

Local Wisdom of Fishermen Society on the Use of Floating Lift Net (Case Study in Pasir Putih Village Lembo District, North Konawe Regency)

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Abstract. This study aims to find and describe the local wisdom of fishermen communities and its benefits on fishing business using lift net technology. This research uses a positivistic paradigm in which the key informants were chosen purposively. The informants are considered capable of providing the necessary information related fisherman community of Pasir Putih village Lembo District North Konawe. The results show that (1) fishing activities with lift net technology in the form of customs, beliefs, knowledge, myths, prohibitions and technology still co-exist and become the life norm for communities in Pasir Putih village, (2) the benefits obtained are the sustainability of marine resources, the growth of togetherness and the system of mutual cooperation, the maintenance of marine ecosystems and environmentally friendly system.

Keywords: local wisdom, community, fisherman, floating chart

I. Introduction

Indonesia is one of the largest archipelago countries in the world consisting of thousands of islands, where two-thirds of its territory consists of oceans. It is estimated that there are 17,508 islands, 13,607 small islands, and a 90,000 km beach length scattered throughout the archipelago. This condition indicates the potential of fishery resources. Its territorial waters reach 5.8 million km² which is divided into territorial water (0.3 million km²), archipelagic water (2.8 million km²), and the Exclusive Economic Zone (EEZ) (2.7 million km²). Data shows the utilization of the potential of fisheries resources has just reached half of its potential resources. The potential of fisheries resources reached 4.5 million tons a year and the potential EE was 2.1 million tons a year (Dahuri, 2000).

Marine resources are very essential for the community as a major livelihood. Fishermen have many kinds and types of fishing tools, such as nets, traps, gillnet, fishing rod, and the likes. Fishing tools have their respective uses relying on the behavior and characteristics of the fish. There are various characteristics of fish life and it is mainly defined into three types, namely shallow water fish, middle sea fish, and deep water fish.

In its development, the type of fishing equipment is increasing and progressing as technology develops. One type of fishing tool in Indonesia is a lift net used. There are several types of net fishing tools in

Indonesia, including upright net, raft net, boat net and lift net. As technology develops, fishermen prefer lift net to of small pelagic fish.

Management and utilization of marine resources must be adapted to local conditions and local wisdom in each region because each region has different characteristics. Local wisdom not only functions as a hallmark of a community but also functions as an effort to preserve the ecological environment of a community. Local wisdom is a norm that is inherited from one generation to the next in the form of religion, culture or customs that are generally in verbal form. The existence of local wisdom in the community is the result of a process of adaptation in a very long period of time to an environment through interactions (Juniarta, 2013)

The Southeast Sulawesi are potential fishing areas in fishery businesses. Most fishing activities use trawl ring that is operated at night. Fishermen attract fish to flock by light. The positive phototaxic nature of fish and potential fishing grounds is utilized by lift net fishermen and trawlers to get the maximum catch. Light fishing activities can optimize fishing area at night and increase the amount of fish caught in the net.

North Konawe is one of the regencies in Southeast Sulawesi. North Konawe Regency was definitively developed on January 2, 2007. At present, North Konawe has 11 districts, namely Motui, Sawa, Lembo, Wawolesea, Lasolo, Molawe, Andowia, Wanggudu, Oheo, Wiwirano, and Langgikima (BPS of North Konawe, 2016). The area of North Konawe Regency is 500,339 Ha or 13.38% of the area of Southeast Sulawesi Province. The sea area of north Konawe is (including the territorial waters of South Konawe and Konawe Regencies) $\pm 11,960$ Km² or 10.87% of Southeast Sulawesi waters (BPS of Southeast Sulawesi, 2016).

Pasir Putih Village is one of the villages in Lembo District. The people of Pasir Putih Village mostly work as fishermen, especially those in area III. Those fishermen generally use floating lift net. Floating net technology was carried out for approximately 10 years ago. It is a big enough opportunity to be developed in this area because 13.38% of North Konawe Regency is a waters/coastal area.

The people of Pasir Putih Village believe that any fishing activity has to be conducted on a certain day, date, and month. They believe that fishing in that time will benefit them and protect them from any such of disaster. They are also convinced to get a good catch at that time. Another belief is that on Independence Day or August 17, fishing communities are banned go to sea for several days. According to their, at that time the weather was very bad with strong winds and currents so they were also very difficult to get fish. The local wisdom of Pasir Putih village is very close to religious law, cultural value, social norm, and custom.

This is able to give security, order, and prosperity. In addition, there are restrictions (*pamali*) that must be considered by the community in the process of fishing such as defecating in any place, spilling coffee in the floating lift net, removing eggshells, and discarding fish bones at sea. The fishermen believe that it has an impact on fishermen.

The floating chart is very easy for the fishing community to catch fish in the sea without harming marine ecosystems such as fish bombs. Moreover, the results are also quite a lot and environmentally friendly. Therefore, the researcher is interested to study about this to obtain a picture related to local wisdom and its benefits to the fishing community in Pasir Putih Village, Lembo District, North Konawe Regency.

II. Theoretical Approach

A. The Floating Chart Concept

Floating lift net is a type of fishing tool to catch small pelagic fish. It is firstly introduced by Bugis-Makassar fishermen around the 1950s. In a relatively short time, it has been known throughout Indonesia. The floating lift net has been modified many times in both the shape and the size. Based on the operation, the floating lift net is categorized as a lift net. Moreover, because of using the light to attract fish, it is called light fishing (Baskoro and Suherman, 2007).

According to Baskoro and Suherman (2007), classify lift net into two; anchored and floating structures. Anchored lift net is structured by stacking wood post to the sea ground so the position cannot be moved. The operation of the anchored lift net was carried out at night. Most use light that comes from pressure lamp, although some also use electric lamp.

Floating lift net has almost the same construction as the anchored lift net. The difference is that the floating chart can be moved (operated in various places) by pulling it using a boat. Floating lift net is made from a series of rectangular ironwood arrangement. In the middle of the lift net structure, a net is installed which is 1 meter smaller than the lift net structure.

Basically, this tool consists of ironwood, a rectangular net that is fastened to a wood frame. On all sides, there is wood that crosses to strengthen the lift net. In the middle, there is a cottage to store tools and food and to protect the generator from rain. On top of the building, there is also a roller made of wood that functions to pull the net. Generally, this fishing tool measures 8x8 meters while the height is 15 meters.

B. The Concept of Fishermen Communities

Society is a system of habit, authority, and cooperation between various groups (Mac Iver in Soekanto, 1990). According to Ralph Linton (Soekanto, 1990), society is any group of people who have lived and worked together long enough so that they can organize themselves and think of themselves as a social entity with clearly defined boundaries. Meanwhile, according to Selo Soemardjan, people are people who live together and create a culture.

Furthermore, the theory of fishermen, according to Imron (2003) in Julyadi (2007), fishermen are a group of people whose lives depend directly on sea products, either by catching or cultivating. They generally live in coastal highlands. Their residence is close to the location harbor. According to Setyohadi (1997) in terms of skills, fishermen, in general, are quite skillful with their equipment but difficult to operate new technology and modernization. This causes the low economic state of fishermen.

C. The Concept of Local Wisdom

Local wisdom in the dictionary consists of two words, namely wisdom and local. In the Indonesian English Dictionary, John M. Echols and Hassan Syadily (2016) local wisdom are local ideas that are full of wisdom, of good value, embedded and by members of the community.

According to Keraf (2010), that local wisdom is as follows:

- Traditional wisdom belongs to the community. It is known as knowledge about humans, nature, and relationships with nature.
- Traditional wisdom is a holistic property, which involves knowledge and understanding of all life with all its relationships in the universe. Nature is a series of relationships that are related to one another, so understanding and knowledge of nature must constitute a comprehensive knowledge.

- Unlike western science which claims to be universal, traditional wisdom is local. It is related to a particular and concrete place. Traditional wisdom and knowledge always concern the particular person (the indigenous community itself) and its relation to nature.

Local or traditional wisdom according to Keraf (2002) is all forms of knowledge, beliefs, understanding or insight as well as customs or ethics that guide human behavior in life in the ecological community. It also concerns the knowledge and understanding of society about humans and how good relations between humans.

III. Research Methods

This research was conducted from November to December 2016. Location was determined by considering that the White Sand Village is one of the coastal areas in Lembo District. The inhabitants are mostly fishermen. The research method used is a qualitative descriptive method and case studies with an ethnographic study approach describing and interpreting culture, social groups or systems (Sukmadinata in Mardoyo, 2008).

This method is used because it is related to the study of local wisdom using data from informants. Qualitative methods are more based on phenomenological philosophy that prioritizes appreciation and tries to understand and interpret the meaning of an event of human behavior (Usman and Akbar in Juniarta, 2013). According to Yin (2009) case studies are widely used in social sciences research, both in traditional disciplines (psychology, sociology, political science, and anthropology).

The technique of taking key informants is done by purposive sampling, namely selecting informants based on the writer's subjective assessment. This is based on certain characteristics that are considered to be capable of providing the information needed related to the fishing community of Pasir Putih Village, Lembo Subdistrict, North Konawe District. Data collection techniques used in this study are as follows:

- Interviews were conducted through a number of meetings with several parties who were considered to be able to provide accurate information related to the focus of the study, such as village heads, community leaders, and fishing communities.
- Observation is done in two ways, namely, regular observation and participate. Data was collected through ordinary observation. Data encompasses the types of equipment in their business activities, patterns of activities and people's daily activities. While the observation of participating is related to activities carried out by the fishing community.
- Documentation. It was done by copying data available on the research object and taking pictures of fishermen's activities.
- Literature relating to the research.

IV. Discussion

A. History of Floating Lift Net in Pasir Putih Village

In the beginning, the people in Pasir Putih Village knew the step fishing that was first brought by Bugis ethnic around the 1970s who came from the Lasolo. Bamboo was a basic material in its manufacture. Along with the times, the community considered that the materials used did not last long so fishermen had to replace the materials in each harvest period. Furthermore, the community developed an idea to find a solution to these conditions. Thus, bamboo was replaced with wood and could be used for a longer period of time.

Along with current technological advancements, lift net had abandoned and switched to a floating lift net, which was first introduced by entrepreneurs or buyers who came in 2000 where the idea was adopted from the Lambangi area. The floating lift net, in terms of construction, is different from the step lift net, where it uses the drum as a floating device. The onboard step uses bamboo that is anchored at the sea ground. The materials used to make floating lift net are nets, ropes, net hangers, bolts, drums, zinc, generators, cables, etc. The materials used are mainly strong and durable materials, and resistant to loads and resistant to friction. The nature of these materials is generally found in net rope materials made of synthetic fibers such as nylon blends, polyester, polypropylene, and nylon. Besides the materials, weights, buoys, rings, and wooden poles are also considered.

Floating lift net operation techniques begin with how to prepare for fishing ground such as preparation for fishing materials (gasoline, water, ice, kerosene, etc.). When it reaches the fishing ground, the day before night and the lights are turned on, the net is usually lowered immediately until it is time for the fish gathering in a lift net or the wind entering the area of the light. To attract the attention of fishermen, they turn on the lights that have been installed on white lights, which are mounted on all four sides of the floating lift net.

When the roller is turned, most of the lights are turned off so that the fish can gather at a certain point/concentrate. It attracts the fish so that the fish rises to the surface and prevent the fish from becoming too wild. After waiting a few hours and the fish began to be seen gathering at the fishing location, the net was lifted above the water. The operation area of this fishing tool is calm and stable.

B. Local Wisdom in Fishing Activities Using a Floating Lift Net

The fishing activities using floating lift net in Pasir Putih Village are usually carried out throughout the year, except when the moonlight is on. When the moon is visible (Emponna Ketengnge), the calculation of the Islamic calendar expects that the next 17 or 7 days after, fishermen cannot go down to sea because they will catch less fish. Fishermen take advantage of this time by carrying out various activities such as repairing boats, preparing boat machines, replacing decayed wood, or other activities. However, there are fishermen who go down to the sea in the morning and return home in the afternoon. The fish obtained are usually sold or to be consumed by themselves.

The basic principle of lift net is to lure the fish with the help of light so that the fish are attracted and gathered above the coverage area of the net. The fish that have been collected on the net will be caught when the net is lifted to the water surface.

If the fishermen caught expensive fish which price around more than Rp 60.000/kg like tuna, red snapper fish, giant trevally and so on, they tended to bring it to the local market. While cheap fish like anchovy, and sardine, used to be dried taken to home to consume.

V. Conclusion

Local wisdom related to fishing activities with floating lift net technology is a form of customs, beliefs, knowledge, myths, prohibitions (*pamali*), and technology that are still obeyed until now and become the basic rule for the community in the Pasir Putih Village. The local wisdom is transferred by involving

children from childhood (especially boys) because boys are trusted as breadwinners and leader in the family. They also involved in most fishing activities.

The benefits of preserving local wisdom are 1) the preservation of marine resources damage, especially related to the use of environmentally friendly fishing tool technology; 2) the growth of togetherness and cooperativeness between fishermen; 3) maintenance of marine ecosystem and 4) the maintenance of sea pollution and local wisdom inheritance.

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