

Management of *Penaeus merguensis* conducted in Fish Auction Place (TPI) Minasari Pangandaran, Indonesia

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Abstract:- TPI Minasari Pangandaran is one of the fish auction places in Pangandaran which has a high activity. One of its superior commodities is *Penaeus Merguensis*. The purpose of this study was to determine the auction management of *Penaeus merguensis* conducted at TPI Minasari. The research was conducted in October 2020 - January 2021 at TPI Minasari Pangandaran. The data collected includes daily *Penaeus merguensis* production data, prices, KUD Minasari data regarding agency profiles, organizational structure, data on catch and sale of *Penaeus merguensis*, data on *Penaeus merguensis* fishermen and data on collectors. Data were analyzed using descriptive qualitative and quantitative methods. The results showed that TPI Minasari is one of the business fields owned by the Minasari Village Unit Cooperative (KUD) in Pangandaran. TPI Minasari conducts auction activities at 18.30 - 20.30 focusing on seafood with shrimp commodities. The types of shrimp that are generally auctioned here are *Penaeus merguensis* and tiger shrimp. The daily production of *Penaeus merguensis* reaches 59.62 kg / day with an average production value of 7,404,838 IDR / day and an average price of shrimp 124,600 IDR / Kg. TPI Minasari has adequate facilities to support its basic needs of auction activities. The auction activity at TPI Minasari can be said in accordance with administrative procedures and order. Periodic registration that is carried out by each fisherman before carrying out auction activities and clear auction stages makes fishermen who carry out auction activities at TPI Minasari feel more comfortable.

Keywords:- *Penaeus merguensis*; management; fish auction; Pangandaran; fishing activity.

I. INTRODUCTION

Penaeus merguensis is a type of shrimp that is widely enjoyed by the community because it contains a lot of meat (about 75% of its body weight)[1]. According to the Office of Marine, Fisheries and Food Security [2] the production volume of *Penaeus merguensis* reaches 60,481.58 kg and continues to increase from year to year. Meanwhile, based on a survey in 2020, *Penaeus merguensis* in big sizes (B grade) at the price up to Rp. 170,000, - per kg and medium size (M size) reaches Rp. 124,000, - per kg. The catch of *Penaeus merguensis* is usually landed at the Minasari Pangandaran Fish Auction Place (TPI).

TPI Minasari Pangandaran is one of the fish auction in Pangandaran District which is under the Minasari Village Unit Cooperative (KUD) agency. KUD Minasari is a Village Unit Cooperative established by people who work as fishermen to help overcome some of the difficulties that have occurred in Pangandaran [3]. KUD Minasari oversees several business fields, one of which is the Fish Auction Place (TPI). TPIs that are under the management of KUD Minasari are TPI Cikidang, TPI Minasari, and TPI Jongor Batu. According to Hendrik [4] Fish Auction Place (TPI) is a means of fishery activities that become a driving force in increasing the income and welfare of fishing communities.

TPI is a very important place in supporting the smooth running of economic activities of small scale fishery business, one of which is the auction process. Basically, the auction is a market with an intermediary system where the bid passes in front of the buyer and the one who is entitled to the auction result is the highest bidder [4]. The auction that is held at TPI Minasari is usually done at night everyday, and the auctioning commodities are various types of shrimp. In smoothing the auction process, a management is needed so that all auction activities run smoothly. In an effort to streamline auction management at TPI Minasari Pangandaran, it is necessary to make direct observations in the field regarding the activities and activities during the auction, especially for the *Penaeus* commodity, so that the

auction process runs well so as to reduce errors that may occur. The purpose of this study was to determine the auction management carried out at TPI Minasari by directly observing the auction activities and activities of *Penaeus merguensis* carried out at TPI Minasari Pangandaran.

II. METHOD

The research was conducted in October 2020 - January 2021 at TPI Minasari Pangandaran Regency. The data obtained in this practical field work are primary data and secondary data. Primary data is data obtained directly from the object of research in the field [5]. According to Jannah [5] explain that primary data is obtained directly in the field by conducting observations and interviews with the object being observed so that they can get information that is in accordance with existing conditions in the field. Secondary data is data obtained from several related and existing literature studies. The data collected included data on daily *Penaeus merguensis* production, jerbung shrimp prices, KUD Minasari data regarding agency profiles, organizational structure, data on catch and sale, data on fishermen for *Penneus merguensis* and data on collectors, data on descriptions of the auction process at TPI.

Data collection methods in this study are observation and interviews. Observation is not only an activity of observing and recording but also makes it easier to obtain information about the world around which will be studied [6]. According to [6] explains that observation can develop and find information more broadly. Observations were made at TPI Minasari, namely by looking at how the fish landed at TPI Minasari, the auction process, and the process of collecting data on catches and data on the results of shrimp auction by collectors. The interview is a method of collecting data by asking questions to related parties. Interviews were conducted with field supervisors and related stakeholders who understood the organizational structure at TPI Minasari, TPI Minasari duties and functions as well as the auction process carried out at the TPI. In addition, a few questions were asked about the *Peneus merguensis* capture and landing unit at TPI Minasari.

III. RESULT AND DISCUSSION

A. Profile of KUD Minasari Pangandaran

The Minasari Pangandaran Village Unit Cooperative (KUD) was established on January 2, 1962. The purpose of its establishment was to improve the standard of living of the people in the Pangandaran area, especially for people who live around the coast, the majority of whom work as fishermen. This establishment also aims to help some of the difficulties felt by fishermen in the Pangandaran area, including offering the catch that is obtained and meeting the fishing gear needs of the fishermen. With the hope that after the establishment of KPL Minasari the difficulties faced by Pangandaran fishermen can be overcome gradually. Evidence of the success of establishing KPL Minasari is the rapid progress and the increasing number of members joining KPL Minasari every year.

KUD Minasari is a cooperative that was formed to help the welfare of fishermen in Pangandaran. According to data from the 2019 Minasari KUD Annual Report, there are 24 employees working at the KUD. The organizational structure in KUD Minasari is as follows:

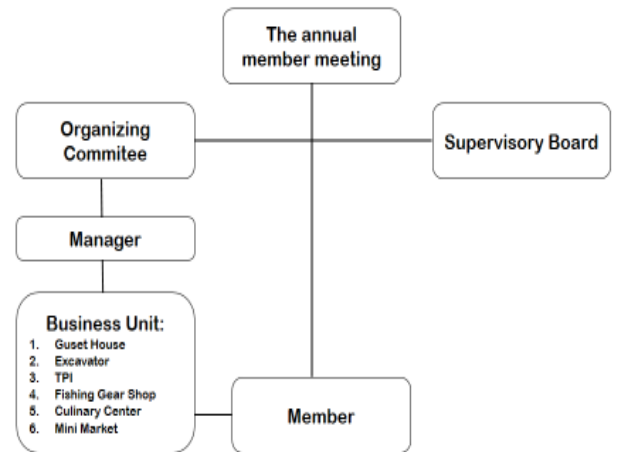


Fig 1. Organizational Structure

Fish Auction Place (TPI) is one of the business units owned by KUD Minasari and continues to this day. The following are the names of employees who work at TPI's business units as follows:

1. TPI Unit Manager: 1 person
2. Cashier: 3 people
3. Fishermen Recapping Officer: 2 people
4. Auctioneer: 2 people
5. Administration: 2 people
6. Computer Operators: 1 person
7. Weigher officers: 5 people
8. Ticket Officers: 2

B. General Condition of TPI Minasari Pangandaran

According to Hendrik [4] explaining that the fish auction place (TPI) is a means of fishing activities and a driving factor to increase the income and welfare of the fishermen community. TPI was built with the aim of helping fishermen market their catch [7].

Fish Auction Place (TPI) Minasari Pangandaran is one of the TPI in the Regency. Pangandaran which is located on Jalan Kidang No. 240, Pananjung, Pangandaran. Astronomically, the coordinates of TPI Minasari are at $7^{\circ} 42'09''$ LS and $108^{\circ} 39'29''$ East Longitude. TPI Minasari is located in the same place as the Village Unit Cooperative (KUD) Minasari Pangandaran. KUD Minasari is a cooperative that is intended for people who live around the coast where the majority of their livelihoods are fishermen [3].

KUD Minasari oversees several existing business fields, one of which is TPI. The TPI that is supervised by KUD Minasari are TPI Cikidang which is close to the Cikidang Fishing Port, TPI Minasari and TPI Jongor Batu on the East Coast.

C. TPI Minasari Pangandaran Facilities

Fish Auction Sites (TPI) were built to support fishermen in carrying out their catch landing and marketing activities [8]. TPI Minasari was built with the aim of providing facilities and infrastructure to make it easier for Pangandaran fishermen to auction off their catch and increase income[3]. In addition, TPI must have facilities that support activities at TPI. The facilities at TPI Minasari have almost fulfilled the needs of fishermen who conduct auction there.

D. Implementation of Auction Activities

The auction activity of *Penaeus merguensis* at TPI Minasari is managed by KUD Minasari and is ultimately reported to the Department of Marine, Fisheries and Food Security (DKPKP). The auctions conducted at the TPI always run well in accordance with proper auction practices. The auction and sale of *Penaeus merguensis* are carried out in public, then there is a bidder with the highest price who will be declared the winner of the auction who has the right to own the shrimp that has been auctioned [9].

The auction of *Penaeus merguensis* at TPI Minasari is carried out every day except on Thursday. This was done because of the local tradition with fishermen, which is prohibited from going fishing on that day. The auction activities carried out at TPI Minasari usually start at 18.30 - 20.00 WIB. Fishermen and collectors all gathered to wait for the auction to begin. The following are the auction activities of *Penaeus merguensis* at TPI Minasari:

1. The boat is anchored on the beach, the fishermen immediately bring the shrimp to the TPI using small barrels. One fisherman usually carries more than one small barrel containing the catch of shrimp which is added with ice so that the shrimp can last longer while fishing.
2. Its approved the catch that is taken out of the barrel and sorting is carried out starting from the type then the size.
3. Type and size of sorted shrimp are then weighed and the data on how much catch is obtained by fishermen. Shrimp are recorded according to their type and weight in the daily auction and ticket logbook. The types of shrimp being auctioned already have their respective codes. For example, for *Penaeus merguensis*, the large code is (B) and the medium to small code is (S).
4. After that the finished shrimp are placed and neatly arranged to make it easier at auction. The auctioneer will give a minimum price in accordance with the lowest price in the market per kilogram. This is done so that no one is harmed and the auction remains fair.
5. The auctioneer together with the ticket maker begin the auction process. The auctioneer uses the daily auction logbook while the ticket maker uses the ticket to write down the agreed price at auction. Shrimp are offered to baskets or auction participants. The process of bidding prices is done openly. Shrimp are offered at tiered prices until the highest bidder wins the auction.

6. After the price has been agreed upon, the auctioneer fills in the auction logbook with the name of the basket that won the auction and the price that has been agreed upon. Meanwhile, the ticket clerk writes the name of the collector and the price on the auction ticket. There are 3 copies of the auction ticket, namely white color that will be given to fishermen, pink color which will be given to baskets / auction winners and yellow as data for TPI to be reported to DKPKP Kab. Pangandaran.

7. After the auction is over, fishermen can immediately exchange the tickets given to the administration room for money. Meanwhile, baskets can pay for it directly.

8. After getting money, fishermen can go home and share the money they receive with the crew of other boats.

E. Production of Penaeus merguensis

Shrimp commodity is one of the leading fishery products, one of which is capture fisheries [1]. One of the penaeid shrimp production which is quite high at TPI Minasari is the *Penaeus merguensis* shrimp. According to Saputra [1] explains that *Penaeus merguensis* is a type of shrimp whose production is large and economical. *Penaeus merguensis* is usually caught by trammel net fishing gear which has a three-layer net. *Penaeus merguensis* caught by the trammel net is clasified by big size (B) and mendium size (M). The following is the catch of *Penaeus merguensis* for one month starting from 15 November 2020 - 15 December 2020.

Table 1. Catch of *Penaeus merguensis* Size B and M

No	Size	Volume (kg)	Value (IDR)
1.	Big Size (B)	654,2	90.356.700
2.	Medium Size (M)	895,9	102.169.100
	Total	1550,1	192.525.800

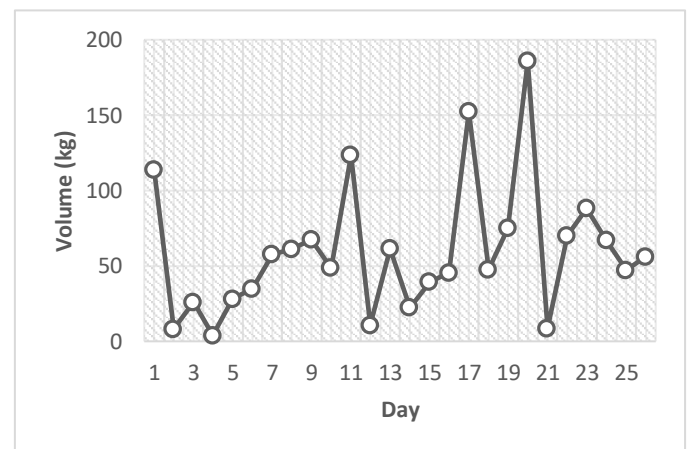


Fig 2. Daily Volume Production

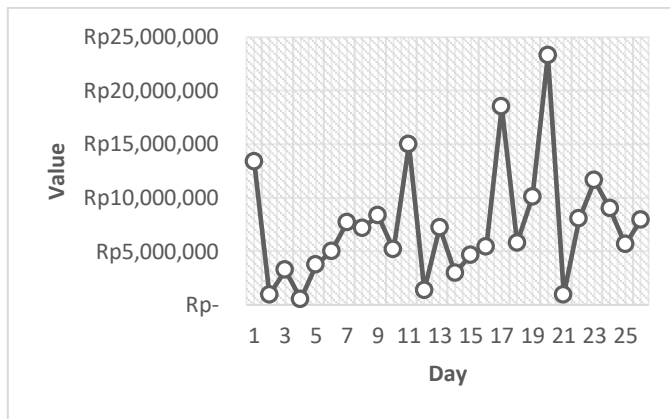


Fig 3. Daily Value Production

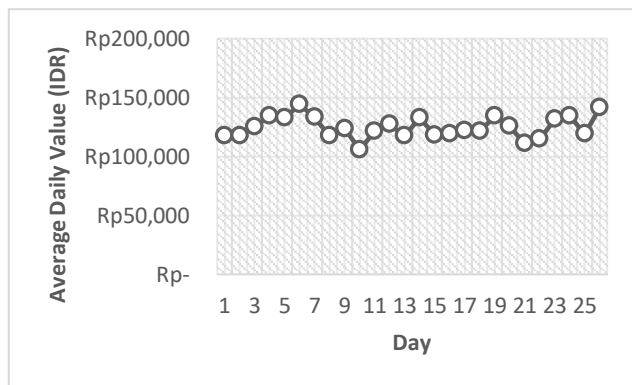


Fig 4. Daily average price

Penaeus merguensis caught by the trammel net is more medium-sized than large ones. The total large catch for one month being auctioned at TPI was 654.2 kg with a production value of Rp. 90,356,700, -. Meanwhile, the shrimp caught in medium size was higher than the previous one at 895.9 kg with a production value of Rp. 102,169,100, -. The various sizes of the fishing gear mesh size used by the fishermen led to the size of *Penaeus merguensis* being captured to various sizes.

The production of the catch of *Penaeus merguensis* that is auctioned off at TPI Minasari tends to fluctuate. The highest catch of *Penaeus merguensis* was on December 14, 2020 with a weight of 185.7 kg and a production value of Rp. 23,286,700. While the lowest was on November 18, 2020 with a weight of only 4 kg and a production value of Rp. 538,000, -. The total catch of *Penaeus merguensis* during the month was 1550.3 kg with the production value obtained was Rp. 192,525,800.

The income of fishermen in each auction will be deducted by administrative fees which will be submitted to KUD Minasari. This was done because the fishermen who auctioned at TPI Minasari were members of KUD Minasari. The following are the administrative fees paid by fishermen, as follows:

1. Mandatory 1% savings
2. Free savings 2%
3. Fund famine 0.4%
4. Death fund 0.5%
5. Fishermen savings 0.4%

6. Eid packages 0.3%
7. Funds RAT 0.2%
8. Social Fund 0.5%
9. Old age funds 0.3%
10. Marine livelihood funds 0.2%
11. Auction service 1.2%

Fishermen who are members of the Minasari KUD are required to pay the administrative fees set by the Minasari KUD. This has been determined by the KUD and must be obeyed by all members of the fishermen who conduct the auction there.

F. Conclusions

- TPI Minasari is one of the business fields owned by the Minasari village unit cooperative (KUD) in Pangandaran.
- TPI Minasari conducts auction activities at 18.30 - 20.30 focusing on catches with shrimp commodities. The types of shrimp that are generally auctioned here are *Penaeus merguensis* and tiger shrimp.
- The daily production of *Penaeus merguensis* reaches 59.62 kg / day with an average production value of 7,404,838 IDR / day and an average price of shrimp 124,600 IDR / Kg. TPI Minasari has adequate facilities to support its activities in meeting the basic needs of auction activities.
- The auction activity at TPI Minasari is said to have been in accordance with administrative procedures and order. Periodic registration that is carried out by each fisherman before carrying out auction activities and clear auction stages makes fishermen who carry out auction activities at TPI Minasari feel more comfortable.

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