



Analysis of the Role Cikidang Fish Landing Port (PPI) Towards Fishermen's Socio-Economy in Pangandaran District, Indonesia

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Authors' contributions

This work was carried out in collaboration among all authors. Author MAS designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors AAH and Junianto managed the analyses of the study. Author AR managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

This research was conducted in Pangandaran District, precisely at the Fish Landing Port (PPI) Cikidang Pangandaran. This PPI Cikidang is included in the type D fishing port of the Fish Landing. The research method used is a case study with data analysis using a Likert Scale. The aim of this research is to describe the role of PPI Cikidang through basic port facilities on the socio-economic characteristics of Pangandaran fishermen who work at PPI Cikidang. Based on observations and interviews through questionnaires, some of the main port facilities are still not optimal in their development and function. This affects the catches of fishermen and the activities of fishermen at the port. Some basic facilities that are still not optimal make fishermen more independent in activities without having to wait for facilities to be repaired or developed. The main facilities that have not been optimal are the pier, harbor ponds and fish markets. At the docks and port ponds there needs to be improvement by dredging the bottom of the water so that it can get inside, the

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tides can be conditioned. In the fish market, its function is still less than optimal because it is only used as a canteen. The improvement is to re-socialize the function of this fish market and try to carry out its function properly by increasing the fisheries business budget around PPI Cikidang.

Keywords: Cikidang PPI; main facilities; fishermen; pangandaran.

1. INTRODUCTION

Pangandaran is one area in West Java that is geographically located at coordinates $108^{\circ}41''$ - 109° East Longitude and $07^{\circ}41''$ - $07^{\circ}50$ South Latitude and has an overall area of $\pm 1,010$ km² [1]. Pangandaran is one of the mainstay areas for the marine tourism sector and capture fisheries. Both of these sectors are noted to have contributed greatly to the regional economy and the people in the region [2]. This is the main reason for the development of a fishing port in an area that will help facilitate the community in optimizing the potential use of natural resources in Pangandaran.

The port has an important influence on the lives of the surrounding community, especially fishermen who are very dependent on the existence of the port. This strategic role encourages the development of industries in fishing ports, not only at local but regional and international scale [3]. This strategic role is needed at every port, including the Cikidang Fish Landing Port (PPI) Pangandaran Regency. The port is one of the transportation infrastructure that is quite important for a country, especially Indonesia.

Supporting factors for increasing socio-economic activities of fishermen are the good facilities at the port. The existence of a fishing port in an area is expected to support the activities of fishermen in that area so that it can contribute to economic development for fishermen. The development of fishermen's socio-economic standard of living is an indicator that fishery ports play a role as the center of fisheries economic activities. Not only supporting ship landing facilities, cargo and crew, but also many other aspects such as the feasibility of the fish auction site, information about the port bureaucracy and other facilities.

The strategic role of fishing ports in the service activities of the port is to greatly contribute to the growth of industry, economy and trade and as a business field should contribute to the national economic development [4]. The urgency of fishing ports in fishery activities is quite clear,

namely as a place to anchor a ship or a fishing boat and a place for loading and unloading activities of production and production facilities. The function of the fishing port is very broad. The existence of a fishing port in the physical sense, such as the capacity of the port must be able to encourage other economic activities so that the fishing port becomes a fishing industry development area.

The use of Cikidang fish landing port facilities that have not been maximized will have an impact on the socio-economic attributes of Pangandaran fishermen; So, the research on "Analysis of the Roles of Cikidang Fish Landing Port (PPI) on the Socio-Economic characteristics of Fishermen of Pangandaran Regency" is very important because it is useful to find out how much influence the existence of Cikidang fish landing port is having on the fishermen in fulfilling their daily lives.

2. MATERIALS AND METHODS

The research was conducted in Pangandaran Regency, West Java Province. The time of research was August - November 2019 This research used the case study method. Case studies are describing and in-depth analysis of bounded systems [5]. This research directly observed and interviewed several fishermen and the aspects studied were the socio-economic conditions of fishermen who are in Cikidang fish landing port, Pangandaran

Direct observations were made on the conditions, activities and patterns of adaptation as well as the patterns of fishing activities around the fishing port in Pangandaran.

Interviews were conducted using a questionnaire in which there were several questions about the benefits of a fishing port and the improvement or development needed for a fishing port in terms of social and economic aspects. Interview data collection in this study by purposive sampling. In order to achieve the research objectives obtained sample criteria, including: (1). The main profession of fishermen, (2). Long been a fisherman 5 years, (3). Can assess the benefits

of port services, (4). Willing to interview, (5). 30-60 years old.

The questionnaire was made using the Likert scale method with a score of 1-5 (a score of 5 means strongly agree, a score of 4 means agree, a score of 3 means doubt, a score of 2 means disagree, and a score of 1 means strongly disagree). The data is then analyzed in a continuum diagram so that the approval level is seen. Operational standards referred to the Minister of Maritime Affairs and Fisheries Regulation No. 08 / 2012 concerning fishing ports.

3. RESULTS AND DISCUSSION

Pangandaran Regency is one of the regencies in West Java Province with the Capital of the Regency located in Parigi District. Pangandaran Regency with a total area of 1,433.82 km², was formed based on Law Number 21 of 2012 concerning the Establishment of Pangandaran Regency in the West Java Province.

Based on geographical location, Pangandaran Regency is located at 108° 30 'to 108° 40' East Longitude and 7° 40 '20 "to 7° 50 '20" South Latitude.

3.1 Characteristics of Respondents

The main actors in this research process are fishermen because fishermen are the main actors at the Cikidang Pangandaran Port. In this

study, fishermen were asked to provide information about the role of the port felt by fishermen and fishermen's knowledge about the standardization of basic facilities and the optimization of the functions of basic facilities. Respondent characteristics observed in this study include age and last education level.

According to Fig. 1, a slight majority 44% are in the age range 31-40 years and at the age of 41-50 reached 40% and the lowest was 6% for fishermen aged 51- 60

Seeing from the final education level of fishermen studied in Fig. 2, many fishermen with an education level were finally low with the elementary education level. The rest were junior and senior high school education only. The level of education of course related to the socio-economic characteristics of the fishing communities around the Cikidang Port. In general, the port community became fishermen because of economic factors and heredity.

3.2 Analysis of the Role of Cikidang Fish Landing Port

3.2.1 Catch production

The respondents surveyed were fully fishermen and depend on Pangandaran sea for their livelihood by catching fish for sale to fish traders, fish processors, TPI or tourists. The details of the growth in catch production per year.

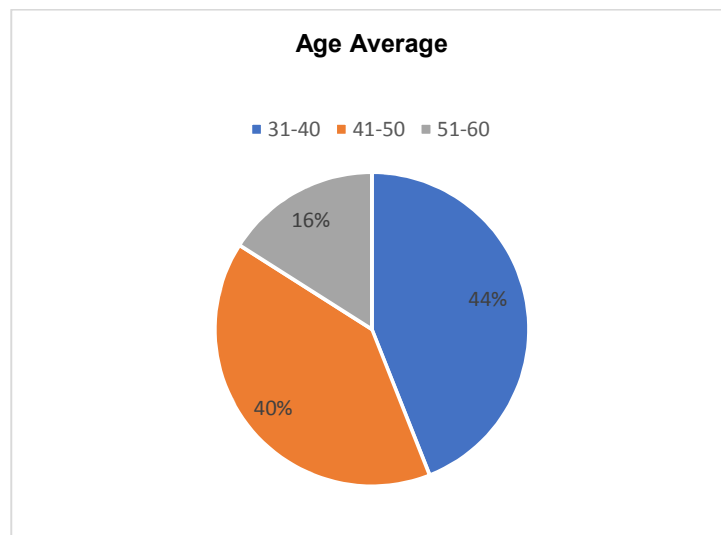


Fig. 1. Ages average of fishermen

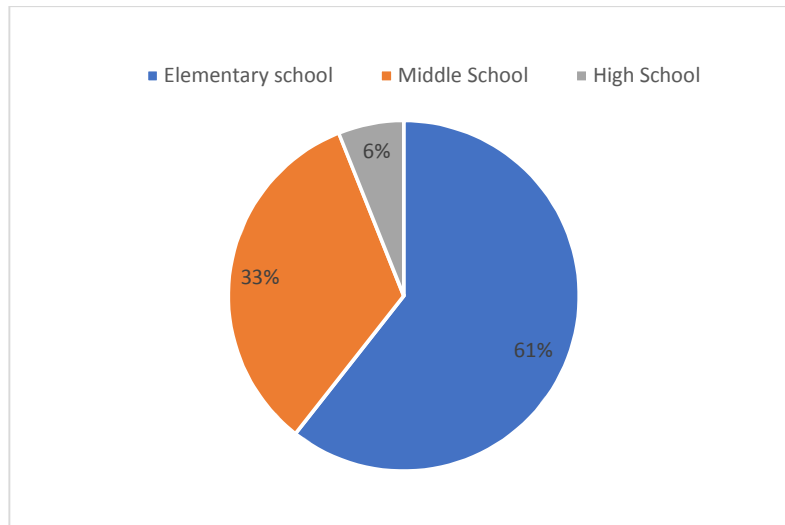


Fig. 2. Percentage final education of fishermen

Table 1. Catch production

Year	Production (kg)	Growth (%)
2013	345.834,30	
2014	596.316,90	72 %
2015	892.829,20	50 %
2016	316.923,80	-64 %
2017	418.837,05	32 %
2018	298.641,84	-28 %
2019	298.931,30	0.1 %
Growth Average		12 %

3.2.2 Fishermen's perception on the role of PPI cikidang pangandaran

Fisheries port has functions that support activities related to the management and utilization of fisheries and human resources in the surrounding environment starting from preproduction, production, processing, to marketing.

The main facilities at the port are the most important things in fishing activities. The main facility functions include anchoring the fishing fleet and loading and unloading sites for fisheries. Based on observations at the Cikidang Pangandaran port, the main facilities have been built, but some facilities still do not meet the standards and their functions have not been used in accordance with the use of this facility. The facilities provided based on field observations consist of docks, port ponds, Fish Auction Place (TPI), fish markets and port offices.

Based on the percentage graph above, number 1 regarding the pier 30 fishermen respondents rated the level of approval to only 39.3% which means that they strongly disagree if the pier is in accordance with operational standards and functions. At the fishermen's approval level, which reaches 100%, it is strongly agreed to the repair and development of the pier. The importance of docks for ports, especially for fishing ports, can be seen from the separation of docks for different activities [6].

Effects of non-standard and non-optimal function of the pier can result in fishermen safety when landing fish at stake, damage to fishing vessels due to shallow water depth of the pier can cause the ship to touch the bottom of the water and be damaged, and fish production decreases due to waiting time for high tide waters and the quality effect fish can decrease. The proposed improvement for this pier is by dredging the bottom waters of the pier area to increase its depth. The positive impact if it has been repaired

according to the standard, the tides do not affect the waters of the dock area.

Seeing from the graph above the value of the level of agreement in number 2 regarding port ponds, the standard port pond and port functions are in operational compliance at 40% which means that the fishing communities around the port do not agree. In the third statement the fishermen's approval level reached 100%, which means that he strongly agreed to the repair and development of the Cikidang port pool. Port pond is a basic facility that has a major influence on the function of a fishing port [7].

This makes the port pond an important basic facility for its existence. The operational standards and functions of the Cikidang PPI pond are not optimal in terms of the depth of the pond's waters. The repair solution is dredging the bottom of the port pond according to standards so that the tides have no effect. So with this improvement, the activities of the fishing communities around the Cikidang PPI are not hampered.

The function of the Fish Auction Place is to assist the activities of fishermen who want to sell fish quickly and at a good price and to accommodate the catches of fishermen's fish [8]. According to graph above number 3 regarding TPI at the Cikidang port that the value of the level of approval from fishermen for TPI agrees to reach 80% that the TPI in terms of buildings is in accordance with the standards and its functions are in operational compliance. In the assessment of the approval level of statement reached 87%, it meant that the fishermen hoped that there would be an improvement or development in the Cikidang TPI

The percentage of approval level in the statement in number 4 regarding the fish market according to the standard and operational functions reached 66.5%. This illustrates that the standards and functions of the fish market are groomed. Direct observation in the field, the fish market in Cikidang Port is still empty and has not been used for fish trading, but is used as a canteen. The proposal is more to the development in regulating the existence of this fish market to match its function. Fish markets should be tried to operate to sell catches or fish products.

Based on the graph above, the approval rate number 5 regarding the port office is in accordance with the standard and operational function reaches 85.3%, which means that the fisherman agrees that the port office is in accordance with the operational standard and function. Based on the value of the fishermen's approval level reached 93% with the repair and development of the port office. It is hoped that the improvement and development of the port office can further improve service. The proposed improvements are more extensive buildings, information is made interesting, and the attitude of the management members is more professional.

Based on the graph above number 6 that 30 respondents considered that the presence of PPI Cikidang was quite influential on the socio-economic conditions of fishermen with a value reaching 90%. PPI Cikidang Pangandaran is one of the most crowded fishing ports and is visited by many buyers, because in Pangandaran the number of catches is highest among other PPI. In addition, because this PPI is strategically located which makes it easier for the community to buy sea catches, it is easier to access sales locations.

Based on the results of direct interviews, fishermen get a lot of positive influence from the presence of PPI Cikidang, in terms of adequate facilities and good port service. The existence of the wharf in PPI Cikidang, although it has not been maximized in its construction and function, still facilitates the mooring activities of ships, loading and unloading fish catches and filling supplies for fishing operations at sea.

The Fish Auction Place (TPI) is a very supportive facility for fisheries activities in the Cikidang Port. Facilitated meetings between fishermen and consumers or buyers. This good TPI building makes many consumers come to buy sea catches, not only consumers but also many visitors or tourists who just see the fish caught by fishermen and see the fish auction process. The results of interviews with fishermen that fishermen are greatly helped by the existence of TPI because the building is already good and its function is in accordance with operational standards. The problem at the Cikidang TPI is the cleanliness and the pathway from the pier where the decline in catches to TPI is still not strategic because they have to cross the main port road.

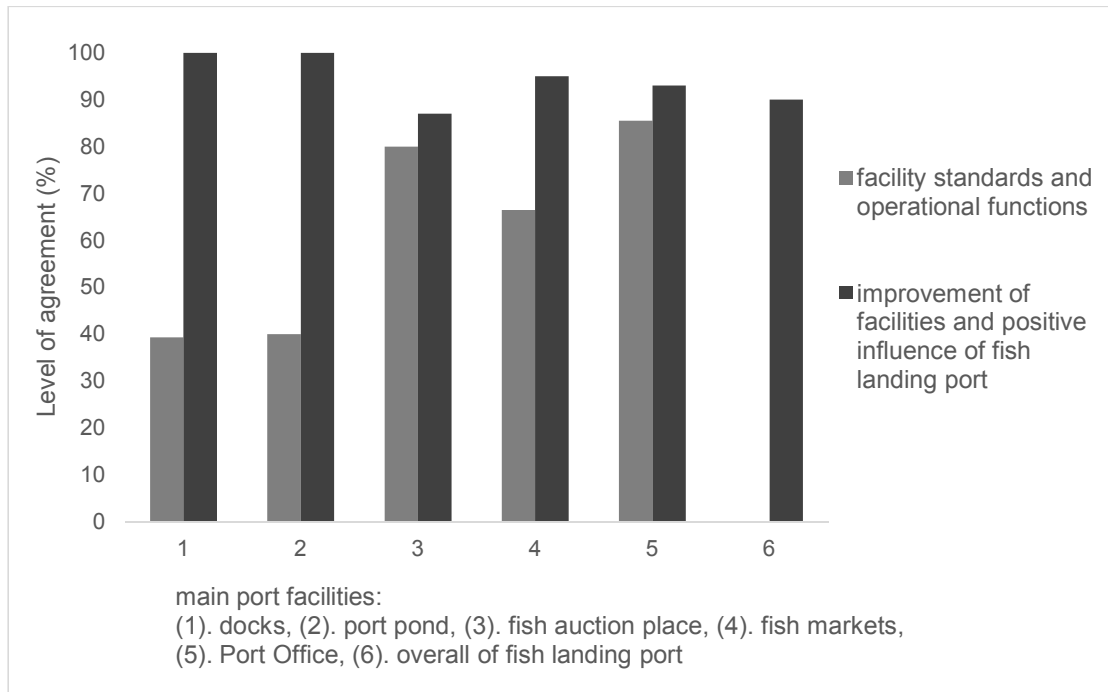


Fig. 3. Analysis of the role cikidang fish landing port's likert scale in pangandaran

Another positive impact on the role of PPI Cikidang based on the interview is the service of the port office. Many felt that fishermen received service assistance regarding fishing operations. The flow of the bureaucracy with information and delivery that is easily understood makes fishermen very helpful. Another service is the syahbandar which regulates the departure and arrival schedules of fishing vessels. The schedule is based on the tidal waters around the Cikidang Port. Fishermen are also given weather prediction information before going to sea because the safety of fishermen when they go to sea takes precedence. Inspection of ships or boats is also carried out by port office officials to see the condition of the feasibility of the fleet of the ship for the safety of fishermen when going to sea. This is very helpful for fishermen because quite a number of fishermen are negligent with the condition of the boat or the boat itself.

4. CONCLUSION

The role of the Cikidang PPI Pangandaran in the economic sector was quite pronounced. Part of the main facilities of the pier and port pool are still not optimal standards and operational functions, this affects the activities of the fishing community around the port. In other facilities namely TPI PPI Cikidang its existence is very

good and its function is used is quite optimal. The fish market in PPI Cikidang in terms of building is good but its existence has not run according to its function. The port office has been running quite optimally based on programs to the public, social institutions, and port services. The results of interviews with fishermen that Based on the results of direct interviews fishermen get a lot of positive influence from the presence of PPI Cikidang, in terms of adequate facilities and good port service. Some basic facilities that have not been maximized in development will not be an obstacle for fishermen in their activities at the port. The fishermen can only hope for improvement and development of basic facilities.

CONSENT

As per international standard, informed and written participant consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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