

CLASS IMPROVEMENT STRATEGIES FOR THE BINUANGEUN FISH LANDING BASE IN LEBAK REGENCY, BANTEN

Strategi Peningkatan Kelas Pangkalan Pendaratan Ikan Binuangeun Kabupaten Lebak, Banten

By:

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ABSTRACT

The increase in fishing activities of fishers in the Lebak Regency is facilitated by the Binuangeun Fish Landing Base (PPI). Every year, there is a growth in fish production at PPI Binuangeun. Production from 2015 to 2019 increased by 671 tons (13.55%). This study aims at formulating and determining strategies for improving the PPI Binuangeun class category. A survey approach was used in this study. Samples were taken by purposive sampling. The improvement in PPI class were categorized using the Analytical Hierarchy Process (AHP) scoring method. Results showed that the score was 254 with a success value of 251-300, indicating high potential and standards fulfillment. Thus, PPI Binuangeun can be transferred and upgraded to PPP (Coastal Fishery Port). The results of the AHP suggested that the central priority values for the development of PPI Binuangeun include: supply, auction, landing and marketing activities with the priority value of 0.585. Subsequently, another strategy is expanding the port area with score of 0.409. The support of relevant stakeholders for the development of the fishing port is needed to realize the aspirations of the central and local governments.

Keywords: Fishing activities, AHP, Fish Landing Base, Fish production.

ABSTRAK

Peningkatan aktivitas perikanan tangkap di Kabupaten Lebak difasilitasi oleh Pangkalan Pendaratan Ikan (PPI) Binuangeun. Setiap tahunnya, terjadi pertumbuhan produksi ikan di PPI Binuangeun. Produksi tahun 2015 – 2019 mengalami peningkatan sebesar 671 ton (13,55%). Penelitian bertujuan untuk merumuskan dan menentukan strategi peningkatan kelas PPI Binuangeun. Pendekatan Survei digunakan dalam penelitian ini. Sampel diambil dengan menggunakan *purposive sampling*. Analisis peningkatan kelas PPI menggunakan metode AHP (*Analytical Hierarchy Process*). Hasil penelitian diperoleh skor 254 dengan nilai keberhasilan 251-300 yang mengindikasikan hasil sangat berpotensi dan memenuhi standar. Oleh karena itu, PPI Binuangeun sangat berpotensi dialihkan serta dinaikkan kelasnya menjadi PPP (Pelabuhan Perikanan Pantai). Hasil AHP diperoleh nilai prioritas utama pengembangan PPI Binuangeun diantaranya: aktivitas perbekalan, pelelangan, pendaratan dan pemasaran dengan nilai prioritas 0,585. Strategi peningkatan kelas diperoleh nilai prioritas sebesar 0,409 yang ditujukan pada perluasan lahan pelabuhan. Dukungan *stakeholder* terkait untuk pengembangan pelabuhan perikanan diperlukan guna merealisasikan aspirasi pemerintah pusat dan daerah.

Kata kunci: Aktivitas nelayan, AHP, Pangkalan Pendaratan Ikan, Produksi ikan.

INTRODUCTION

The development of the capture fisheries sub-sector continues to be promoted by several existing fishing ports, but is still not adequate. However, the urgency of developing fishing ports requires improvement and optimization, considering that Indonesia is blessed with a rich fishing ground, not yet equipped with adequate port facilities (Lubis and Pujiono 2020; Soumokil 2021). Increasing utilization of fishing ports is closely related to the existence of facilities at the port. There are four categories of fishing ports in Indonesia: PPS (Ocean Fishery Port), PPN (Nusantara Fishery Port); PPP (Coastal Landing Port); and PPI (Fish Landing Port). The Fish Landing Base is entered into a type D port intended to serve fishing vessels of at least 5 GT in size. The port is expected to market fishery products an average of 2 tons/day and has a land area of at least 1 ha (KKP RI 2012; Rini et al. 2017; Pratiwi et al. 2021).

Binuangeun Fish Landing Base is one of the type D fishing ports in Indonesia. This port plays a role in increasing the fishing activities of fishers around the coast and becomes the largest PPI in Lebak Regency, Banten. The potential of Binuangeun Fish Landing Base in fisheries every year has increased (Masqudi et al. 2018). Binuangeun Fish Landing Base, located in Lebak Regency, has a marine potential of 91.42 km, with fish production reported by the Marine and Fisheries Service reaching 1,533 tons, an increase of 17% (2015); 1,688 tons, an increase of 19% (2016); 1,815 tons (2017) and 1,856 tons (2018), an increase of 20%; and 2,204 tons, an increase of 24% (2019). In addition, this PPI is the most significant contributor to fish production with monthly achievements of 140 tons and 1,688 tons in a year, especially in the southern region of Banten province compared to PPI Cibareno, PPI Bayah, PPI Panyaungan, PPI Citarete, PPI Cimandiri and PPI Sukahujan (Lubis 2012; Suadi and Kusano 2019; Syakuro et al. 2020; Ersina 2021).

Binuangeun Fish Landing Base is the foundation of Lebak Regency's marine fisheries due to its high yield and production value. Ironically, the status related to type D, makes development impossible in the Binuangeun area. The lack of existing facilities makes investors not interested in opening a fishery business in this area. Fishers and PPI managers hope that the government will increase the status of PPI to type C PPP (Murdiyanto 2004; Maulana and Nugroho 2020). It is supported by the very promising

potential and increasing production developments, so strategic efforts are needed to increase the PPI class (Russo and Spreafico 2020; Bosa et al. 2021; Firdaus et al. 2022). Through this effort, it is hoped that it will facilitate fishing activities and spur high economic growth because economic transactions are carried out with large values (Maulana and Nugroho 2020). This strategy is carried out by considering the available production and capacity (Dewanti et al. 2021; Fada et al. 2021; Nugraha et al. 2021). Furthermore, many economically transactions involve in this ports such as the sale of fish catch, operational fishing needs, fish processing industry activities and other fisheries. Thus, it is important to develop strategies for improving class categorized of this fishing port through a research. This research aims to formulate strategies for class categorized improvement of PPI Binuangeun, Lebak Regency, Banten. Through this research, it is hoped that it will be helpful for relevant agencies and stakeholders in formulating particular strategies to increase the capacity of the Binuangeun fishing port class to PPP and be used as a policy recommendation to expedite the improvement of the fishing port class in Lebak Regency, Banten Province.

METHODS

The data were collected by using purposive sampling method from two months field survey (January – Februari 2021) at the PPI Binuangeun Lebak Regency, Banten Province. The geograohic location is 060o50'18" SL and 105o052'01" EL presented in Figure 1. In this study, the population consisted of fishers with fixed boats in PPI Binuangeun, with up to 275 boats. Furthermore, calculations were performed using the slovin formula (Darwin et al. 2021) thus, 23 fishers who met the inclusion criteria were obtained, including fishers with boats of 5 GT (10 fishers), 5–10 GT (3 fishers), and > 10 GT (3 fishermen) (10 fishermen). Furthermore, from 23 respondents, 11 expert respondents (actors) were selected who were responsible for improving the Binuangeun PPI class and considered an essential part of developing the Binuangeun PPI class. Lebak Regency, Banten. The respondents included three government agencies, namely: one person from the Marine and Fisheries Service (Head of Service), one person from the Regional Development Planning Agency (Head of Service), one person from the Housing and Settlement Area Service (Head of the Service), one person from the Legislature of the

Regional People's Representative Council (Chairman of Commission II for the economy of the Banten Provincial DPRD), three fishers on each boat, three boat owners (fish entrepreneurs), and one person from the fishing cooperative (chairman of the cooperative).

This study's primary data came from interviews obtained directly from expert respondents and research samples. In contrast, this study's secondary data came from the marine and fisheries profile data of Lebak Banten Regency every year, obtained from the Marine and Fisheries Service of Banten Regency and the Central Statistics Agency of Banten Regency. The data collected in this study includes an overview of the research location; the state of the capture fisheries (fishing fleet, fishing gear, the proportion of fishermen, the volume and value of production in the Binuangeun PPI, the area and the fishing season, and the production of caught fish); and the Binuangeun PPI Class Improvement Strategy based on program priorities.

Analysis of the operational activities of the fishing port were carried out by assessing the operational level of the fishing port, which was then analyzed descriptively (Putri et al. 2020). The determination of parameters and sub-parameters used Ministerial Regulation

Number 8/2012 concerning The Determination and Improvement of Fishing Port Class (KKP RI 2012) while the criteria and scale of analysis for improving the class of PPI Binuangeun used the Decree of the Director-General of Capture Fisheries Number 20/KEP-DJPT 2015 (KKP RI 2017a).

The class categorized improvement of the PPI Binuangeun class using the scoring method adopted from the Analytical Hierarchy Process (AHP) (Syaifullah 2010). The hierarchy is structured as an effective and efficient decision-making framework by simplifying problem-solving through the variables in a hierarchical arrangement (Apriliani et al. 2019; Syakuro et al. 2020). The principle of solving problems with AHP is divided into three stages, including the principle of compiling a hierarchy, the principle of determining priorities, and the principle of logical consistency (Rini et al. 2017) which is shown in Figure 2. Furthermore, the strategy for improving class categorized of PPI Binuangeun was carried out gradually and systematically by considering the priority scale, actors and strategies used as a benchmark for the hierarchy. The calculation of this analysis was based on the expert respondents' questionnaires—data analysis using Expert Choice 2000 for Windows.

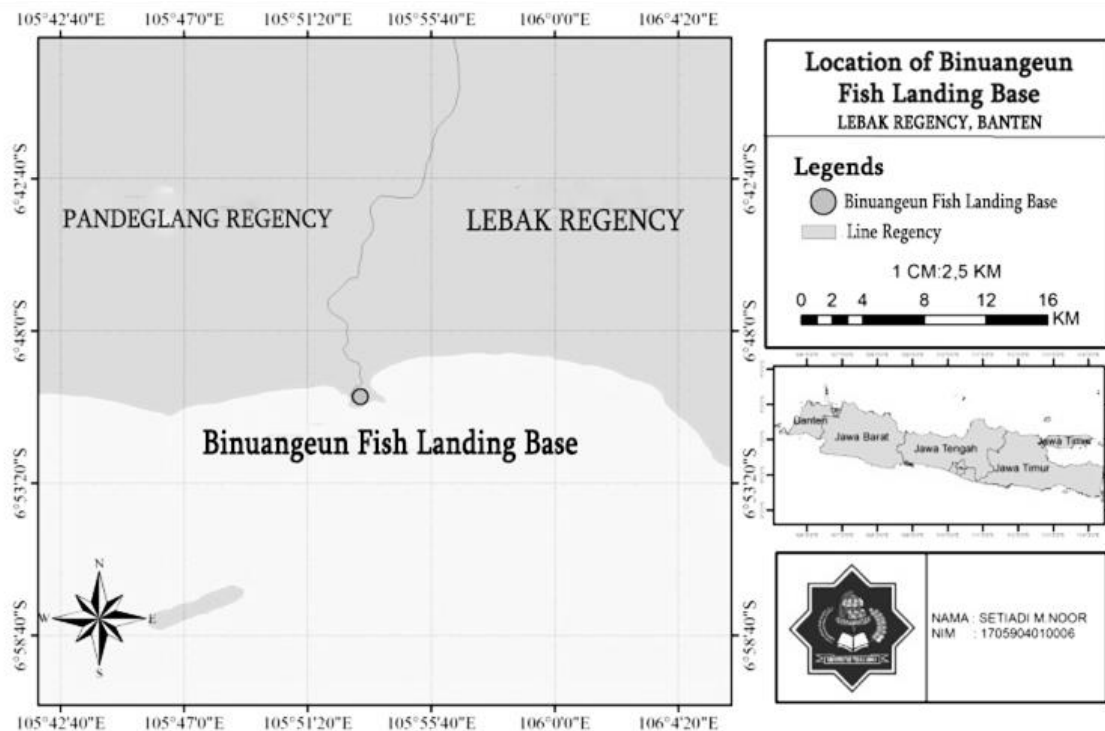


Figure 1 Location of Binuangeun Fish Landing Base.

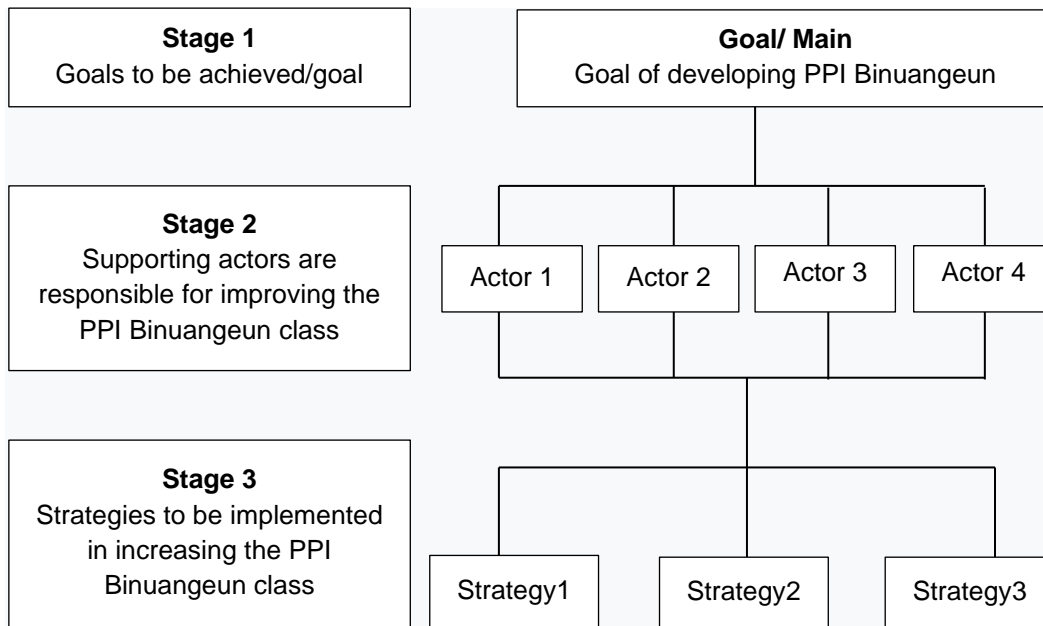


Figure 2 PPI Binuangeun class improvement hierarchical model structure

RESULTS

Binuangeun Fish Landing Base is located at the Binuangeun estuary. The area of PPI Binuangeun is around 13,400 m². Based on data from 2014-2019, the number of fixed boats increased year by year on vessels 1-5 GT and vessels above 5 GT (Figure 3).

Fishing gear at PPI Binuangeun has increased every year and recorded in 2014-2018 for rampus fishing gear, millennium gillnet and fishing rods. The latest data recording provided by the PPI in 2018 for millennium gillnet fishing gear was 221 units and increasing every year; Figure 4 shows the development of fishing gear in PPI Binuangeun.

Binuangeun fisher are categorized into 3 (three) groups: total fisher, prominent part-time fisher, and other part-time fishers. There were 2,254 persons registered, consisting of native fisher (local) and migrant fishers. Figure 5 shows increasing number of fishers within 2014 – 2018 and the development of the number of fishers.

Figure 6 shows data for the last five years shows that fish production at PPI Binuangeun fluctuates yearly. Total production in 2015 reached 1,533,583 kg with a monthly average of 128 tons; in 2016, production reached 1,688,603 kg with a monthly average of 140 tons/month; in 2017, it reached 1,815,833 kg with an average of 151 tons/month. Furthermore, in 2018 it reached 1,865,091 kg with an average of 155 tons/month, while in 2019, there was an increase of 2,204,231 kg with an average of 183 tons/month. Figure 6 shows the fish production of PPI Binuangeun in the 2015-2019.

Additionally, the development in fish production has a beneficial effect on the production value, or prediction of the catch landed at PPI Binuangeun. Between 2015 and 2019, the production value was IDR 30.1 billion, 35.8 billion, 34.9 billion, 37.07 billion, and 42.07 billion, correspondingly. Figure 6 shows the value of fish production in 2015-2019.

Binuangeun fishers classify the fishing seasons based on wind direction into 3 (three) seasons, namely, the west, east and paliwungan (transitional) seasons. Besides, the fishing season varies depending on the type of catch. It was recorded that the catch landed at PPI Binuangeun were dominated by skipjack tuna with a percentage of 31%, followed by tuna with 24%, then tuna with a catch percentage of 8% and several other types of fish such as scad, sword fish, squid, marlin, snapper, mackerel, skipjack tuna, and other commodities. Figure 7 shows catch landed distribution at PPI Binuangeun.

Based on the Analytical Hierarchy Process calculation results, there were three factors need to be considered in the development class category of PPI Binuangeun. The factors, namely increasing the comfort of fishers in PPI Binuangeun activities, including supply, auction, landing, and marketing activities (58.5%); increasing PPI Binuangeun facilities in the context of optimizing port land (31.1%); and an increase in PPI Binuangeun facilities (10.4%). Figure 8 depicts the Expert Choice 2000 for Windows calculation results.

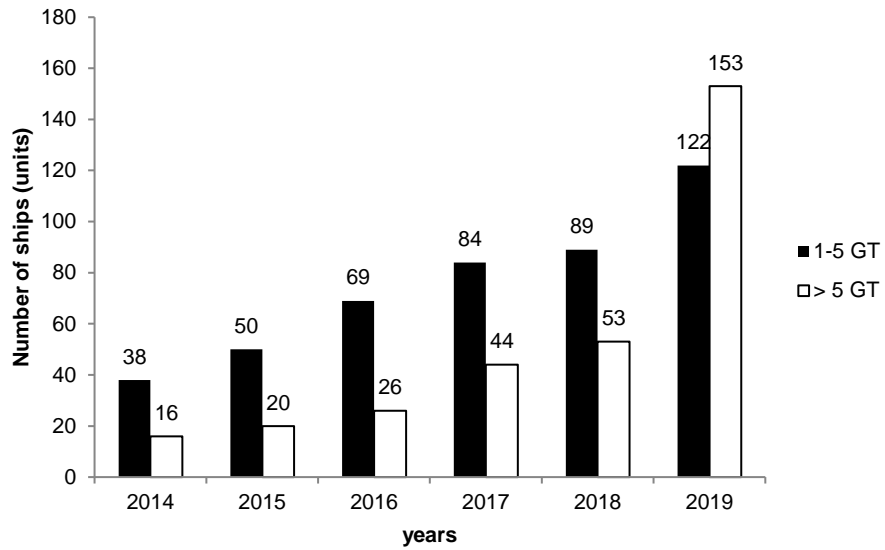


Figure 3 Number of vessels development at PPI Binuangeun.

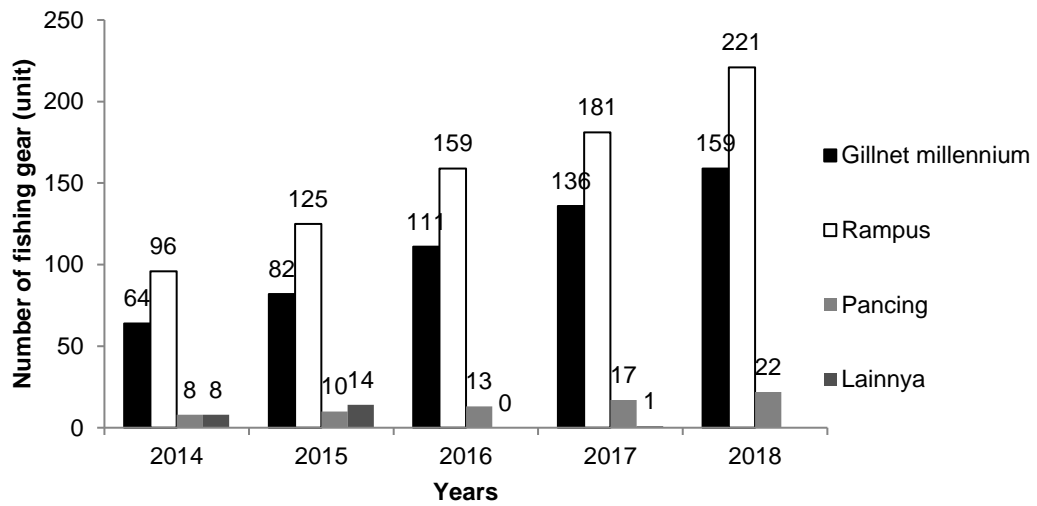


Figure 4 Development of fishing gear in 2014-2018 at PPI Binuangeun.

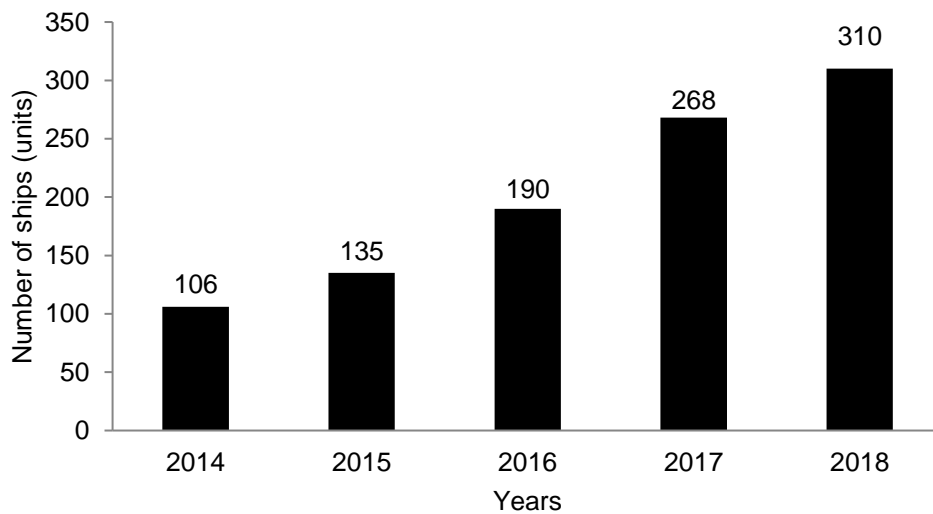


Figure 5 Development of the number of fishers in 2014-2018.

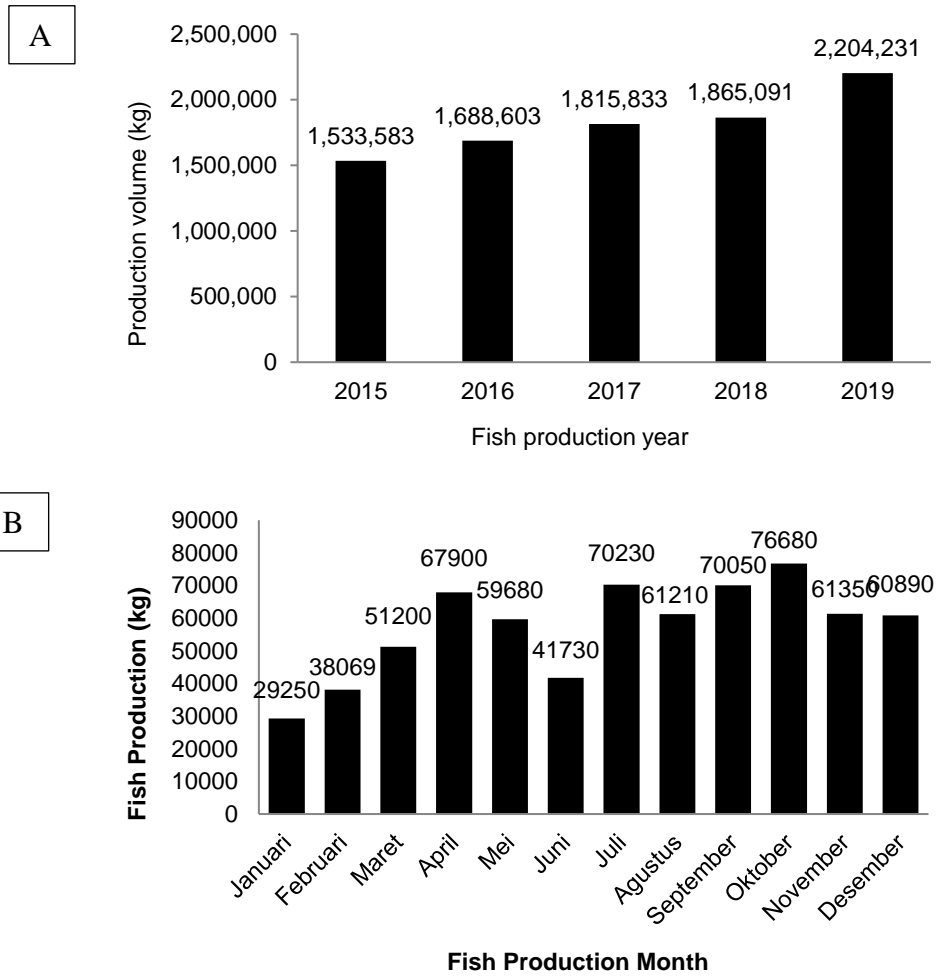


Figure 6 Fish production and production value at PPI Binuangeun 2015-2019. Description: A = fish production in the last five years; B= Fish production depends on peak season.

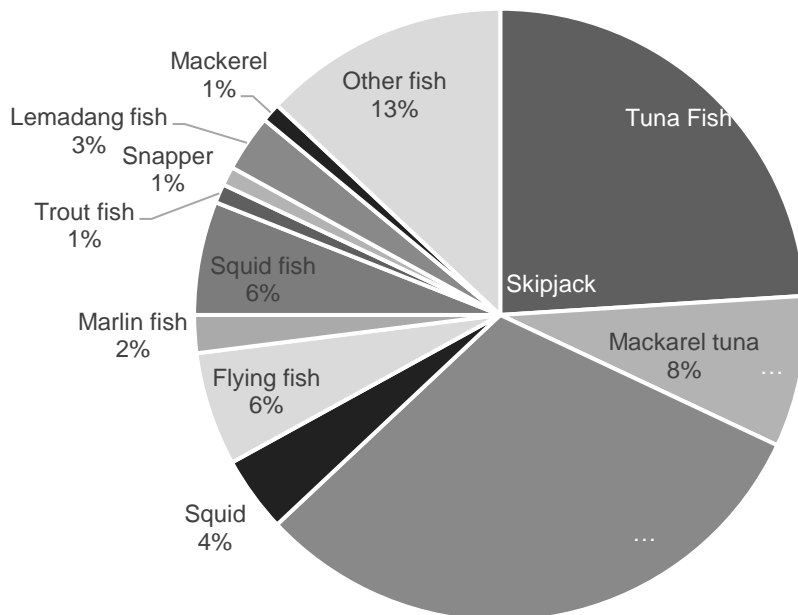


Figure 7 Distribution of caught fish landed at PPI Binuangeun in 2019

Performance Sensitivity for nodes below: Goal: Development Goals of PPI Binuangeun

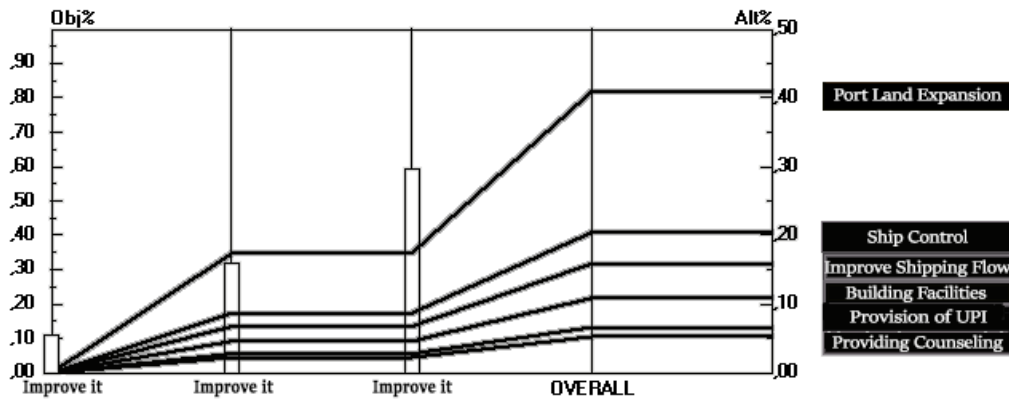


Figure 8 Performance Goals/Development Goals of PPI Binuangeun

Based on the proportion of aims or objectives for the development of the Binuangeun PPI, six priorities can be implemented to expedite the development of the Binuangeun PPI into PPP. The priority is 40.9%, the second priority is 20.4%, the third is 15.9%, the fourth is 10.9%, the fifth is 6.6%, and the sixth is 5.3%. Figure 9 shows the percentage of Binuangeun PPI development goals.

The priority value of each achievement of the primary goal for developing PPI Binuangeun is that an increase in the comfort of fishers in PPI Binuangeun activities such as supplies, auctions, landing and marketing activities with a priority value (0.585). Meanwhile, the second priority is increasing the PPI Binuangeun facilities to optimize portland with a priority value (0.311). The third priority is to increase the number of industrial fish processing units with a priority value (0.104). The overall inconsistency value is (0.00037). The result refers to the consistency ratio (CR) value. If it is less than 10% or less than 0.1, the priority data is considered consistent (valid). In this case, it is measured using an analysis of sensitivity to the priority of selecting alternatives to existing modes. Figure 10 shows the calculation results of Expert Choice 2000 for Windows.

The priority value for actors who play an essential role is the government with a priority value (0.474). The second priority is the Legislative Council of Regional People's Representatives (DPRD), which has a value of (0.253). After that, the third priority is the ship owner or entrepreneur with a priority value

(0.101). Fishers occupy the fourth priority actor with a priority value (0.095). The fifth priority is the fishers' cooperative with a priority value (0.077). Total inconsistency value of (0.05). The result refers to the consistency ratio (CR) value. If it is less than 10% or less than 0.1, the priority data is considered consistent (valid). In this case, it is measured using an analysis of sensitivity to the priority of selecting alternatives to existing modes. Figure 11 shows the actors involved in developing PPI Binuangeun.

The strategies recommendation in the effort of increasing class categorized of PPI Binuangeun are the first strategy by expanding the port area with a priority value (0.409). The second priority is controlling fishing vessels that have finished unloading fish at PPI Binuangeun (anchored pond), which becomes an obstacle when unloading catches at PPI Binuangeun with a priority value (0.204). It is necessary to increase the shipping lanes of ships when entering PPI Binuangeun so that the catch landing activity goes well and smooth so that no ship is choked due to the lack of shipping lanes as a third alternative strategy with a priority value (0.159). Furthermore, the fourth priority is the need to construct facilities that support the processing industry in the form of processing buildings, quality control of processed fish to marketing buildings with a priority value (0.109). Provision of UPI (Fish Processing Unit) cold storage facilities at PPI Binuangeun as a value-added option to the fifth approach (0.066). Counselling and training are needed as well for fishers to pioneer the industrialization of fisheries as an alternative

to developing PPI Binuangeun with a priority value (0.053) and an overall inconsistency value (0.08). The result refers to the consistency ratio (CR) value. If it is less than 10% or less than 0.1, the priority data is

considered consistent (valid). In this case, it is measured using an analysis of sensitivity to the priority of selecting alternatives to existing modes. Figure 12 shows the strategy in developing PPI Binuangeun.

Dynamic Sensitivity for nodes below: Goal: Development Goals of PPI Binuangeun

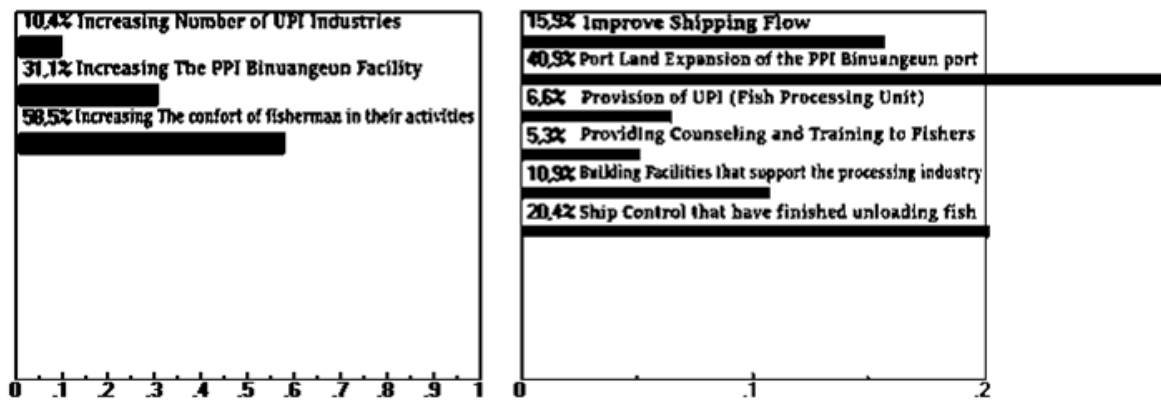


Figure 9 Percentage of Goals / Goals for Development of PPI Binuangeun

Model Name: Development Goals of PPI Binuangeun



Figure 10 Development Goals of PPI Binuangeun

Model Name: Development Goals of PPI Binuangeun

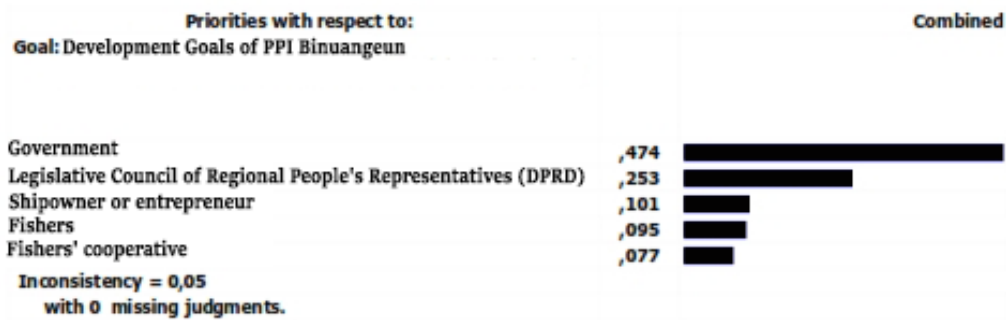


Figure 11 Actors involved in the development of PPI Binuangeun

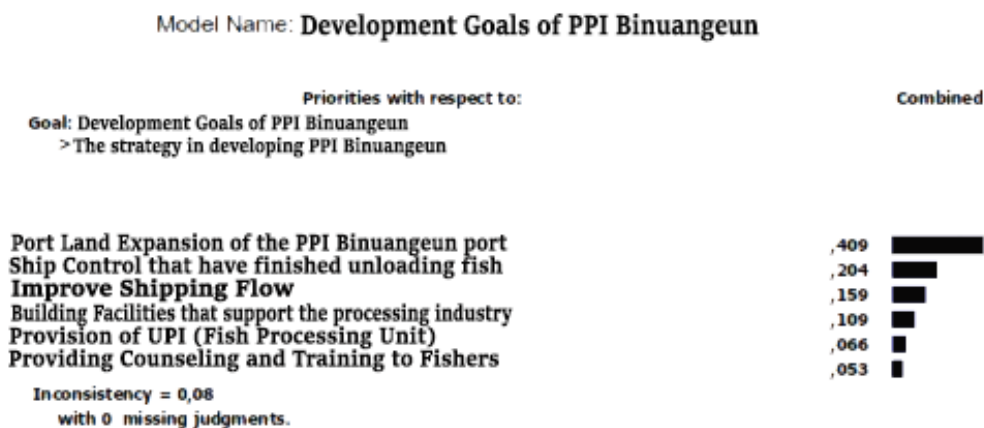


Figure 12 The strategy in developing PPI Binuangeun

DISCUSSION

The value and production volume of PPI Binuangeun in 2019 was an average of 2,204 tons, an average of 183 tons per month and an average of 6.1 tons per day. This amount was quite large for a type D fishing port such as PPI Binuangeun. The catch was at least 2 tons per day for type D fishing ports (Arkhipkin *et al.* 2015; Deswati 2015; Wolok *et al.* 2021). Compared to conditions directly in the field, PPI Binuangeun is feasible to increase with a high number of catches. PPI Binuangeun has a fish processing industry that is still traditional, which consists of salting fish, micro-enterprise processing of shredded fish, processing fish balls, processing seaweed and processing fish crackers typical of Binuangeun. The most dominant activity, namely marinating fish which obtains raw materials from PPI Binuangeun (Gumilang and Susilawati 2019; Syakuro *et al.* 2020; Harrison *et al.* 2021; Matriadi *et al.* 2021).

PPI Binuangeun has a broader fishing ground area (Danial *et al.* 2020). Compared to PPN Karangantu with type B fishing port class, PPI Binuangeun with type D fishing port is much better. The mooring service at PPI Binuangeun has served fishing vessel from 2 GT to up to 60 GT. Based on the Regulation of the Minister of Maritime Affairs and Fisheries number 8 of 2012, the PPI class criterion is only 5 GT. This shows that the PPI Binuangeun mooring service has exceeded the capacity for the PPI criteria under these regulations and has met the criteria for upgrading to PPP or PPN class (KKP RI 2012; OECD 2014). The depth of the port basin at PPI Binuangeun is 2 to 5 meters with an area of 15000 m² and can accommodate ships with

a capacity of over 300 GT, while the PPI pool depth criteria are at least 1 meter with a total ship capacity of at least 75 GT (Bahri 2021; Pratiwi *et al.* 2021; Mardiyah Ramdhani *et al.* 2022). Thus, the PPI Binuangeun basin depth and fishing vessel accommodation capacity have exceeded the PPI capacity criteria and have met the class of the PPP class level (Amiruddin *et al.* 2019; Putri *et al.* 2020; Avadi and Acosta-Alba 2021).

Fishing activities in Binuangeun is a primary source of livelihood. This has made number of fisher increasing by the time. Consequently, fleet and fishing gears increasing as well by the time. Apart from being the primary source of livelihood, the number of fishers at PPI Binuangeun is in line with the increase in the fleet and fishing gear in PPI Binuangeun. Research by Pamungkas *et al.* (2019); Wahyuni and Kandi (2019); Ariwibowo (2020); Soumokil (2021) revealed that the high production capacity of fish caught by fishers must be supported by adequate fleets and tools and supportive capacity in terms of quantity and quality. The better the fleet and fishing gear are used and supported by adequate resources, the more the number of catches increases (Fujii 2021; Selig *et al.* 2022). PPI Binuangeun strives to provide and facilitate adequate fleets and fishing gear to increase catch capacity and entity from the catch.

Binuangeun fishing grounds are generally found along the southern coast of Banten province, between Tinjil Island and Deli Island. Large ships (20–30 GT) usually reach Indonesia's exclusive economic zone (EEZ) (Deswati 2015; Russo and Spreafico 2020; Bahri 2021; Iksan *et al.* 2021). The

division of fishing grounds occurs based on the capabilities of the vessels and fishing gear being operated. Purse seine fishing gear Around Tinjil Island, Deli Island, and the territorial sea are fishing grounds (<12 miles from the coast). Gillnet fishing gear is generally operated around Tinjil Island and Deli Island. Ships that use outboard motors, such as fishing gear and rods, operate around the coast. Boat Chart operates in a protected and quiet area around the waters of Tanjung Panto. The determination of fishing grounds by fishers is still traditional among fishers who operate by looking for fish by looking at the foam or birds in the water (Dwiyanto *et al.* 2019; Yan *et al.* 2019; Bosa *et al.* 2021). Fishers operating rampus nets set nets in warm water and calm currents (KKP RI 2017b; Wahyuni and Kandi 2019; Fajriah *et al.* 2021; Nugraha *et al.* 2021).

The improvement of fishing ports PPI Binuangeun refers to the legal regulation that regulates the classification of fishing ports in Indonesia. The Regulation of the Indonesian Minister of Maritime Affairs and Fisheries, namely PER.08/MEN/2012, concerning Fishing Ports The classification of fishing ports is determined based on two aspects, namely technical and operational criteria. The technical criteria consist of five components: fishing grounds, mooring facilities, dock length, pond depth, and land area. The operational aspect consists of fish exports and production volumes and a fish processing industry (KKP RI 2012; KKP RI 2017a; Hyun *et al.* 2020). The calculation of the probability of increasing the PPI Binuangeun class obtained a score of 254 with a success value of 251-300; this indicates that the PPI binuangeun has the potential to be upgraded to PPP (Coastal Fishery Port). The fishing ground area of fishing vessel based in PPI Binuangeun has reached Indonesia and ZEEI. Based on the Regulation of the Minister of Maritime Affairs and Fisheries Number PER.08/MEN/2012, the fishing ground criteria for the PPI class are only up to Indonesian waters but based on the existing conditions in PPI Binuangeun has exceeded these criteria. The fishing ground areas include ZEEI, Bengkulu waters, Bangka Belitung waters, Northern part of Java Sea, and Sunda Strait (KKP RI 2012; KKP RI 2017a).

The number of fishers interviewed were 23 based on the GT of the ship covering three categories, namely 10 fishermen < 5 GT, 3 fishermen 5-10 GT and ten fishermen 10-30 GT at PPI Binuangeun in 2020 (Deswati 2015; Bahri 2021; Iksan *et al.* 2021). The interview

results showed that 86.95% of fishers strongly agree that the PPI Binuangeun class is increased, and as many as 13.04% others do not agree and feel that it is sufficient so that it does not need to be increased by assuming it will harm small fishers. According to fishers, if the class increase is carried out, it will make the fishing port bigger so that it becomes an entry point for large ships and impacts small fishers, including their income (Pamungkas *et al.* 2019; Wahyuni and Kandi 2019; Ariwibowo 2020; Soumokil 2021).

Increasing the PPI Binuangeun class categorized is one of the developments in the fisheries business (Harrison *et al.* 2021; Firdaus *et al.* 2022). The development process might have a positive or negative influence. One of the impacts of the increase in class is the increase in fishery activity in a port. The bigger the pool, the more significant the economic growth in the fisheries sector, so that more workers are needed. The absorption of this workforce can open up job opportunities for the community around the port and improve the community's welfare (Rengi *et al.* 2017; Maulana and Nugroho 2020; Syakuro *et al.* 2020). The result indicate that the first strategy aims to expand the PPI Binuangeun port area with a priority value (0.409). Class C or Coastal Fishing Ports (PPP) can utilize and manage at least 5 ha of land. While in the research, PPI Binuangeun has a land area of about 1.3 ha (KKP RI 2017b; Wahyuni and Kandi 2019; Fajriah *et al.* 2021).

However, due to the absence of an official opening, the total land area under management exceeds 6 hectares, covering the land area in Pandeglang district. According to the results of interviews with officers from the Lebak district's marine and fisheries branch office, land management in Pandeglang district lacks clarity of ownership. Because of the port land area is owned by the province government, the land area estimate is limited to the Lebak Regency. In line with the planning analysis in the development of fishing ports, Fada *et al.* (2021) stated that the availability of land for PP or PPI is a criterion that is as important as the criteria for facilities. Land area must be estimated in the analysis of the development planning because the area and status of the available land will affect the facility's construction plan. Recommendations can be directed at two alternatives: "full development" or "limited development" (Irawan 2013; Masqudi *et al.* 2018; Soumokil 2021).

The strategies that can be implemented to improve the Binuangeun Fish Landing Base

class are based on the calculation results of the Process Hierarchy Analysis. The percentage of PPI Binuangeun development goals/objectives were the expansion of the PPI Binuangeun port (40.9%) makes it a top priority in the further development of the PPI Binuangeun. Controlling ships that have finished unloading catch at PPI Binuangeun (anchored pond) which becomes an obstacle during the unloading of catch at PPI Binuangeun (20.4%). The third development priority, increasing ship shipping lanes when entering PPI Binuangeun, so that catch landing activities run well and smooth (15.9%). The fourth development priority, building facilities that support the processing industry in the form of processing buildings, quality control of fish processing products to the marketing building development priority (10.9%). On the fifth priority, PPI Binuangeun provide cold storage facilities (6.6%). Furthermore, the sixth percentage priority in developing PPI is providing counselling and training to fishers to pioneer the industrialization of fisheries (5.3%). The results of this study are supported by KKP RI (2012); Wijayanto (2016); Rini *et al.* (2017); Pratiwi *et al.* (2021) the development and improvement of the class of superior priority fish landing bases must meet the PPI's specific needs, and the development is focused on human resources and adequate equipment. Furthermore, (Pamungkas *et al.* 2019; Wahyuni and Kandi 2019; Ariwibowo 2020; Soumokil 2021) explain that the improvement of the port class must be accompanied by synergies from multiple components, including both the port community and the government as policymakers and fishing business developers so that development synergy is centered on superior priorities identified via strategic analysis.

The improvement and development of Binuangeun Fish Landing Base (PPI) have met the requirements stipulated in the Regulation of the Minister of Maritime Affairs and Fisheries PER.08/MEN/2012 concerning Fisheries Port, where the fishing port has the function of supporting activities related to the management and utilization of fish resources and the environment, starting from pre-production, production, processing, to marketing (KKP RI 2012; KKP RI 2017a; Russo and Spreafico 2020; Bahri 2021; Harrison *et al.* 2021; Sari *et al.* 2021). In addition, stakeholders such as the Marine and Fisheries Service (DKP) of Banten Province, the Regional Development Planning Agency (BAPPEDA) of Banten Province, the Housing and Settlement Area Service (DPKP) of

Banten Province, the Legislature of the Regional People's Representative Council (Chairman of Commission II for the economy of the Banten Provincial DPRD), Fishermen, Ship Owners (Entrepreneurs), and Fishermen's Cooperatives) synergize with each other to accelerate and improve the PPI Binuangeun class. (Lubis 2012; Suadi and Kusano 2019; Syakuro *et al.* 2020; Bahri 2021; Ersina 2021) it is stated that the fishing port development strategy will be most effective if the parties with authority collaborate. The government (legislature), the community (institutions), and the corporate sector must collaborate to achieve the same goals under the triple reward system.

CONCLUSION

Class categorized PPI Binuangeun has an opportunity to be upgraded to class categorized PPP (Coastal Fishery Port) since the standard has already been confirmed. The results of the research confirm that it is necessary to accelerate the realization of the PPI development strategy and fishing port management through the change in the status of anchoring fisheries to PPP by the AHP priority strategy by related parties. The top three recommended strategies are: 1) expanding the port (40.9%), 2) controlling ships that have finished unloading fish (anchored ponds) that get in the way of unloading catches (20.4%), and 3) making it easier for ships to enter the PPI so that landing catches goes smoothly (15.9%). More research will need to be done to figure out how ready PPI Binuangeun is to apply class improvement as a PPP-type port.

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