

Fishermen Classifications and Exploitation Structure of Fishermen: Case Study in the Prigi Gulf, Indonesia

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Abstract: Fish is a high-value sea product is needed by any society and taking huge interest from many parties. Socio-economic conditions of fishermen and marginal position in the structure of fish cultivation conditions are not solely created by the internal factors of society itself, but external factors which have significantly contribution such as power of capital and the failure of local government to perform its role. In the exploitation of fish in Prigi Gulf, the state authority failed to enforce rules to ensure free trade market mechanism in fish auction which taking interest from all the actors in it are fair. Meanwhile, the roles of fishermen in the fish auction are influenced by the types of fishermen who are classified based on their fishing gear.

Key words: Fisherman • Exploitation • Fish • Sea • Prigi

INTRODUCTION

Fish, as a commodity with high economic value and is needed by any societies, has become a resource that is always contested by many parties. In the economic context, beside fishermen, who put the fish as an important resource for their lives, there are also among traders who treat the fish as a commercial commodity that can bring in huge profits.

The magnitude of the attraction and since many people who have an interest in fish create a fish market, named Fish Auction, which is usually. The fish auction became the center of fish transactions that reflect the varied economic interests of the various groups. Fish auctions forms a pattern of life-business market economy with its own unique dynamics by offering a fish, namely commodities.

In a fish transaction of the fish auctions, traders generally have a stronger bargaining position; take sizable profit which makes their income levels are relatively high so that they have better welfare. Fishermen (As the owner of a fish) have weaker bargaining positions, small income and have low socio-economic welfare. In determining the fish price, for example, traders tend to be more dominant, while fishermen are in a position of less power so cannot do much. This trend appears at least in the fish auctions of Prigi Gulf, East Java. This context allows the state or government to intervene in order to encourage the presence of an effective market mechanism so that economic actors in them can enjoy their work better [1, 2].

The conditions made it impossible for fishermen to have a lot of options in selling fish. The fish should be sold in the fish auctions and the local merchants. Weak bargaining position of the fishermen is even worst

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due to the transaction fish in the Prigi Gulf are not using the auction system. A fish auction is a fish landing site and fishing transaction without ever existed fish auction process. The price of every single fish landed by a fisherman is directly determined unilaterally by the merchant price. In the Prigi Gulf, fish cultivation is not running in real market mechanism. State or governments who have authority to encourage the creation of a healthy market mechanism and supervisors in the implementation of the regulation does not reveal his role. In that context, the main research question is: How does the structure of exploitation of fish in the fisherman community in the Prigi Gulf? What are the habits of the fisherman to deal with the situation?

Literature Reviews: According to Boeke [3], dualistic social economic institutions take place in rural area of Java, due to growing pervasiveness of capitalist economic elements in the form of commercialization and the use of agricultural technologies. Social economic institutions dualistic divide social economic behavior, namely the urge to maximize yields (Rice) and investment through the purchase of land on the one hand and education on the other. Smallholders generally only have the motivation to survive and return on capital loans to finance the cost of production and a variety of social needs. One of important studies was conducted by Emmerson [4] by taking the case of fishermen in Muncar Banyuwangi. Emmerson study showed that socio-economic ties have been institutionalized and form a structure that is established between groups (Business owner, labor fishermen, boat owners and others) who are interested in the fish resources. In contrast to Emmerson study, in-depth research by de Jonge [5] in a fishing village in Madura island has focused more on fish trading networks aspects which are stratified ranging from business owner (Owners of big capital in the city) to accomplices in the village as their merchant large, common traders, middlemen and business owner. Lee and Amaj [6,7] have done a study on Korean fisheries. They explained how Korean government used the concept of Creative Economy in order to culture shift this sector towards a more sustainable and efficient sector. Meanwhile, Aktar *et al.* [8] conducted a study on fish species availability and marketing system of fish.

Kusnadi [9], in his study examines poverty and deterioration of fishermen communities in the midst of economic development which, in various aspects and areas, shown a number of areas of progress and success. Nasikun [10] has done in-deep research on poverty in fishermen communities in various regions of Java, Sulawesi and Kalimantan. A research by Edyanto [11] in a fishermen community in Serang, West Java, showed that

increasing income of fishermen is also supported by: 1) how the fishermen interpret and respond to the work as fishermen, 2) fishing gear technology used, 3) rural economic institutions and 4) the ability to build a network in marketing fish products. Danardono and Brata [12] who conducted a research in a fishermen village in Yogyakarta showed that fishermen communities are used to deal with changes. Changes in livelihood affect socio-cultural change in fishermen communities.

In regional scale, Bailey [13] conducted a study on fishermen communities in relation to the management and utilization of marine resources which is an open space. In his research, he stated that sea is generally regarded as common property or open resource, in contrast to agricultural land and forestry. More specifically about fishermen in the Prigi Gulf, there were at least three studies in the period 1991-2004. Susilo [14], in a research to a case of the phenomenon of reciprocity among road fishermen in Karanggongso showed that fishermen still retain certain traditional forms of reciprocity, for example, the labor force contribution. Widayanti [15] examined the issue of marginalization of groups of fishermen nets drag "along with the development of the Prigi Gulf. In her research, she stated that pull-net fishermen can only go to beach will be evicted; economic and social marginalization are happening in their lives.

MATERIALS AND METHODS

Qualitative approach will be used in this study. Strauss and Corbin [16] stated that qualitative methods can be used to discover and understand what is hidden behind the phenomena (symptoms) which often difficult thing to understand. Denzin and Yvonna [17] stated that qualitative methods appeared as a reaction to positivism and post-positivism tradition; frame work-oriented research which is interpretive.

Research Site: This research took the site in two villages namely Prigi village and Tasikmadu village in District Watulimo, Trenggalek, East Java, Indonesia. Both villages are located in the Prigi Gulf, which has long been known as a huge producer of various types of fish. In this region fish auction operates a large and magnificent built since 2001. Prigi and Tasikmadu village are coastal village bustling with complex economic, busy and fairly famous fish producer in Java. Most of the residents of the two villages are fishermen who rely on sea products such as fish. Fish auction in Prigi Gulf Bay is a major center of economic activity in Prigi-Tasikmadu. Economic activities of the local community are influenced by the activities of the fish market in the fish auction.

Research Subjects: Informants of this study consisted of two groups, namely key informants (Subjects-informants) and supporting informants (Non-subject-informants). The main informants were fishermen (Employer sea and crew), ashore employer (Boat owners) and middlemen (Wholesalers). The supporting informants are local government officials, especially from the Department of Fisheries and Marine Resources of Indonesia as manager of the Prigi Gulf and local NGOs.

In the process of collecting data from informants, in early stages, through process of observation in the fish auction, researchers tried to communicate with several fishermen about fish, fishing boats and related matters. Through a series of observation processes, researchers found people from groups of fishermen and middlemen who are able to explain the problem adequately in the Prigi Gulf.

When conducting a series of in-depth interviews with a number of people (Informants), the researcher managed to get 6 people (2 fishermen, 2 ashore employers (Skippers), 1 person ship board and one middleman) who really give a fairly thorough explanation of fishermen life, fish auction, social interaction in the fish auction, ties fishermen with the middleman, the role of local government (Department of Marine and Fisheries). They also have knowledge and experience with other aspects related to the fish auction in the Prigi Gulf and matters related to the research focus. The categorization of six groups of informants (Can be called as key informants) as fisherman, ashore skipper, middlemen and ship board, are not completely rigid. There are key informants who role as organization caretaker and supervisor of marine site. From the six key informants, the researcher continuously extracts necessary and relevant information to the issues/research themes as detailed as possible.

Data Analysis: As it was mentioned previously, the study was designed within the framework of a qualitative approach. Then, this research seeks to understand what knowledge and understanding of their fishermen community about their world. The objective to be achieved is to disassemble and capture world subjective world of the fishermen communities as deep and thoroughly as possible. It involves how they interpret; define the activities that they used to do. To achieve this goal, descriptive data analysis will be performed. Researchers also collected relevant documents which are useful and beneficial, especially for setting the point of view of the research. The researcher also collected documents from the research-related site (Particularly the

village office) and supplementary matter. Observations are often performed in conjunction with in-depth interviews. In-depth interviews were conducted over the entire informants with a snowball technique, which is rolling from one person to another until it was discovered six key informants who can provide a consistent, extensive and detail explanation regarding the research theme.

RESULT

Classification of fishermen can be based on fishing gear, fishing gear ownership status, socio-economic conditions and others. This classification can describe some other aspects, such as socio-economic conditions, scale of business (Large or small fishing) and the level of technology (Traditional or modern fishing). Fishermen in Prigi Gulf are classified based fishing gear owned and/or used.

Fishermen classification based fishing gear could consider several categories such As: 1) size of the vessel, 2) type of vessel and 3) fishing gear itself. There are various sizes of fishing boats, namely small, medium, or large. Small vessels (Size and engine capacity) can only be used to find/catch fish around the inside of the bay. The vessel is commonly called as a boat (Outboard engine). There are various types of ships, such as: special boat for fishing (Rod stretching), purse-seine boats, trolling boats and *payang* ship. Meanwhile, according to fishing gear, there are at least nine types, namely: 1) stretching rod, 2) purse-seine (*Slerek*), 3) trolling boat, 4) gill-net (Nylon; white strings and longish nets), 5) *payang* (Traditional purse-seine), 6) basic transmitters, 7) long-line flower (Specifically to look for sharks), 8) drag nets and 9) *bagang*.

The following are descriptions of fishermen in the Prigi Gulf for each type of fishing gear. The first is the purse-seine. Purse-seine fishermen are using fishing gear to catch fish in the sea in form of nets with length of 40-50 meters, using two ships, one front and one rear ship. Front ship is the main ship which is guided by a captain. This ship is used to explore and hunt points where bunch of fish are identified. Meanwhile, the rear ship is a place to store fishing gear and caught fish. When there are a bunch of fish visible and the captain decided to catch them, then he pull the rear ship back immediately and held a drawstring and the net to encircle the group of fish. The number of fishermen on the purse-seine ship is approximately 18-24 people. Each fisherman has a particular task. The captain (Sea skipper) is role as the leader of the entire crew. There is a ship crew who has a duty mechanic (Jonson mechanic), observer of fish

availability, nets puller or spreader and others. There is also purse-seine ship which carries several illegal people as ship crews, who are called as *ngadim*. The *ngadim* go down to sea with strong motivation to some extra fish (*Esekan*) rather than for wages as purse-seine fishermen.

Unlike the purse-seine fishermen, rod (Stretching) fishermen can sail all year round and not overly dependent on a particular season. But, they can catch more fish in the dry season which is between May to November. They use a twin-engine motor ship with 2-3 crews only. As purse-seine fishermen, they depart late afternoon or after sunset and return in the morning. They go to sea within 5-7 miles away of a coastline. Rod fishermen are more specialized to catch a big-sized fish which are mostly for export purpose or to send to other regions. Costs/expenses incurred rod fishermen is relatively smaller than the purse-seine fishermen. The cost of return trip is between 75,000-100,000 rupiahs. According to fishermen, a season is a night for rod fishermen.

Rod fishermen are the fore runner and historical roots Prigi Gulf fishermen. Due to that reason, they are the largest group of fishermen in fishermen communities in Prigi Gulf. One of advantages of the rod fishermen is relatively inexpensive trip cost and can sail all year round regardless the season. Meanwhile, the shortcoming, among others, is less fishing yield if we compare it to the purse-seine fishermen.

Rumpon fisherman (Trolling ship) is new group in fishermen communities in Prigi Gulf. The group sails away into the middle of the sea which is about 20 miles away from the shoreline. The *rumpon* fishermen catch fish which are taking shelter around the *rumpon*. A season is about 7-10 days for the *rumpon* fishermen. Unlike the purse-seine fishermen, usually there are only 5-7 crews only participate the sailing. Due to the fact that fishing spot is far away from shoreline, they usually do not want to go back home with empty handed. When peak fishing season comes (Especially in summer), the amount of fishing yield are a lot so it is quite profitable for the owner of *rumpon* ship.

In this study we also found information that in addition to the purse-seine fishermen, *rumpon* fishermen and rod fishermen, there are other fishing groups such as pull fishermen, pull-net fishermen, *payang* fishermen, gill-net fishermen and others. The number of groups of fishermen in the Prigi Gulf is displayed in the following Table 1. Additional information we have obtained is that fishermen classifications which are based fishing gear is not linear and rigid. For example a purse-seine fisherman can become rod fishermen when the purse-seine ship is not going to sail.

Table 1: Types of main Fishing Gear of Fishermen in Prigi Gulf (Year 2006)

No.	Fishing Gear	Number of Fishing Gears (pieces)
1	Overextend fishing line	600
2	Purse-seine (<i>Slerek</i>)	120
3	Gill-net (nilon; white string; and longish nets)	90
4	<i>Rumpon</i> ship	80
5	<i>Payang</i>	43

CONCLUSION

This study has revealed fundamental and structural problems facing the fisherman community in the business Prigi Gulf, namely the marginalization of fishermen fish in the market due to the dominance of the institution's capital strength (Middlemen) and TPI mismanagement. This research tried to do some exploration on the fisherman classifications based on ship types, ship size and also catching types. Different types of catching types lead to different habits and performances of them. Future research should be focused on pattern of the yield distributions among fisherman.

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