

## **Development of Capture Fisheries in The Bajomulyo Coast Fishery Port, Juwana District, Pati District, 2010-2015**

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### **Abstract**

This study discusses the development of capture fisheries at the Bajomulyo Coastal Fishing Port (PPP), Juwana District, Pati Regency, 2010-2015. The sources used in this research are documents from the Ministry of Maritime Affairs and Fisheries and related agencies as well as research related to Juwana Port. This study found that the development of capture fisheries at Juwana Port experienced ups and downs in terms of fish income, which was influenced by the number of vessels, fish sales methods, and the use of fishing gear. The construction and development of the PPP Bajomulyo also contributes to the development of capture fisheries products. The presence of freezer vessels in PPP Bajomulyo continues to increase, thereby increasing the quality and price of fish. The ship owners added a new ship specifically for freezer ships. The decrease in fish production was due to the direct sales of fish to buyers, changes in auction mechanisms, a decrease in the number of ship departures, and overfishing.

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### **Introduction**

Indonesia is an archipelagic country that has abundant natural resources. The vast Indonesian seas can be exploited for their potential at all levels of the society. Apart from being an agricultural country, Indonesia is a maritime country with tropical waters supported by abundant natural potential with "Mega Biodiversity" capabilities. Strong marine potential can support progress in the fisheries sector, tourism sector and navigation. Utilization of abundant natural resources can support success in the maritime economy. Development of the marine and fisheries sector requires a policy that can provide prosperity for the people in the region (Primyastanto 2011, 1).

This abundant potential has not been managed optimally by the government so that the fisheries sector has not been able to drive the national economy. The capture fisheries sector can make important social and economic contributions, especially to coastal communities. A policy implemented by the Ministry of Maritime Affairs and Fisheries through the Blue Revolution, namely a change in thinking from land to sea which is implemented through a Minapolitan concept. The Ministry of Maritime Affairs and Fisheries released Minister of Maritime Affairs and Fisheries Regulation Number PER. 12/MEN/2010 regarding Minapolitan. This Minapolitan region is a hub for fishing and fisheries that evolves and expands through the implementation of the fisheries business

system and enterprises, which can guide and stimulate fisheries development activities in the nearby areas.

Based on the decision of the Ministry of Maritime Affairs and Fisheries Number Kep.32/Men/2010 concerning the Determination of the Minapolitan Area and the Decree of the Regent of Pati Number: 523/1867/2010 concerning the Determination of Juwana District as a Minapolitan area in Pati Regency, efforts are being made to develop the Minapolitan area in stages starting from 2010 to 2014. The Bajomulyo Coastal Fishing Port (PPP) was incorporated into the development initiative due to its status as a fish landing port with rising production volumes and an extensive fish marketing region. Juwana Port serves as a landing site for caught fish, playing a significant role in the economy of Pati Regency (Bappeda Pati Regency 2012, 1).

The issue identified in this study is that the potential of capture fisheries in PPP Bajomulyo does not match the available port facilities, affecting the fishing communities. Therefore, government intervention is necessary to advance and enhance the capture fisheries sector. To help answer this problem, this research asked questions, namely; first, how is the development of capture fisheries at the Bajomulyo Beach Fishing Port; second, what are the regional government's efforts to promote and develop capture fisheries at the Bajomulyo Beach Fishing Port; third, what is the influence of capture fisheries at the Bajomulyo Beach Fishing Port on the socio-economic conditions of the fishing community in Juwana District.

The study of the development of capture fishing ports has been widely discussed by previous researchers. Studies on the development of capture fisheries together with the Minapolitan program have been studied by Jamilah in East Aceh Regency and Cendry in Muncar District. A study conducted by Jamilah (2018) shows that the government is implementing a captured fisheries-based Minapolitan program in East Aceh Regency in order to exploit the potential that exists in the region. The implementation of the Minapolitan program on the coast of East Aceh has produced positive achievements including increasing capture fisheries production, increasing business, absorbing labor and infrastructure and increasing the quality of human resources (Jamilah, 2018). Additionally, Cendry's (2019) research examines how the Minapolitan program affects the socio-economic status of the fishing community in Muncar District, focusing on aspects such as Human Resources (HR) and income levels. While both studies address the Minapolitan program in a specific area, the effects observed in each region differ (Cendry, 2019).

A study regarding the development of fishing ports was also discussed by Widodo, Nikmah, and Puspasari. A study by Widodo contains the development of a commercial port which has changed its function to a fishing port in Pekalongan (Widodo, 2005). Nikmah's study contains the development of PPN Prigi including fishing technology, work relations, profit sharing systems and its impact on the socio-economic life of fishermen (Nikmah, 2018). Puspasari's study contains the factors faced in the development of PPP Bajomulyo fishing fishermen (Puspasari, 2017). Based on the studies above, it is hoped that the study can be used as material for comparison and relevance in writing on the topic of development of capture fishing ports and the impacts that occur on fishermen and their regions.

## Method

The research method used by the author is a historical method which includes four stages, namely heuristics, criticism, interpretation and historiography. The first stage is a

heuristic, namely searching for sources of information or searching for historical evidence. The primary sources used in preparing this article are the PPP Bajomulyo annual report (2013, 2014, 2015), PPP Bajomulyo shipping information data, and fish production at TPI Bajomulyo Units I and II. In addition, this article was compiled using resources from book libraries, articles from national journals, and relevant online news sources related to this research. Source criticism is an activity that aims to test the historical sources that have been collected. Regulations regarding the establishment of PPP Bajomulyo are compared with contemporary news found in newspapers or online news. Interpretation aims to connect and relate similar and chronological historical facts. is a writing stage which aims to reconstruct all past events based on the facts that have been obtained (Wasino 2018, 11).

### **Beginning and Development of Bajomulyo Port**

Juwana District is the focal point for capture fisheries production in Central Java. Located directly adjacent to the Java Sea in the north, this sub-district serves as a hub for capture fisheries in Juwana District. It hosts PPP Bajomulyo, which includes 2 out of the 8 fish auction sites (TPI) found in Pati Regency. In 2010, these two TPI were recognized as the largest in Pati Regency in terms of production volume and the number of vessels. PPP Bajomulyo has a strategic location because it only has a distance of about 2 km to the regional road. This can facilitate access in and out of transport vehicles for the distribution of fishery products on inter-regional trade routes. Before becoming a Coastal Fishing Port, PPP Bajomulyo was a development of the Bajomulyo Fish Landing Base (PPI). This is stated in the Decree of the Minister of Maritime Affairs and Fisheries Number 12/Men/2004 dated 25 February 2004 concerning Increasing the Status of Fish Landing Bases (PPI) to become Coastal Fishing Ports (PPP). Based on the decision letter, it is stated that Bajomulyo Port is one of the PPI whose status has been upgraded to PPP. The increase in port status resulted in the transfer of port management from the Pati Regency Government to the Central Java Provincial Government.

In Minister of Maritime Affairs and Fisheries Regulation Number 8 of 2012 dated April 20 2012, it is stated that every fishing port must have basic, functional and supporting facilities to support the function of the fishing port. Basic facilities in the form of land, docks, ponds, ports, complex roads and drainage are facilities that a fishing port must have. PPP Bajomulyo already has basic facilities, namely land and a pier located in Juwana, Pati. Apart from that, fishing ports also at least have functional facilities in the form of administrative offices, TPI, clean water supply and electrical installations. PPP Bajomulyo also has an administrative office and two TPI. The supporting facilities that a fishing port must have are a guard post and bathrooms.

Based on the classification of fishing ports, PPP is classified as a class C fishing port. This class of port has operational criteria which consist of fish loading and unloading activities and marketing of fishery products with an average of 5 tons per day, there is a fish processing industry and other supporting industries. Based on production volume and vessel size, PPP can meet Archipelago Fishing Port (PPN) classification. This is because the minimum requirement for fish production per day at Class C ports is 5 tons, while PPP Bajomulyo is able to obtain 45 tons per day. Class C ports are also intended for ships measuring 10 to 30 gross tonnage (GT), but PPP Bajomulyo has a large fleet of more than 30 GT. The challenge in upgrading the port class stems from the insufficient facilities at PPP Bajomulyo.

The first TPI Unit was established initially, followed by the construction of TPI Unit II in 2000, which was officially opened in 2001. At the beginning, Juwana had only one TPI, which was TPI Unit I. Many ships using various types of fishing gear such as *cantrang* (seine nets) and purse seine landed at TPI Unit I made the ships crowded together. Based on these problems, the Pati Regency government proposed to build TPI Unit II. After TPI Unit II was built, a regulation was made that TPI Unit I was intended for vessels with *cantrang* fishing gear, while TPI Unit II was intended for vessels with purse seine fishing gear.

In 2010, during the fish auction at TPI Juwana, there was an issue with fish auction payments (KPLI). This problem arose because fish traders bypassed TPI and paid fishermen directly, leading to unrecorded transactions. Additionally, the cash auction system used by fish traders at TPI contributed to KPLI. After the auction, traders were supposed to pay through TPI, but some either delayed or failed to do so, preventing TPI from compensating the fishermen, who then did not receive their cash earnings. This situation caused anxiety among fishermen, as the income from fish sales was essential for capital turnover. The trade and auction activities for fish at TPI Juwana have been expanding rapidly. TPI Juwana eventually evolved into the Bajomulyo Fish Landing Base (PPI). According to the Decree of the Minister of Maritime Affairs and Fisheries Number 12/Men/2004 dated February 25, 2004, Bajomulyo Port was designated as one of the PPIs that was upgraded to Bajomulyo Coastal Fisheries Port (PPP).

The implementation of the development of the PPP Bajomulyo was carried out through a joint agreement between the Central Java Provincial Government and the Pati Regency Government in 2012. Physical development through this cooperation agreement included the preparation of the master plan and Detailed Engineering Design (DED) of the Bajomulyo PPP, management and development of the PPP Bajomulyo, maintenance of facilities and infrastructure, and ship mooring regulations. The non-physical development carried out is the development of human resources (HR) which includes coaching, reporting and evaluation monitoring.

PPP Bajomulyo currently lacks a designated port pool for ship mooring. Instead, the river adjacent to the port serves as a natural docking area. The port pool is a crucial infrastructure component necessary for the advancement of PPP Bajomulyo. Ships are docked along the Juwana River, often leading to conflicts due to their haphazard arrangement. This disorganized anchoring along the river obstructs larger vessels and outboard boats engaged in fishing activities from accessing PPP Bajomulyo.

The government is implementing both short-term and long-term development initiatives for the PPP Bajomulyo. The first stage, spanning 5 years, focuses on the normalization of shipping channels. Following this, the PPP Bajomulyo development will progress with a long-term strategy, expected to last between 5 and 10 years, which includes dredging the shipping lanes as part of the development efforts.

### **Development of Capture Fisheries in PPP Bajomulyo**

In 2013 to 2014 land acquisition of  $\pm 10$  hectares (Ha) was carried out to provide dock facilities through Pati Regency APBD funds. This land acquisition supports the development of the PPP Bajomulyo, especially in expanding the area to build basic and supporting facilities. The PPP Bajomulyo development project began with the construction of a road to the port pool. The road was built to facilitate vehicle activity going to the port pool area. Ongoing construction involves developing a port pool, which serves the operational needs of docking and maneuvering fishing boats. This port pool is

a water area situated in front of the pier. Its construction was undertaken to complete the essential facilities required at fishing ports, such as PPP Bajomulyo. Building a port pool demands significant time and a substantial budget, making it impossible to finish within a five-year timeframe.

The development of the PPP Bajomulyo encountered difficulties during the dredging of shipping lanes, which are essential for establishing a fishing port. A significant challenge in dredging these channels is the substantial financial investment required. Additionally, the construction of the PPP Bajomulyo faced issues with cleanliness, as waste transportation relied on trucks and insufficient mobilization personnel. To address these challenges, the Pati Regency Government expanded 12 hectares of land in Bajomulyo Village and Bendar Village. This land is intended to support fisheries activities, including the establishment of an Integrated Service Office for all relevant agencies. The Integrated Services Office also serves as a location for the physical inspection of ships involved in fish thawing activities. The remaining land developed by the Pati Regency Government can be leased to third parties to meet port needs, such as kiosks, food stalls, processing facilities, and cold storage. In 2014, efforts to acquire land for development were still ongoing. (PPP Bajomulyo Annual Report 2014, IV.2)

In 2013, an issue arose concerning KPLI, which was addressed by the Regional Government of Pati Regency. Their proposed solution was to introduce a cash auction system, allowing only those with cash to participate in the TPI auction. However, this cash auction approach faced challenges due to a lack of consensus between buyers and fish owners. To resolve the disagreement between buyers and sellers, a wholesale system was implemented, which involved imposing levies based on the ships that were unloaded (PPP Bajomulyo Annual Report 2014, V.3).

In 2014, the government raised the levy on fishery products (PHP) by tenfold for fishing vessels and those aiding fisheries operations. The PHP cost per gross tonnage (GT) of these vessels is determined by factors such as vessel productivity, standard fish prices, and vessel size (Grahadyarini 2021). Ship owners at PPP Bajomulyo expressed dissatisfaction with the increased PHP rates, despite an abundance of fish catches. This discontent stems from the substantial capital costs associated with ship operations, including the significant need for diesel and supplies. Only about 10% of ships generate high income, yet the government bases the PHP increase on these high-earning vessels.

Ships at PPP Bajomulyo are divided into two types, namely fishing vessels and fish transport vessels. Fishing vessels function to catch fish at sea, these vessels can be purse seine vessels, *cantrang* vessels and squid vessels. Fishing vessels operate at sea for around 1 to 7 months. A purse seine ship is a ship equipped with purse seine fishing gear, which is an efficient and sophisticated fishing method. Apart from that, purse seines are also used to catch pelagic fish, namely fish that live on the surface of the sea (Wiyono 2014, 478). Purse seine is the dominant fishing gear at the Bajomulyo Unit II Coastal Fishing Port, with 62% of the total fishing gear used at the PPP Bajomulyo (Prasetyo et al 2016, 68). The next fishing vessel used by PPP Bajomulyo is the *cantrang* vessel. This ship is a ship equipped with fishing gear in the form of *cantrang*. *Cantrang* fishing gear is a tool that resembles a large cone-shaped bag, the larger the shape, the more conical it is. The target fish caught by *cantrang* are fish that are at the bottom of the water, but it is not uncommon for fish at the surface of the water to also be caught (Rahman 2017, 3). *Cantrang* is considered an efficient tool, because it can be used to catch a lot of fish, and in a short time.

In 2015, the Ministry of Maritime Affairs and Fisheries (KKP) implemented Government Regulation number 2 of 2015 concerning the Prohibition of the Use of

Trawls and Seine Nets in the Fisheries Management Area of the Republic of Indonesia, which resulted in protests from fishermen in Indonesia, including Juwana. The protest was carried out by fishermen in the Juwana area, who demanded the reuse of *cantrang* as the main fishing gear. This protest yielded results by extending the period of use of the *cantrang* before it was replaced with more environmentally friendly fishing gear (Kasanti 2019, 87). The next fishing tool used by fishermen in the PPP Bajomulyo area is the gill net, which is a net for catching small fish on the surface.

Another type of ship operating at PPP Bajomulyo is a fish transport ship. This ship is a ship whose job is to transport fish from the operating fishing vessel area (production) to the fish landing area (consumer) and send supplies to the fishing vessel area. (Puspasari 2017, 31). The operational areas for vessels from Juwana are fisheries management area (wilayah pengelolaan perikanan, WPP) 712 (Java Sea), WPP 713 (Makassar Sea) and WPP 718 (Arafura Sea). Juwana boats depart all year round so the type of fish they get depends on the fishing season and fishing area.

The operation of fishing and transport vessels leads to an increase in the consumption of diesel, which is the primary fuel for these ships. In the Bajomulyo PPP area, the rise in diesel usage is also attributed to the employment of freezers for fish preservation. Typically, transport vessels from Juwana supply the diesel fuel needed by fishing vessels still operating in the fishing area. This is because diesel prices in fishing areas are higher than those in Juwana. In 2014, there were 133 freezer vessels at PPP Bajomulyo.

Between 2010 and 2012, fish production in TPI Units I and II saw an upward trend. This increase in catch was attributed to a rise in the number of ships setting sail during this period. However, in 2013, production dropped significantly as fishermen opted to sell their fish directly to buyers, bypassing the auction process at TPI. Consequently, these sales were not recorded by the Pati Regency Fisheries and Maritime Service (DKP). In 2014, fish production declined once more, partly due to some ships not adhering to regulations, resulting in their catches not being documented by TPI registrars. The downward trend continued following the prohibition of *cantrang* use in 2015 (Juwana District Statistics 2015, 8).

Some of the fish produced by TPI Bajomulyo is sold within Pati Regency, while other portions are distributed to cities like Jakarta, Surabaya, and Jogja. Additionally, fresh fish is delivered to various locations in Central Java to supply raw materials for fish processing. The fish is also exported to numerous countries, including Japan, Hong Kong, China, as well as America, Africa, Australia, and the Middle East. The export of fish to international markets is handled by a fish exporting company.

Around PPP Bajomulyo, various fish processing enterprises operate, including those focused on steaming (*pemindangan*), smoking, and salting fish. These ventures are typically small-scale, often run from home, either near the port or at the entrepreneur's residence. The workforce usually consists of family members or nearby neighbors. The production methods and equipment remain traditional, relying on stoves and wood as fuel. The fish smoking industry saw a downturn until 2014, and the salting sector faced a notable decline. The primary reason for the reduction in fish processing businesses in the PPP Bajomulyo area is bankruptcy, driven by rising fish prices. As fish prices increase, demand has been falling.

The impact of the capture fisheries sector in Juwana District in the socio-economic field, namely; first, the emergence of new entrepreneurs in the fish processing sector and the opening of job opportunities. Second, the role of women is increasing in the capture fisheries sector with fishermen's wives joining as baskets or workers in the fish

processing industry. This can increase the income of fishing families. Third, development of the capture fisheries sector, including physical development and human resources, can help raise the standard of living of fishing communities. Fourth, captured fishery products from Juwana can improve the image of Juwana District. Products from the capture fisheries sector that have trademarks include fish crackers, fish fillets, shrimp paste, fish-based canned food and frozen food.

## Conclusion

Following research and analysis, the researcher concludes that PPP Bajomulyo is a port that still relies on natural piers with shallow navigation channels. The Pati Regency Government is undertaking various development initiatives to ensure that Bajomulyo Port facilities meet the standards of a Coastal Fishing Port. These initiatives include dredging the shipping lanes, acquiring land for port basins, and supporting fishing industries in the vicinity. The government, through the Pati Regency Government and the Maritime Affairs and Fisheries Service, also focuses on developing human resources and providing business capital for fish processing enterprises. Advances in fisheries technology are evident in the increased number of freezer vessels and the adoption of squid net fishing gear. However, the number of fish processing businesses has declined due to bankruptcies caused by fish price hikes that do not match the demand for products. Large fish catches contribute to the regional income of Pati Regency. Fish processing businesses near the port create employment opportunities, particularly for fishermen's wives, aiding the household economy. The distribution of processed fish products to various regions enhances the reputation of Juwana District and Pati Regency as centers of capture fisheries.

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