

Local wisdom on the coast of Kupang Regency

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ABSTRACT

Local wisdom is an unwritten law that was made by the local community or the workers and recognized by the community for generations. This wisdom is very binding on the local community and there are always fines given if there are people who intentionally or unintentionally violate them. The fines given have generally been agreed upon since this local wisdom was made. For local people, obeying local wisdom is higher than written law issued by the government. This study aims to identify the forms of local wisdom of coastal communities, analyze the factors that influence changes in the forms of community-based capture fisheries management, and evaluate the forms of community-based capture fisheries management that develop in the coastal areas of Kabupaten Kupang. This research was conducted from March to September 2021 in all coastal areas of Kupang Regency which includes the areas of West Kupang, East Kupang, Semau Island, West Amarasi, North Amfoang and Sulamu. Data obtained from the results of semi-structured interviews with traditional leaders and community leaders then analyzed descriptively.

The results of this study note that currently only a few sub-districts still have valid local wisdom and some are no longer valid.

Key words : Local wisdom, Capture fisheries, Fisheries resources, Coastal communities, Kupang Regency

Introduction

Kupang Regency is one of the regencies in the East Nusa Tenggara region and has a large enough potential for capture fisheries with production data for the capture of Kupang Regency in 2011 reaching 8,389 tons (Development Dynamics of Kupang Regency, 2011).

The forms of management carried out are not always constant, but can change from time to time and are triggered by resource conditions, regional characteristics, and patterns of utilization by the community that are influenced by experience and knowledge formed in utilizing fisheries resources. Historical exploration of forms of capture fisheries

management in the lives of coastal communities that occur becomes one of the information used for planning forms of management in the present and future.

The history of capture fisheries management can reveal the things that form the basis of management, advantages and disadvantages of the form of management, and the results of a management effort that has been done. Based on that, historical analysis of capture fisheries management is needed in formulating optimal and sustainable fisheries management based on historical data on the use of fisheries resources in the coastal area of Kupang Regency.

The development of the form of management that has taken place gives different results in terms of

rules and catching habits. Historical exploration of fisheries management forms capture that happens to be one of the information used for planning the form of management in the present and the future. Historical analysis of capture fisheries management carried out by the Kupang Regency coastal community gave results in determining an effective and sustainable capture fisheries model from the results of the management evaluation that occurred.

This research aims to: (1). Identifying forms of local wisdom of coastal communities in capture fisheries management in Kupang Regency, (2). Analyzing the factors that influence changes in the form of community-based capture fisheries management that develops in the coastal area of Kupang Regency, (3). Evaluating forms of community-based capture fisheries management that develops in the Kupang Regency coastal area.

Materials and Methods

The Study Area

This research was carried out during May-September 2019 in several sub-districts in the Kupang Regency which included the West Kupang, West Amarasi, East Kupang, North Amfoang, Sulamu and Semau Island.

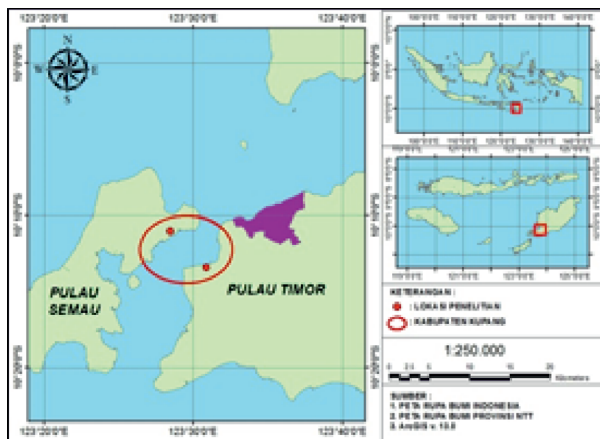


Fig. 1. Research Location Map

Tools and materials used during the research took the form of stationery, questionnaires, cameras with materials were respondents

Research procedure

The research data were collected using a survey method through semi-structured interviews with

the initial resource persons, namely Customary Leaders, Village Heads, and Community Groups. Semi-structured interviews were conducted using the snowball technique with the help of a questionnaire. This step is used to obtain socio-economic data, types of work, income, interests of fisheries resources and forms of fisheries management carried out.

FGDs are conducted to assess the effectiveness of capture fisheries, capture fisheries resources, time and methods of capture and proposals for management of capture fisheries and rules for fisheries utilization.

Data analysis

This research design has descriptive, analytical, correlational and explanatory types. The questionnaire instrumentation was validity and reliability. The statistical test used to analyze quantitative data is multivariate statistical analysis of the main components (PCA). To reconstruct the capture (Historical Catch) the Harvest Control Rule is calculated in the MPA for Fisheries rules.

Results and Discussion

The existence of local wisdom is felt to be very useful in relation to the sustainable management of coastal resources. Local wisdom includes the rules in the use of coastal resources. In general, people may only take or utilize water resources at certain times in locations that have been determined and maintained.

Utilization of these resources must also go through traditional rituals conducted by traditional elders or those who are elder in a particular tribe. At the time of opening for resource utilization (harvest) each participant is required to pay contributions in an amount that is affordable for the benefit of the area's management. After that each participant is welcome to harvest the sea products according to his ability, and the fish and biota obtained can be brought home for consumption.

The results showed that not all research locations have their respective local wisdom. There is local wisdom that is owned by 1 village but also applies to neighboring villages. There is local wisdom that has been lost and is no longer valid, but there are also some that are still maintained until now. The existence of local wisdom is considered very suitable in supporting government programs in terms of

sustainable resource management. As we know that the goal of sustainable management is the use of resources today and can still be enjoyed in the future by our children and grandchildren.

The results obtained by some local wisdom owned by the community in several locations are presented in Table 1.

Table 1. Local wisdoms related to marine management at the study site

| Districts | Name of local wisdom for coastal resource management |
|---------------|---|
| Semau | <i>Uin lulin</i> |
| Kupang barat | - <i>Lilifuk bimusu</i> - <i>Lilifuk katen</i> - <i>Lilifuk loles</i> |
| Kupang timur | - |
| Amarasi barat | - |
| Amfoang utara | - |
| Sulamu | <i>Biota gastropoda (losing)</i> |

The local wisdom of Uin Lulin in the Semau District was made by the Helong tribe chief to manage resources on the coast. This wisdom is made to manage or forbid all Helong tribes from fishing, as well as conducting or carrying out fisheries activities both cultivation and fishing in a certain area or part of the sea area on the Semau coast. This wisdom is made by the Helong tribe considering the use of marine and coastal resources by every citizen is done by not maintaining its sustainability. At any time, all people in their own way make efforts to capture or work the area for their own interests without caring for others and the environment. Finally, the elders held discussions and made rules that prohibit fishing activities in certain areas. The area in question is in the form of a large enough pond that at the farthest recedes there are still biota trapped in that area. Then a regulation was made that prohibited fishing activities in the area until a certain period of time to be cultivated or harvested jointly by all members of the Helong tribe.

The results showed that the existence of this local wisdom Uin lulin is increasingly fading even now it is no longer valid. This is expected because the community's awareness of the importance of management is getting lower, and human needs are increasing. In addition, the technological development factor and information caused the young generation to feel ashamed and felt that it was no longer the time to obey the local wisdom.

Along with no more traditional elders who know and who hold these rules, the local wisdom of Uin Lulin becomes lost. This is unfortunate because one of the very important and high-value cultural heritages is lost because of a lack of awareness from the community.

West Kupang District has several local keraifan including Lilifuk Bimusu, Lilifuk Katen, and Lilifuk Loles. The existing local wisdom is in 2 different villages namely Bolok Village and Kuanheun Village. The two villages are neighbors both land and sea. The topography of the two villages is the same as the rocky and barren characteristics. The people who live in these two villages are generally from the same tribe, namely the Helong, Timorese and migrants.

Lilifuk has the meaning of areas such as ponds or basin areas that are at the bottom surface of waters that are still flooded when the farthest recedes occur. During the farthest recedes, the area still has water with a capacity large enough to allow aquatic organisms to survive at that location. Lilifuk used to be known in the language of helong which means lake water / pond water because if the sea water is dry in that place it is still flooded like a lake / pond.

In Bolok Village there are 2 local wisdoms called Lilifuk Bimusu, Lilifuk Katen. Bimusu Lilifuk was given this name because the first to make the lilifuk was the Bimusu clan. It is not yet known exactly when it was first carried out but according to the results of the interview it is known that this lilifuk has existed since ancestors. The characteristics of Bimusu Lilifuk are the same as other lilifuk which are areas that resemble ponds at the bottom of waters or basin areas where there is still water at the farthest recedes. The existence of Bimusu Lilifuk has been known by the government and the local community. Lilifuk Bimusu will be closed to the public for a certain period by the Bimusu tribe, and if it will be harvested then 1 week in advance the village government will make a letter about the plan to open Lilifuk Bimusu to neighboring villages in the West Kupang District in order to take part in harvest activities referred to. The day before harvesting, the chieftain will overtake all residents to the location of Lilifuk Bimusu, by bringing fruit from the gewang tree or commonly in Dawan language called clisak, then smoothed and then when lilifuk then the gewang fruit has been pounded and put into lika (a place to store fish) then shake into the water. The purpose of doing this is to intoxicate fish.

Surrounding communities often use the fruit to search for fish. After the harvesting has been completed, the people participating in the activity are required to give a small portion of their catch to Mr. Lilifuk Bimusu, but currently the obligation is no longer in the form of fish but has been replaced by paying a levy of Rp 1,000-5000. Usually, the harvest will be done in November and only done once a year.

The results showed that until now the existence of Lilifuk Bimusu has increasingly faded in the sense of not functioning properly. According to Mr. Basarius Piubati as the manager, that many people came from outside the Bolok Village area and local residents no longer obeyed the regulation. The reason of the inhabitants is that the sea belongs to a general group not a particular tribe so they are free to take it. This caused Lilifuk Bimusu's manager to become lazy and no longer serious about managing Lilifuk Bimusu.

Lilifuk Katen means "itchy pool" according to Tn. Soleman Holbala as Lilifuk Katen's manager at first when residents entered the water at this location, the residents experienced itching on their skin, this was because their bodies were in contact with seagrass plants at that location. Itching caused painful pain so residents immediately left the location. The beginning of Lilifuk Katen was carried out because there were residents from a neighboring village (Desa Boneana) who came looking for fish to the area and saw that there were a lot of fish playing in the area. Residents want the area to be their own lilifuk area but that intention is opposed and rejected by the Holbala family because lilifuk is near their territory. Lilifuk Katen has existed since 1966, where the formation involved many parties, namely the village government, the church and old traditional people. When Lilifuk Katen was formed, it was marked by the activity of killing cows as a symbol of validation of Lilifuk Katen. The sacrificial animals are then distributed to village governments, churches and traditional elders as proof that the area has become a place of public prohibition, so that if there is a violation then it will be subject to adat sanctions.

Lilifuk Katen is closed to the public for a certain period of time, usually the harvest is done in March and November every year. In harvesting activities, the manager will send to the village government, the church and the elders and then the village government will send an invitation to the villagers and the surrounding community. Before the harvesting was

carried out, the old custom would be to take the gewang fruit into powder and spread it in the pond to intoxicate the fish, but this was no longer done. Harvesting activities will be carried out after all invitations are present and preceded by management and traditional parents perform prayer rituals. In this activity each visitor is required to pay a fee of Rp. 5.000, - to be used as operational costs to manage Lilifuk Katen.

The results of the study note that until now the existence of Lilifuk Katen has faded, this is due to many old habits and managers. At the time of harvesting, each citizen is required to pay a fee of Rp. 5,000, - who are already elderly and no longer able to manage Lilifuk Katen, but also that many young generations do not care about the existence of Lilifuk Katen. It was considered as something ancient that was not important to know.

Lilifuk Loles is in Kuanheun Village. The early history of the existence of Lilifuk / Nifu Loles was initiated by the Baineo tribe / clan. Lilifuk Loles was formed hundreds of years ago, beginning with the war between the Baineo tribe / clan (Kuanheun Village) and the Lai tribe / clan (Bolok Village) fighting over three clusters of calculated locations and locations of coastal waters (Tinmau). Tinmau is the name of a pond in a row with Lilifuk / Nifu Loles, which has a depth of more than 15 meters, a circle with a diameter of \pm 500 meters and the bottom of the pool consists of a population of coral reefs which are breeding grounds for fish. In the war Laikopan tribe suffered defeat and fled to Semau Island, so that the Baineo tribe had the right to have local wisdom in these waters (Hidayat, 2014).

Furthermore, in the interview with the manager of Lilifuk Loles it was found that this Lilifuk Loles was also made to be known by the fellow tribes / clans of Baineo that there were people / families or descendants living in this location. Lilifuk Loles runs for 3 generations. When the first generation died, Lilifuk Loles had stopped in its management in the sense that the community had arbitrarily entered the prohibited location to collect or harvest sea products, but in the current generation Lilifuk Loles was reopened by making laws / regulations for its management and use, which then legalized by the government and currently there is legal force.

In the implementation of Lilifuk loles, initially the location of Lilifuk loles is closed for 1 year and then harvesting is done in a certain month according to instructions from the old custom / manager. At the

time of harvesting, the manager reports to the village government to further issue an invitation to the village and village community to participate in the harvesting activities which will be used as a cost in managing Lilifuk loles. In accordance with the results of interviews with the management of Lilifuk Loles that currently harvesting is done 2 (two) times in 1 year, namely in March and November.

East Kupang Subdistrict, West Amarasi Subdistrict, and North Amfoang Subdistrict at the time of data collection there was no local wisdom in terms of marine resource management. This is understandable because the number of fishermen in the 3 districts is small on a household scale and is a migrant fisherman. The type of fishing gear used is also a simple fishing gear with a range of fishing ground around the coast. In addition, also that the profession as a fisherman who was carried out by the people in the 3 districts has not been too long. In addition, according to information obtained that in their area there is no "pool" large enough as in some other districts to serve as a protection area. Another obstacle is that the coastal conditions in the sub-district are too open to the sea so that the current and wave conditions are quite fast.

The results of research in the District of Sulamu are known that a long time ago there was a local wisdom carried out on Pulau Tikus, but the information obtained was very minimal because this wisdom had been lost since the time of the parents of respondents interviewed by researchers. Some of the information obtained that in the past Pulau Tikus was banned from the utilization / harvesting of fish resources in a location similar to lilifuk. Utilization / harvesting can only be done when it has been opened by an old custom. But now local wisdom has been lost because people from outside the district of Sulamu often carry out fishing activities in the area. This was done because they did not know of any areas that were prohibited from being used. In addition, the successor who has the right to manage the wisdom does not know clearly what and how the wisdom is so that the wisdom disappears on its own.

Pariti Village as part of the Sulamu District has a local wisdom created by local village chief officials. The wisdom created is specifically for gastropod biota. The village of Pariti has a thick muddy coastline that is inhabited by gastropods in very abundant quantities. By the local community, this gastro-

pod is used for food and for sale. In its use, people take the gastropod every day in large amounts, and often damage the gastropods that live in these locations. By the traditional elders made rules regarding the prohibition of taking gastropods referred to every day. The prohibition applies generally to all users of the gastropods.

The rules made say that there is a ban on taking gastropods every day. Gastropods must be allowed to grow to adult size for harvest. The specified time period is 2 months of harvest (depending on the size of the gastropod), and the right to harvest is the local community and is not intended for people from outside the village.

Conclusion

The results showed that of the 6 districts that were the object of research, only 3 districts had local wisdom in managing coastal and marine resources. Some of the local wisdom was still valid but some were no longer valid. The reason for the invalidation of local wisdom is that there is no successor to manage the local wisdom, it is outdated and the opinion of the general public that the sea is public property. Existing local wisdom is not only in the form of protected areas / ponds (lilifuk), but also local wisdom for certain biota that is maintained and managed in its utilization.

References

- Alains, A. M., Putri, S. E. and Haliawan, P. 2009. Pengelolaan Sumberdaya Perikanan Berbasis Masyarakat (PSPBM) melalui *Model Co-Management* Perikanan. *Jurnal Ekonomi Pembangunan*. 10(2): 172-198.
- Ambarwati, W. and Johan, Y. 2016. Sejarah dan Perkembangan Ilmu Pemetaan. *Jurnal Enggano*. 1(2): 80-82.
- Baskoro, M. S. and Wahju, R. I. 2011. Konsep Pengelolaan Sumberdaya Perikanan Berbasis Masyarakat. *Seminar Nasional Perikanan Kelautan, Faperika UR*.
- Dewi, Anak Agung Istri Ari Atu, 2018. Model Pengelolaan Wilayah Pesisir Berbasis Masyarakat (*Community Based Development*). *Jurnal Penelitian Hukum De Jure*. 18(2): 163-183.
- Dinamika Pembangunan Kabupaten Kupang, 2011. Potensi dan Pemanfaatan Sumberdaya Perikanan Laut. Kabupaten Kupang.