

A STUDY ON THE SOCIOECONOMIC CONDITIONS OF FISHERMEN IN THE KARANGANTU ARCHIPELAGO FISHING PORT (PPN) AREA

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ABSTRACT

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Coastal communities are groups of people that live in coastal areas and take part in socioeconomic activities related to coastal and marine resources. The objective of this research is to study the social and economic characteristic of fishermen in PPN Karangantu. This research was conducted at PPN Karangantu in Serang Banten Regency from March to June 2023. The study's respondents were the fishermen from the Karangantu PPN. Data collected through surveys, observations, documentation studies, and interviews with respondents, specifically fishing communities. In general, Karantu fishermen are of productive age, with a low level of education, 1-4 dependents, and 0-20 years of work experience. Meanwhile, in terms of social conditions, Karangantu fishermen preserve local knowledge, actively participate in fishermen's groups, are aware of current regulations, and encounter conflicts between fisherman, fishermen, and sellers. Economically, Karangantu fisherman continue to earn little revenue.

INTRODUCTION

Coastal communities are individuals that live and engage in socioeconomic activities related to coastal and marine resources, hence they are heavily reliant on the potential and condition of coastal marine resources. Fatmasari (2016). The condition of fishing communities or coastal communities is a community group that is relatively behind economically, socially (especially in terms of access to education and health services), and culturally compared to other community groups, so this group can be characterized by several characteristics, such as poverty, social culture backwardness, and a lack of human resources (HR) (Siagian *et al.* 2020). Fishermen are one of the communities that represent the coastal community group.

According to Hermawan (2006), fishermen are a group of individuals whose livelihoods are directly dependent on marine resources, either catching or cultivating them. Fisherman communities typically stay close to the coastline, near to their activities. Sociologically, fishing villages differ from farming communities in

terms of land management and use. Fishermen are extremely reliant on natural conditions, with variable degrees of occupational risk. The characteristics of fishing communities evolve in response to the dynamic nature of the resources on which they rely, therefore fishermen must move about in order to catch the largest number of fish. In addition, fishing communities live in a resilient natural environment that is constantly unpredictable when it comes to managing their businesses due to significant business risks (Sebenan, 2007).

Karangantu is a fishing center in Banten that additionally functions as a port for vessels and fishing boats (Nadhilah *et al.*, 2022). The majority of fishermen in PPN Karangantu fish in the waters of Banten Bay. Banten Bay, sometimes called Karangantu Bay, is a bay that faces the Java Sea directly on the north shore of Banten Province. The fishing gear used by PPN Karangantu fisherman includes gill nets, step nets, floating nets, traps, and more. The variety of fishing gear undoubtedly leads to a variety of catches. As a result, each fisherman has unique social and economic characteristics.

The purpose of this study is to analyze the sociological characteristics of coastal communities, specifically fisherman in PPN Karangantu. This research aims to provide an overview of the socioeconomic conditions of fishermen in PPN Karangantu. This information can be utilized as beginning information in establishing relevant government policy.

METHOD

This study was conducted in March-May 2023 at the Karangantu National Fishing Port (PPN), which is located on the northern section of Serang City, Kasemen District, Banten Province. The location in this area was chosen since the Karangantu PPN area is an important site for fish fishermen and traders. Fishermen who utilize gillnets and fish traps are the subject of this study.

This study used a survey method that included structured interviews with directed inquiries (questionnaires) as well as direct and natural observations of fishermen's everyday lives in PPN Karangantu. Interviews with 20 fishermen were performed and then analyzed using descriptive statistical methods to characterize the factual conditions of the research results. According to Wahyuni (2022), descriptive statistics are used by researchers to convey information about research variables and support their study by presenting summaries and data in numerical and pictorial form.

RESULT AND DISCUSSION

Overview of the PPN Karangantu fishermen

Age

Fishermen might be classified as field workers. This condition must undoubtedly be supported by appropriate age conditions, as age has been shown to

influence job productivity. Figure 1 shows the age distribution among fisherman in PPN Karangantu.

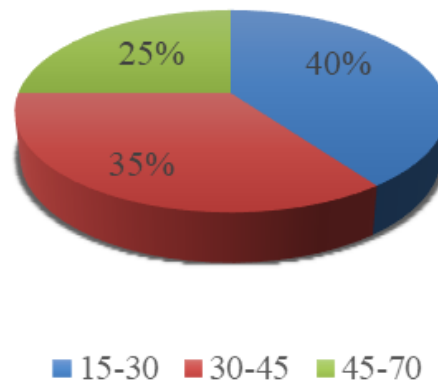


Figure 1. The Age Distribution among Fisherman in PPN Karangantu.

Source: Primary Data (2024)

According to Figure 1, majority of respondents (45%) were between the ages of 15 and 30, while the minority (25%) were between the ages of 45 and 70. According to the research results, the youngest respondent is 16 years old, while the oldest is 70. As a result, it is reasonable to conclude that the ordinary fisherman in PPN Karangantu is still productive. According to Koronalma *et al.* (2020), the productive age ranges between 15 and 64 years. This productive age can undoubtedly promote the adoption of appropriate fishing operations in order to maximize income. In general, younger and healthier fishermen have better physical abilities than older fishermen (Manggabarani 2016).

Gender

In Indonesia, a fisherman's employment is identical to a men's. This is due to the high hazards associated with fishing employment, which requires a significant amount of energy.

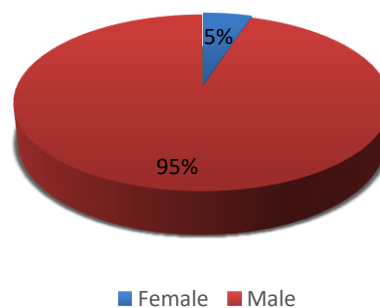


Figure 2. The Gender Distribution among Fisherman in PPN Karangantu.

Source: Primary Data (2024)

Figure 2 shows that majority of fishermen in PPN Karangantu are men, with only 5% or one female fisherman. Women typically work as sellers or processors in the fishing industry. The male fisherman fish, or buy and sell fish, but female fishermen process fish (salted fish, pindang, and shrimp paste) (Aisyah, 2022). Romdhon and Sukiyono (2011) also noted that women play an essential role in fishing households, allowing them to take on the roles of fishermen in terms of processing, marketing, and household economics.

Education

Education is an essential component of human life. According to Khosiah and Akbar (2018), having an adequate education allows a person to understand what is good and what might make a person valuable both for himself and for others in need. However, education is rarely a top concern in the life of coastal communities, particularly among fishermen. Figure 3 shows an overview of the educational levels of fisherman in PPN Karangantu.

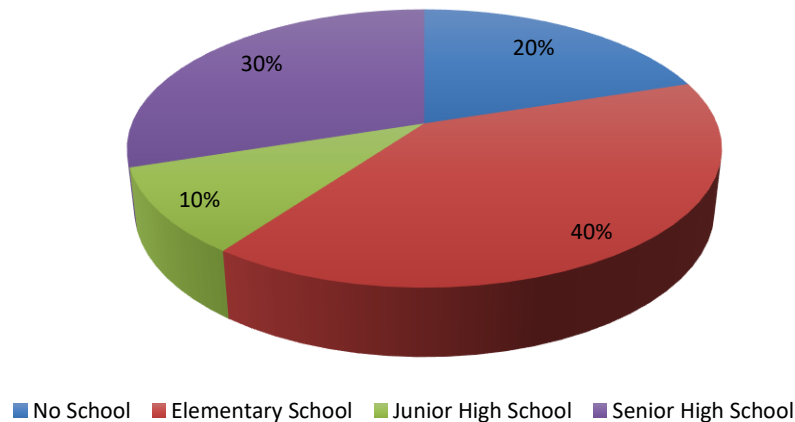


Figure 3. The Educational Level among Fisherman in PPN Karangantu.

Source: Primary Data (2024)

Figure 3 shows the educational conditions of fishermen in PPN Karangantu, where only 20% have completed high school, while majority of respondents, 40%, have completed elementary school, and 20% do not attend school. These conditions show that the education level of fisherman in PPN Karangantu is quite low. This low level of education can be caused by a variety of factors, including societal and economic constraints. According to the research results of Arista and Marhaeni (2018), fishermen believe that working as a fisherman is merely a physical activity that requires energy and muscle, and that their level of education, no matter how high, has little effect on the results of fishing.

Number of family dependents

According to Lestari (2016), the number of dependent family members in a household may impact the level of consumption required by the household because

it is related to their increasing needs. In general, fisherman in PPN Karangantu have between one and four dependents per household (Figure 4). Generally, PPN Karangantu fishermen serve as family leaders. According to Mapandin (2006), the number of dependents in a home influences the amount of consumption required by the household because it relates to whether their needs are increasing or decreasing.

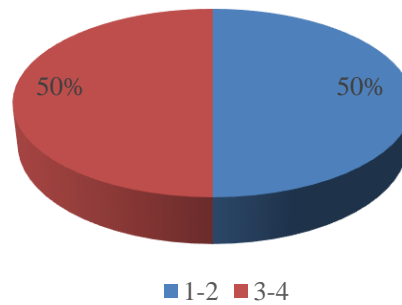


Figure 4. Number of family dependents among Fisherman in PPN Karangantu.
Source: Primary Data (2024)

Work Experiencei in Fishing

Experience refers to the number of years a fisherman has worked as a fisherman. Experience is one of the characteristics that determine fishermen's income. According to the research findings, Karangantu fishermen have the following employment experience:

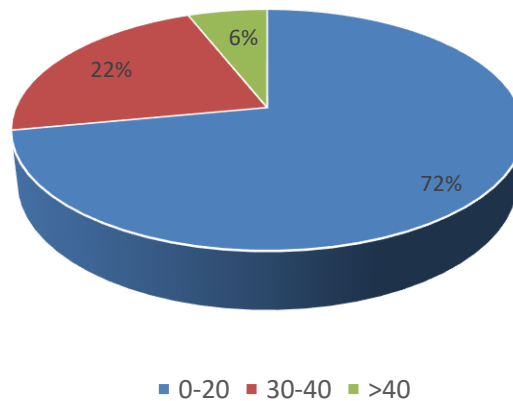


Figure 5. Work Experience in Fishing among Fisherman in PPN Karangantu.
Source: Primary Data (2024)

According to Figure 5, some of the Karangantu fishermen respondents had 0-20 years of experience, while only one respondent has more than 40 years. This experience surely has an impact on the success of fishing activities. Fishermen with extensive fishing experience would undoubtedly have more knowledge and skills in

understanding the use of tools, fishing locations, and so on. Norlinda (2019) stated that an experienced employee will have steady and fluid motions, rhythmic movements, respond more rapidly to indicators, and be able to forecast potential challenges so that they can be better capable of dealing with them.

The Social Conditions of Fishermen

A social study was conducted to identify the social conditions of the Karangantu fishing community using local knowledge, fishermen's organizations, conflicts among fishermen, and legal aspects.

Local Wisdom

According to Hidayati (2017), local wisdom is a socio-cultural system consisting of a community's knowledge, rules, regulations, and abilities for meeting shared (living) needs that has been passed down from generation to generation. Local wisdom is social capital generated by a community to create order and harmony between the community's sociocultural life and the preservation of the surrounding natural resources.

The fishing community in PPN Karangantu typically practices indigenous wisdom by showering boats with flowers. For fisherman, this idea is regarded as an attempt to clean up and avoid all negative circumstances during fishing activities. This local wisdom is additionally found in other places, such as in the research of Amu *et al* (2016), which revealed forms of local wisdom of the fishing community in Olele Village, such as in the process of lowering the boat used in fishing activities, you must first pray sholawat, using water and leaves, which is believed to be a ritual for lowering boats or tools used in fishing activities, with the aim of hoping that when fishing, a fisherman remains under God's protection.

Fishermen Organization

In general, the goal of building an organization is to achieve or fulfill each member's shared aspirations or ideas in order to benefit and succeed from organizational goals, as well as to overcome restricted independence and personal skills to reach common goals. Some of the fishermen who responded claimed that they have joined organizations linked to and outside of their field of service. Rukun Nelayan and Nusantara are two of the organizations that the fishermen have joined Rakhmanda *et al.* (2015) explained that fishermen groups can act as learning classes and a vehicle for collaboration, increasing members' knowledge and skills, as well as their access to productive sources and information related to finances, markets, technology, or networks, which has a positive impact on the productivity of fishery businesses.

Fishing Regulation

Every port has many legislative rules in place to protect fishermen and prevent exploitation. Majority of respondents stated that there were several fishing regulations in the surrounding area, including: 1. It is forbidden to fish around corals, 2. It is forbidden to catch protected animals, 3. It is forbidden to use fish bombs, and 4. There must be BPJS (Health Card) and ID Card. Some of the regulations listed above are harmful to fisherman, but others were intended to prevent fishermen from being exploited.

Conflict among Fisherman

Several fishermen said that there were conflicts among fishermen as result of differences in the types of fishing gear used, such as trawls or traps. Several more conflicts involving traders and fishermen over fish sales occurred. According to Arumsari *et al.* (2020), conflict is a social phenomenon that will always exist in the lives of all communities. Several potential causes of conflict within the fishing community exist, including conflicts over fishing grounds/places at sea, differences in the use of different types of fishing gear, and differences in compensation between workers and employers (Abdullah *et al.* 2022).

The Economic Conditions of Fishermen

The economic study attempts to determine the economic conditions of fishermen in Karangantu Port. This study examined investment costs, operating costs, fish sales, and fishermen's income.

Investment Cost

Investment expenses are the initial capital required for business actors to operate their businesses (Azkia and Reza 2023). In Karangantu, fishermen typically require boats and fishing equipment as the beginning company investment. According to observations of trap and gill net fishermen, they have invested in boats, fishing gear, equipment, and fishing equipment.

The price range for ships is determined by their size, which ranges between \$50 and \$800 million with an economic life of 5 to 20 years. The expenditures for purchasing fishing gear vary depending on the type of fishing gear used by fishermen, with trap fishing gear typically costing around IDR 20,000/unit and having a 10-year economic life, whereas gill nets cost between 5-10 million. According to Indriani *et al.* (2022), investment costs can vary based on fishermen's needs and the economic life of the investment components used by fisherman.

Operational Cost

Operational costs are one of the economic components of fishing. These expenses are incurred each time a fisherman conducts fishing activities. Typically, operational costs include the cost of supplies, oil, diesel oil, ice blocks, feed, and other items. Table 1 shows the operational cost of Karangantu fisherman during 1-2 days visits.

Table 1. Operational Cost of Karangantu Fisherman.

Cost	Need	Price per Unit (Rp)	Total Cost l (Rp)
Perbekalan (food and cigarette)	3 persons	50.000/pack	150.000
Fuel (Solar)	-	8.000/lt	80.000
Oil	-	-	50.000
Total			280.000

Source: Primary Data (2024)

Fishermen Income

According to Manggabarani (2017), income is the result of economic activity in the form of money or products, where products are assessed at the price and can be used for daily necessities. Table 2 contains data collected from interviews with Karangantu fisherman.

Table 2. Fisherman Income.

Income/month	Individual	Percentage
>Rp. 1000.000	9	45 %
0-1.000.000	11	55 %

Source: Primary Data (2024)

Table 2 show the level of net income of fishermen after reducing expenditure such as basic necessities. Most respondents still have extremely modest income, namely an average monthly income of Rp. 0 to 1,000,000. Sembiring (2017) stated that Fishing income in Indonesia is low due to extreme weather conditions that prevent fishermen from catching fish in the sea. In addition, most fishermen in Indonesia do not own their own fishing vessels or fishing gear.

CONCLUSION

In general, Karangantu fisherman are of productive age, have a low level of education, have 1-4 dependents, and have 0-20 years of working experience. Meanwhile, in terms of social conditions, Karangantu fishermen preserve local wisdom, actively participate in fishermen's groups, aware of current regulation, and

have conflicts arise between fisherman, fishermen and sellers. In terms of economics, Karangantu fishermen still have low income.

REFERENCES

- Abdullah, S., Radjab, M., Djibe, S., Arifin, A., & Anriani, H. B. (2023). Manajemen dan Resolusi Konflik Komunitas Nelayan di Sulawesi Selatan: Studi Kasus Komunitas Nelayan Etnis Bugis dan Makassar. *Prosiding Konferensi Nasional Sosiologi (PKNS)*, 1(1), 385-388.
- Aisyah, F. C. (2022). PERAN MASYARAKAT NELAYAN TERHADAP PENINGKATAN PEREKONOMIAN DESA DALAM PERSPEKTIF EKONOMI ISLAM (Studi Kasus Desa Sukorahayu Kecamatan Labuhan Maringgai Lampung Timur) (Doctoral dissertation, UIN RADEN INTAN LAMPUNG).
- Amu, H., Salam, A., & Hamzah, S. N. (2016). Kearifan Lokal Masyarakat Nelayan Desa Olele| Local Wisdom in Fishing Community at Olele Village. *The NIKe Journal*, 4(2).
- Ariska, P. E., & Prayitno, B. (2019). Pengaruh umur, lama kerja, dan pendidikan terhadap pendapatan nelayan di kawasan pantai kenjeran Surabaya tahun 2018. *Economie: Jurnal Ilmu Ekonomi*, 1(2), 37-46.
- Arista, L.D. & Marhaeni, S.S. (2018). Persepsi Masyarakat Nelayan Tentang Pentingnya Pendidikan Formal 12 Tahun (Studi Kasus di Desa Kedungrejo Kecamatan Muncar Kabupaten Banyuwangi). *Jurnal Ilmiah Pendidikan Pancasila dan Kewarganegaraan*, 13(1): 12-17
- Arumsari, N., Paradita, W. D., & Wijayanti, T. (2020). Strategi Komunikasi Dalam Upaya Penyelesaian Konflik Nelayan Pantai Utara Di Kabupaten Batang. *Integralistik*, 31(1), 22-28.
- Azkie, L. I., & Reza, M. (2023). Analisis kelayakan usaha penangkapan ikan menggunakan alat tangkap sodong (push net). *Jurnal Mina Sains*, 9(2).
- Fatmasari, D. (2016). Analisis Sosial Ekonomi dan Budaya Masyarakat Pesisir Desa Waruduwur, Kecamatan Mundu, Kabupaten Cirebon. *Al-Amwal: Jurnal Ekonomi dan Perbankan Syari'ah*, 6(1).
- Hermawan, M., Sondita, M. F. A., Fauzi, A., & Monintja, D. R. (2006). Status Keberlanjutan perikanan tangkap skala kecil. *Buletin PSP*, 15(2).
- Hidayati, D. (2017). Memudarnya nilai kearifan lokal masyarakat dalam pengelolaan sumber daya air. *Jurnal Kependudukan Indonesia*, 11(1), 39-48.
- Indriani, N. (2022). HUBUNGAN PATRON-KLIEN USAHA PENANGKAPAN BAGAN TANCAP DI DESA BETUNG KECAMATAN KUSAN HILIR KABUPATEN TANAH BUMBU PROVINSI KALIMANTAN SELATAN.
- Khosiah, K., & Akbar, A. (2018). Kajian Sosial Ekonomi Masyarakat Pesisir Dalam Membudidaya Bandeng di Desa Rupe Kecamatan Langgudu Kabupaten Bima. *JISIP (Jurnal Ilmu Sosial dan Pendidikan)*, 2(1).
- Konoralma, S., Masinambow, V. A., & Londa, A. T. (2020). Analisis faktor yang mempengaruhi pendapatan nelayan tradisional di kelurahan Tumumpa Kecamatan Tuminting Kota Manado. *Jurnal Berkala Ilmiah Efisiensi*, 20(02).

- Lestari, W. P. (2016). Analisis Faktor-Faktor yang Mempengaruhi Konsumsi Rumah Tangga PNS Guru SD di Kecamatan Kotaanyar Kabupaten Probolinggo. *Jurnal Ilmiah Mahasiswa FEB*, 4(2), 1-11
- Manggabarani, I. (2017). Kajian Sosial Ekonomi Masyarakat Nelayan yang Bermukim di Pesisir Pantai (Studi Kasus Lingkungan Luwaor Kecamatan Pamboang, Kabupaten Majene). *AGROVITAL: Jurnal Ilmu Pertanian*, 1(1), 27-33.
- Mapandin, W. Y. 2005. Pengaruh Faktor Sosial Budaya Rumah Tangga Terhadap Konsumsi Makanan Pokok Masyarakat Di Kecamatan Wamena, Kabupaten Jayawijaya tahun 2005. Program Pascasarjana Magister Gizi Masyarakat. Universitas Diponegoro. Semarang.
- Nadhilah, S., Masri, A. E., Assyifa, A. R., Roselien, A. R., Nadhilah, N., & Azka, N. M. (2022). Lembaga Pemberdayaan Masyarakat Rumah Kupas Sebagai Solusi Permasalahan Masyarakat Pesisir Karangantu.
- Norlinda, N. (2019). Pengaruh Pendapatan Nelayan Terhadap Peningkatan Ekonomi Masyarakat di Desa Ambahai Kecamatan Paminggir Kabupaten Hulu Sungai Utara.
- Rakhmanda, A. (2015). Peran Kelompok Nelayan dalam Perkembangan Perikanan di Pantai Sadeng Kabupaten Gunungkidul (Doctoral dissertation, Universitas Gadjah Mada).
- Romdhon, M. M., & Sukiyono, K. (2011). Karakteristik Sosial Ekonomi Dan Model Pengambilan Keputusan Wanita Nelayan Di Kota Bengkulu.
- Sebenan, R. D. (2007). Strategi pemberdayaan rumahtangga nelayan di Desa Gangga II Kecamatan Likupang Barat Kabupaten Minahasa Utara. Fakultas Perikanan dan Ilmu Kelautan, Universitas Sam Ratulangi, Manado.
- Sembiring, R. (2018). Pengaruh nilai tukar nelayan (pendapatan nelayan, pendapatan non nelayan, pengeluaran nelayan, pengeluaran non nelayan) terhadap kesejahteraan masyarakat (pendidikan, kesehatan, kondisi fisik rumah) di Desa Pahlawan. *Jurnal Ilmiah Abdi Ilmu*, 10(2), 1836-1843.
- Siagian, R. M., & Yulinda, E. (2020). Strategi Adaptasi Masyarakat Nelayan Dalam Menghadapi Kemiskinan Di Desa Kuala Lama Kecamatan Pantai Cermin Kabupaten Serdang Bedagai. *Jurnal Sosial Ekonomi Pesisir*, 1(4), 64-69.
- Wahyuni, M. (2020). Statistik Deskriptif Untuk Penelitian Oleh Data Manual dan SPSS Versi 25.