that has similarities in race, origin, religion and is bound by a cultural value system (Triwibisoni 2021). Based on existing samples, the community around PPN Pekalongan has an ethnic composition dominated by Javanese up to 100%. According to research by Santoso et al. (2020), around 85% of the population in this area is Javanese, while the remaining 15% consists of various other ethnic groups such as Bugis, Madurese, and Chinese. This diversity creates unique social and cultural dynamics in the coastal area of ​​Pekalongan.

Inter-ethnic interactions around PPN Pekalongan have been going on for a long time and have formed a unique cultural acculturation. Widyaningrum (2021) stated that inter-ethnic marriages are quite common, especially between the Javanese and Bugis tribes who both have strong maritime traditions. This results in a mixture of cultures that is reflected in various aspects of daily life, such as language, cuisine, and local traditions.

Despite acculturation, each ethnic group maintains its cultural identity. Prakoso's (2022) research shows that the Chinese community around PPN Pekalongan is still actively holding Chinese New Year and Cap Go Meh celebrations, while the Bugis community maintains their traditional ceremonial traditions. This diversity is seen as a cultural wealth that strengthens the social cohesion of the coastal communities of Pekalongan. Based on Kustriyoni et al (2018), the Pekalongan community has a religious culture, especially Islam, besides that Pekalongan can also be said to be the center of the growth of Chinese culture which continues to stick to this day.

**3.3.2 Religion**

Religion is defined as an element that relates to experiences with the highest level of value, namely to the Almighty and is believed to be the origin of the existence of the people. Religion is said to be an important social force and has a strong influence on the social environment (Fridayanti 2015). The religious conditions around PPN Pekalongan reflect harmonious diversity. Based on data from the Ministry of Religion of Pekalongan City (2023), the majority of the population (around 95%) are Muslim, while the rest consist of Christians, Catholics, Hindus, Buddhists, and Confucians. Although Islam is the majority religion, tolerance between religious communities is well maintained

Based on the existing sample, the fishing community is dominated by Islam with a percentage of 93%. The religious life of the community around PPN Pekalongan is very dynamic and colors various aspects of social life. According to Astuti (2021), religious traditions such as sea alms, which are a combination of Islamic elements and local traditions, are still routinely carried out as a form of gratitude for the fishing community. In addition, the existence of Islamic boarding schools and madrasahs in this area also plays a role in shaping the religious character of coastal communities. Although Islam is the majority religion in Indonesia, harmony between religious communities is still well maintained. Hidayat's research (2022) shows that there are routine interfaith dialogue initiatives carried out by local religious figures. This contributes to the creation of an atmosphere of tolerance and mutual respect between religious adherents in the area around PPN Pekalongan.

Based on the interview results, most or almost all of the residents of Dadap Village are Muslim.The largest Islamic organization inPekalongan, namely Nahdlatul Ulama (NU) and Muhammadiyah. This is reflected in the religious activities carried out by the Islamic organization Nahdatul Ulama (NU) such as the commemoration of Islamic holidays (PHBI), Maulid, welcoming fasting, lectures, tahlilan, marhabanan, and pilgrimage after Eid prayers. The religious activities of the Muhammadiyah organization are not very visible because the number of its members is not large.

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| **Fig. 3. Batik and Mosque**  **(Source: bumi-nusantara.blogspot.com)** | |

Based on the interview results, the fishermen's beliefs do not greatly affect fishing activities at the Pekalongan Nusantara Fisheries Port. The existence of Islamic holidays does not stop fishermen from going to sea other than Eid al-Fitr. This is because it is difficult to sell the fishermen's catch before Eid al-Fitr, so the fishermen decided to stop fishing activities 7 days before Eid al-Fitr.

**3.3.3 Kinship Relations Of Fishing Communities**

Kinship relationships are created because of blood relations and exchange relationships, so that a sense of togetherness arises (Anjani 2021). Social relations among fishermen are also close. They help each other in various ways, such as helping to pull boats ashore, sharing the catch, and providing information about good fishing locations. The socio-cultural life of the fishing community around PPN Pekalongan is also very strong. They have unique traditions and customs, such as slametan before going to sea and thanksgiving after getting an abundant catch. The dynamics of social relations around PPN Pekalongan do not always run smoothly. Sometimes there are disputes between fishermen and fish traders regarding the selling price. However, in general, the social relations between them support each other and work together. This is the key to the resilience and survival of the fishing community around PPN Pekalongan.

Kinship plays an important role in the social and economic structure of coastal communities around PPN Pekalongan. Susilowati (2020) revealed that kinship relationships are often the basis for the formation of fishing work groups, where family members and close relatives tend to work on the same boat or fishing group. This not only strengthens social ties but also facilitates the transfer of knowledge and skills at sea between generations. Although modernization and urbanization have affected people's lifestyle patterns, the kinship system remains an important social safety net. Kusuma's (2022) research shows that in crisis situations, such as when catches decline or natural disasters occur, kinship networks act as the main support system. Relatives help each other financially, share resources, and provide emotional support. This phenomenon strengthens the social resilience of fishing communities around PPN Pekalongan in facing various challenges.

Relationships of kinship and trust foster the loyalty of fishermen workers to ship owners and ship owners to customers. Trust is the main basis used by fishermen and customers in carrying out capital lending relationships (Muninggar 2013). The existence of ties between ship owners and customers also helps the flow of sales of small fishermen's catches. The relationship of kinship and trust that has been formed can end if one of them disappoints.

**3.3.4 Gender Roles Of Fishing Communities**

Gender roles are a concept of social relations between men and women (Kusumo 2008). Gender roles that occur in the social environment of the PPN Pekalongan mini purse seine fishing community are divided into three roles, namely productive roles, reproductive roles, and community management roles.

***3.3.4.1 Productive Role***

The productive role is a role that produces goods to fulfill human needs and money as family expenses (Murtiana 2017). Around the Pekalongan Nusantara Fisheries Port (PPN), women mini purse seine fishermen are not only focused on domestic roles. They are actively involved in economic activities, especially as stall traders and tailors. Women stall traders sell various basic necessities and seafood to fishermen and the surrounding community. They play an important role in maintaining food security in the fishing community. Women tailors make and repair fishermen's clothes and make fishing nets. Their skills support the smooth running of fishing activities and help increase family income. The contribution of women in this productive role is no less important than the role of men as fishermen. They help meet family needs and improve the economic welfare of the community.

According to Nopembri's statement (2007), the differences between women and men in terms of physical, both anatomically and physiologically, cause men to be more capable of carrying out activities that require greater strength. Therefore, the role of men in the fishing community in PPN Pekalongan is more focused on the obligation to earn a living as fishermen in fulfilling daily life.

Women productively help and support men in meeting household needs. Efforts made by fishermen's wives include helping to find activities that can increase family income. Many fishermen's wives do not carry out productive activities due to several reasons, including weak abilities and skills. Abilities and skills can affect work productivity (Sari 2019).

***3.3.4.2 Reproductive Role***

The reproductive role is a role that does not produce or receive payment in cash and the like (Fajarwati 2023). The reproductive role is said to be the role of managing the household (Murtiana 2017). The reproductive role is generally carried out by women, but it does not rule out the possibility of men helping to carry out domestic activities.

Based on the differences in gender roles that occur in the community around PPN Pekalongan, especially Mini Purse Seine fishermen in terms of decision making in the domestic sector. There are several differences in the selection of household decisions with activities of taking care of the house and children. Activities of taking care of the house and children are dominated by the role of women. Decision-making activities are carried out by mutual agreement. In essence, women are given domestic roles in the family and cannot be separated from daily activities because it is a necessity besides there is no one else to help at home (Setyawati 2018). Although active in economic activities, women mini purse seine fishermen in PPN Pekalongan still have the main responsibility in taking care of the household and raising children. They cook, clean the house, and take care of children's education. This reproductive role supports family harmony and helps create a conducive environment for child development.

***3.3.4.3 The Role Of Community Management***

The role of community management is a social or community role as a member of society in the social, economic, and political fields (Murtiana 2017). The community role of small fishermen in PPN Pekalongan is carried out by agreement or discussion between women and men. Formal organizational activities such as KUD and KUB are generally attended by men. In line with the statement of the head of KUD and KUB that all members of the organization are men. Women mini purse seine fishermen in PPN Pekalongan have also begun to show involvement in community management. Several women act as administrators of fishermen's organizations, such as treasurers and secretaries. They are actively involved in decision-making related to fishermen's activities and welfare. The involvement of women in community management is a positive step in increasing participation and gender equality.

**3.3.5 Fisheries Social Organization**

An organization is a group of people who have one goal. The purpose of a fisheries organization is to collect training, a forum for discussion in planning for going to sea, and a forum for distributing assistance from related agencies for small fishermen (Mutia 2022). Based on the results of field research, there is only one active formal group of KUD (Village Business Cooperative) that is active in PPN Pekalongan, namely KUD Makaryo Mino. Formal groups are groups that are formed intentionally, are structured, and have certain tasks. Informal groups are groups that are formed according to the same interests or interests (Shabrina 2016). KUD Makaryo Mino plays an important role in improving the welfare of the fishing community in PPN Pekalongan which focuses on two areas, namely social and economic. In 1962, precisely on October 5, 1962, fishermen formed a Marine Fisheries Cooperative (KPL) unit called KPL Makaryo Mino in Pekalongan. The members of this cooperative are fishermen and owners of fishing vessels or boats. Makaryo Mino comes from the words Ma, Karyo, Mino. Ma means together, Karyo means work, and Mino is fish. So Makaryo Mino means people who work or try in the fisheries sector together.

Based on the interview results, there are KUD Makaryo Mino programs related to its efforts for the people of Pekalongan City, and especially for KUD Makaryo Mino members themselves, their existence plays a very important role. KUD is an economic institution that helps fishermen in procuring capital and fish auction facilities (Bahua 2015). KUB fisheries capture is a group formed by fishermen based on the results of member agreements based on shared desires (Boari 2022). The Village Unit Cooperative (KUD) is a fisheries organization under the Regional Technical Implementation Unit (UPTD).

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| **Fig. 4. KUD Makaryo Mino**  **(Source: Personal documentation)** |

Group In 2023, KUD Makaryo Mino collaborated with the surrounding community in a community service activity to clean the drainage channels in the TPI (Fish Auction Place) area. This activity aims to maintain environmental cleanliness and prevent flooding. KUD Makaryo Mino's active involvement in social activities like this shows its commitment to improving the welfare of its members and the surrounding community. KUD Makaryo Mino has an important role in improving the welfare of mini purse seine fishermen at PPN Pekalongan. KUD's economic activities help fishermen increase the efficiency and productivity of their fishing efforts, so that they get a better income. KUD's social activities also help improve the quality of life of fishermen and the surrounding community, such as increasing access to education and health, and creating a clean and healthy environment. KUD Makaryo Mino is a good example of a social organization that is able to empower fishing communities.

The formal group that many fishermen join is the KUD group because being a member is one of the requirements to receive cooperative assistance. Many fishermen do not join formal fisheries organizations because they are busy and do not have time to participate in activities such as discussions or managing activities together

**3.3.6 Social Stractification**

The social stratification in PPN Pekalongan is formed due to social interaction. The social interaction felt by small fishermen begins with cooperation between customers, ship owners, and labor fishermen. The social stratification of the fishing community has different dimensions, namely honor, power, and education (Lubis 2019). The mini purse seine fishing community in PPN Pekalongan is a dynamic community with complex social and economic stratification. Understanding this stratification is important for understanding the socio-economic conditions of the fishing community and formulating appropriate policies to improve their welfare. This social stratification affects various aspects of the lives of fishing communities, such as income, access to resources, and levels of participation in social activities.

Stratification based on honor is seen from the community's response in respecting community leaders, religious leaders, and people who have services to the community (Lubis 2019). Based on the results of research and interviews with mini purse seine fishermen at PPN Pekalongan, the social stratification of the fishing community can be divided into several levels. The upper level consists of ship owners and skippers who have large capital and control several mini purse seine vessels. The next level is the middle level consisting of captains and senior ABK (Ship Crew) who have high experience and expertise in going to sea. Often their opinions are a reference for younger fishermen to be asked for opinions regarding issues surrounding fishermen, the last level is ABK or manual laborers and small fish sellers, most of whom are small investors.

The economic stratification of the mini purse seine fishing community is measured based on income and level of asset ownership. Based on observations and interviews obtained from interviews, it can be concluded that there are three economic levels. The first level is a group that can be said to be rich who have an income above IDR 5,000,000 per month or ship owners who employ crew members. This group often supports other fishermen. This group often provides loans for capital to go to sea for small fishermen or ordinary traders who need material capital. The next group is the middle group whose income is between IDR 2,000,000 and IDR 5,000,000 per month. This group is the largest majority in the population. The last group is the poor group who earn below IDR 2,000,000 per month who usually work as junior crew members, laborers, and small fish sellers. This economic stratification affects various aspects of the lives of fishing communities, such as access to education, health, and housing. Stratification based on power is seen from how powerful a person is in the scope of small fishermen (Lubis 2019). Stratification based on education is seen from how far a person has succeeded in pursuing their education (Lubis 2019). Education plays a major role in determining social status. The higher the level of education, the more respected they will be. According to the results of observations, fishermen using mini purse seine fishing gear are the most active fishermen in fishing with an average of 21 trips per month, followed by fishermen using gemplo fishing gear with an average sailing activity of 20 trips per month.

In the Education AspectAccording to the observation results, educational stratification is the least influential. Social strata seen from education are no longer a priority. For fishing communities, education is not a priority because skills as fishermen have been obtained and learned from parents since childhood. So that there is a decrease in children's motivation towards education according to the 2019 Kemendikbud partner survey in (Agustina 2022). The difference in wealth elements among fishing communities causes a very visible difference in lifestyle. According to Alfian's statement (2015), the level of wealth of community members shows a fairly clear difference

**3.3.7 Social Conflict**

Social conflict is a dispute over values ​​or demands regarding status, power, and limited resources (Napitupulu 2022). Social conflict can also occur due to differences in interests and often occurs due to provocation (Soetopo 1999). Generally, the disputing parties will harm their opponents. The mini purse seine fishing community in PPN Pekalongan is inseparable from various social and economic conflicts. This conflict affects the relationship between fishermen, the relationship between fishermen and the authorities, and the smooth running of fishing activities. Understanding these conflicts is important for formulating appropriate solutions to create a conducive atmosphere for the lives and businesses of fishermen.

Differences in views on policy between the port and the village caused disagreements between the two parties. This resulted in feelings of distrust and difficulties in cooperation between the village and the port. Information on assistance from the central government was conveyed to the Cooperative first rather than to the village. So according to the village administrators, assistance from the central government in the fisheries sector was considered very minimal when compared to assistance from the agricultural sector.

The mini purse seine fishing community in PPN Pekalongan often feels disadvantaged by government policies that are considered not to benefit them. For example, policies on restrictions on fishing gear, determination of catch quotas, and regulations related to fishing areas are often considered unfair and hinder the efforts of fishermen. Dissatisfaction with these policies causes conflict between fishermen and authorities, such as officers from the Marine and Fisheries Service and law enforcement officers. This conflict can trigger protests and demonstrations by fishermen, which disrupt public order and hinder the law enforcement process.

The mini purse seine fishing community in PPN Pekalongan also often experiences conflicts with port officers. These conflicts occur due to various things, such as unclear procedures and port service fees. Fishermen are often confused about the procedures and fees they must pay for various services at the port, such as loading and unloading fish, document processing, and use of port facilities. Fishermen often feel treated unfairly by port officers, such as being prioritized in services, being charged higher fees, or receiving services that are not in accordance with procedures. This conflict causes frustration and dissatisfaction among fishermen, which negatively affects their relationship with port officers. It can also hinder the smooth running of fishing activities and reduce the efficiency of fishermen's businesses.

**3.4 Supporting And Inhibiting Factors For The Development Of Small Fishermen**

Social factors that can have a positive impact on the development of mini purse seine fishermen at the Pekalongan Archipelago Fisheries Port are the age of the fishermen, their experience at sea, and the kinship of the fishermen.

**3.4.1 Fisherman’s Age**

The age of mini purse seine fishermen at the Pekalongan Nusantara Fisheries Port is included in the productive working age, namely in the range of 30 to 50 years based on the results of the study, there are as many as 60% of people (Table 1). The productive working age helps fishermen earn higher incomes from fishing because the energy and stamina possessed by fishermen are still very large (Putri 2019).

**3.4.2 Sea Experience**

Mini purse seine fishermen at the Pekalongan Nusantara Fisheries Port have experience at sea ranging from 15-50 years. Fishermen's experience at sea can help the fishing process because the skills possessed by fishermen can have an impact on the catch. According to Indara's statement (2017), the longer the experience of the fisherman, the greater the fish catch obtained.

**3.4.3 Kinship**

The kinship of the mini purse seine fishing community at the Pekalongan Nusantara Fisheries Port, the mutual cooperation embedded in the individual fishermen community has a positive impact on the development that will be carried out by both the village and regional governments in involving their communities. The mutual cooperation and mutual assistance possessed by the mini purse seine fishermen at the Pekalongan Nusantara Fisheries Port is greatly needed when something happens that cannot be resolved alone. In line with Indara's statement (2017), the need for mutual cooperation and mutual assistance is important when dealing with situations that require either large costs or the deployment of manpower.

4. Conclusion

There are a total of 118 mini purse seine fishermen operating at the Pekalongan Archipelago Fisheries Port. All mini purse seine fishermen are Muslims, Mini purse seine fishermen at the Pekalongan Archipelago Fisheries Portincluded in the Javanese tribe with the language used being Javanese. The fishing tradition that is still carried out today is the Sea Festival Ceremony (Sadranan). Interaction between communities in Panjang Wetan Village is well established and leads to associative relationships. MostMini purse seine fishermen at the Pekalongan Archipelago Fisheries Portonly completed elementary school education and have experience at sea for more than 15 years. Gender roles that occur in societyMini purse seine fishermen at the Pekalongan Archipelago Fisheries Portdifferent between men and women. The role of men focuses on the obligation to earn a living while the role of women focuses on domestic roles.

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**5. ETHICAL APPROVAL**

There are No. ethical issues in this manuscript. All participants gave informed consent before participation.

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