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Study Of Social Aspect In Marine Protect Area Liukang Tangaya District, South Sulawesi, Indonesia

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This Research aims to identify community perceptions of water areas to be reserved as marine conservation areas. This activity was carried out for 6 months, in March - August 2019 with the location of the activity located in Liukang Tangaya District, Pangkajene and the Islands Regency South Sulawesi, Indonesia. The planned program of the Identification of the Marine Protect Area in the Liukang Tangaya district in terms of social aspects is assessed from the level of community perception of the existence of the program plan related to the way of life and service production activities owned by the Liukang Tangaya District community. The activities of the fishing community towards greater water conservation activities to choose the existence of a conservation area around their waters as a form of the impact of the many conditions of waters that have been damaged and able to harm the community. Patterns of community life that are still traditional in nature and trust in local culture can be used as material in compiling rules of activity in water conservation areas based on local wisdom. In the MPA activities in the Liukang Tangaya District area, it must be able to provide more detailed community knowledge in the management of conservation areas, besides that new economic resources such as tourism potential can be held so as to avoid potential threats, especially potential conflicts between communities in Liukang Tangaya District.

Keywords: Social Aspect, Marine Protect Area, Liukang Tangaya

INTRODUCTION

Marine Protect Areas (MPA) are protected water areas, managed by zoning systems, to realize sustainable management of fish resources and the environment. Conservation Area Zoning is a form of spatial use engineering through the determination of functional boundaries in accordance with the potential of resources and carrying capacity and ecological processes that take place as a single ecosystem. Effective conservation areas need to be realized in order to provide socio-economic-cultural benefits for the community and resource sustainability.

Effective management of marine, coastal and small islands conservation areas in line with the

principles of the blue economy will be able to provide guarantees in the efficient use of natural resources, as an effective source to support other uses in an environmentally friendly manner, and to grow economic benefits for local communities. The management of the waters conservation area in Liukang Tangaya Subdistrict, Pangkajene Regency and the Islands is expected to be able to provide maximum benefits both for stakeholders, especially the local community, as well as for biodiversity resources that are protected and conserved in the area. The reserve of this conservation area is carried out to maintain the food chain system and the economic life cycle of important fish, guarantee the existence of culture,

customs and historical values, and ensure access of local community areas in Liukang Tangaya District, Pangkajene Regency and the Islands in the utilization of the area. The management of the conservation area is intended to reduce the rate of habitat degradation and extinction of Fish Resources and to provide social and economic benefits for the community in Liukang Tangaya District. This Research aims to to identify community perceptions of water areas to be reserved as marine conservation areas.

MATERIALS AND METHODS

Research sites

This activity was carried out for 6 months, in March - August 2019 with the location of the activity located in Liukang Tangaya District, Pangkajene and the Islands Regency South Sulawesi, Indonesia.

Sampling Method

Community involvement in planning activities is a strategic effort that can be done to create awareness as a form of agreement and support in establishing a watershed conservation area that is in the environment where they carry out activities both in social and economic activities.

Data Analysis

➤ **Community Support**

$Am = (Eps / Epo) \times 100\%$

Where :

Am = Community aspirations

Eps = Number of residents who agree

Epo = Number of respondents

Assessment criteria :

≥ 75% = support (3)

40 - 75% = sufficient support (2)

≥ 40% = does not support (1)

➤ **Potential Conflict**

High potential threats, there are > 5 threat factors present (1);

moderate Potential, there are 2 to 5 threat factors existing (2);

Less potential, there are <2 threat factors present (3) ;

➤ **Local Wisdom**

Having local wisdom that supports conservation (3);

Having local wisdom but not effective (2);

Don't have local wisdom (1);

RESULTS

Community Support

Community life in the Liukang Tangaya District does not have significant differences from other coastal communities in the South Sulawesi Province. The dominance of the main livelihoods of the Liukang Tangaya Subdistrict community who work as fishermen creates the lifestyle of the Liukang Tangaya people who still rely on their survival from the availability of fisheries resources that exist around the territorial waters of the Liukang Tangaya community. With the level of need for the availability of fisheries resources in the waters of the Liukang Tangaya District, communities in several islands that do not have guaranteed economic sustainability continue to form relationships to capital owners or people who have a higher economy in their area.

Based on the results of the socio-economic the community's perception of the existence of a planned reserve of water conservation areas in the waters of the Liukang Tangaya District agreed with the plan. The form of community agreement in the plan is in the form of enthusiasm of the people who were respondents in this survey in Liukang Tangaya District to want to find out more information about the purpose of the planned reserve of water conservation areas in the Liukang Tangaya District waters. The purpose of the water conservation area as the formation of a sustainable area and a breeding ground for marine biota causes the desire of residents on several islands to be able to do the same from their waters that have been damaged either temporarily or permanently as a result of illegal actions fishing carried out by irresponsible people from islands outside their territory.

Community Perception of Marine Protect Areas

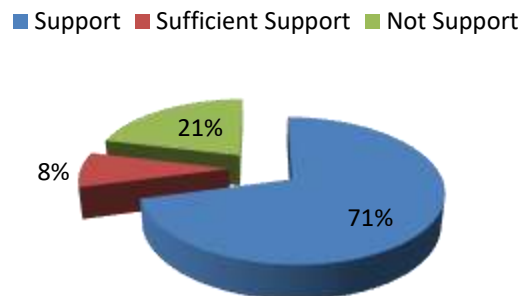


Figure 1: Community Perception

Potential for Reserving Reserves in the LiukaTangaya District in terms of social aspects is assessed from the level of community perception of the existence of the plan of the program which is related to the way of life and service production activities owned by the Liukang Tangaya District community. The following are the results of a survey analysis of local community perceptions in water conservation areas presented in the diagram below:

Based on the figure 1 shows that the perception of the community around the Liukang Tangaya District area regarding the existence of planned activities for the Reserve of Water Conservation Areas is in the category of agreeing with the percentage of answers of 71 percent, while those who are still doubtful about the existence of this activity are 8 percent and those who refuse or do not agree with the existence of a watershed conservation area of 21 percent. The public perception in the form of approval of the Reserve of Water Conservation Areas in the Liukang Tangaya District is due to the high hopes that these activities will not only be protective of the waters in their area but also become the basis for tighter supervision conducted by security forces so that the activities of persons who are not responsible for carrying out illegal fishing activities can be reduced or no longer occur in the waters of the Liukang Tangaya District.

the average level of knowledge of the people who were respondents in the survey of watershed planning in the Liukang Tangaya District was in the medium category of 66 people or 55 percent. This is because in several islands which were used as survey locations for this activity, the same program had been carried out by the COREMAP agency in collaboration with the Department of Maritime Affairs and Fisheries in Pangkep Regency from 2013 to 2015. The activities of the COREMAP agency that did not last long and were at the point certain points in the group of islands of Liukang Tangaya Sub-District resulting in low public knowledge of the importance of the management of conservation areas as well as the benefits that will be achieved by the existence of conservation activities in their territorial waters.

Potential Conflict

Based on a vulnerability analysis, coral reef ecosystems of islands in the prospective MPA as a bastion of island protection and a buffering system for productivity and biodiversity face the threat of damage, both by natural factors (global

warming) and potential threats arising from the area's utilization activities. Through effective management of conservation areas based on the zoning system, it is hoped that developing eco-friendly natural resource utilization practices can improve ecosystem resilience to the influence of natural factors. The following results of the analysis of the potential threat (conflict) to the existence of planned waters conservation areas in Liukang Tangaya District:

LEVEL OF POTENTIAL CONFLICTS IN MARINE PROTECT AREA

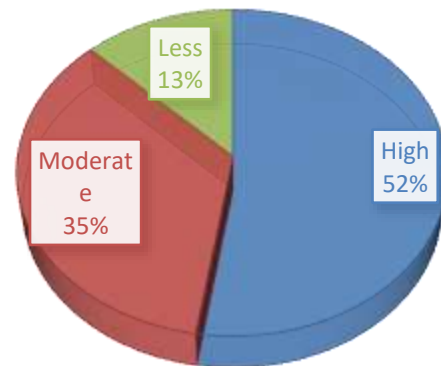


Figure 2: Level Of Potential Conflict

Based on figure 2 shows that according to respondents the potential threat in terms of conflict against the planned water conservation area in the Liukang Tangaya District is in the high category or by 52 percent. This is due to the lack of monitoring activities carried out by government officials in preventing destructive fishing activities in the waters of Liukang Tangaya District. The lack of supervision has encouraged communities on several islands to take action on their own vigilante, causing open conflict with some fishermen from the island in the Liukang Tangaya District area, as well as from outside the Liukang Tangaya District area. Because of the conflict, the respondent in Liukang Tangaya Subdistrict stated that he took firm action against the perpetrators of the destruction of the aquatic ecosystem without the need for security forces and when the closure or prohibition of access to fishing activities in their territorial waters would lead to more conflict among fellow island communities. is the fishing ground location of the fishermen.

Conflict of interest is the level at which conservation area management will be able to resolve conflicts of interest and protect the interests of local communities. MPA candidates are islands that are generally uninhabited. Administratively, the group of islands included in the territorial waters of Liukang Tangaya District is one of the coastal districts in Pangkajene and Kepulauan Regency. However, resources in waters around the island are used not only by residents around the island but also other villages from outside Pangkep Regency. The potential for conflict among resource users in these islands is high. Therefore, management of the area in the corridor of the marine conservation area (MPA) is one solution to overcome conflicts of interest and protect the interests of local communities through a clear management pattern mechanism.

Local Wisdom

The identification activity of Marine Protect Area, in addition to seeing the community's perception in the form of approval or rejection of the activity, also assesses the desires of the local community who are in the design of the territorial waters conservation area to participate in the management and supervision activities of the water conservation area. This is assessed from the availability of norms and values internalized in the fishing community in the form of social or customary rules agreed upon in service activities in the waters of the Liukang Tangaya District. The following analysis results in the availability of customary rules contained in the Liukang Tangaya District area:

Availability of Local Wisdom

■ Have Local wisdom ■ Don't Have

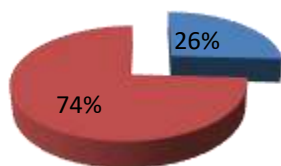


Figure 3: Availability Of Local Wisdom

The diagram above shows that customary rules or community agreements in their service activities are only 26 percent. This is due to the absence of customary rules that are still trusted by the community as standard rules that can bind fishermen in carrying out their production activities. The customary rules that are considered to be supportive in protecting waters conservation areas can be seen in the form of regulations which are one of them on Sabaru Island, with emphasis on fishing activities using arrow fishing gear with the help of a compressor machine may not carry out fishing activities or areas their fishing ground must be outside 3 m of the coast of Sabaru Island. This is based on the fact that the 0-3 mill area of Sabaru Island waters is a fishing area that can only be used by fishermen using fishing gear, so there is no over exploitation of marine life in the area around the waters.

Discussion

In the community's cultural sector in the Liukang Tangaya District, the lives of coastal communities that are still far from access to technology have caused the activities of coastal communities to still behave with cultural traditions that they believe are the products of their ancestral lives. This can be seen from the fishing activities and the community voyages in Liukang Tangaya Subdistrict still relying on local knowledge in their activities. Besides the rules of life of coastal communities is a rule that is still based on local culture which is an agreement with the community in the islands of Liukang Tangaya District.

Erratic fishing activities get income from the community in Liukang Tangaya District, causing fishing communities to not be able to improve their family's economy, and this is also supported by the availability of economic guarantees played by people who have a higher economy so that the circumference of poverty is framed in the activities of debts in the fishing community of Liukang Tangaya District.

The location of Liukang Tangaya Subdistrict which is far from the marketing center of fishery products such as the capital region of Pangkep Regency or Makassar City, forces fishermen to only produce a lower price compared to other prices prevailing in the fisheries market. This encourages some people to modify the catch by declining the catch into dried fish in order to maintain the quality of the price and maintain the quality of the fish having a higher economic value. With this processing is part of the community

strategy in Liukang Tangaya to still be able to get income from fishing activities that they do everyday.

Another source of economic pockets of the community in Liukang Tangaya District is the agricultural sector. The islands in the Liukang Tangaya sub-district which are still not in the dense residential category are utilized by some communities to carry out agricultural and plantation activities such as planting coconut trees. The coconuts are then processed into copra products with a selling price of IDR. 6,000 per kilogram, and sometimes also direct sales of these coconuts at a price of IDR. 1,000 to IDR. 1,500 per piece.

The behavior patterns of the community behavior of Liukang Tangaya District form within the frame of patronization as a lifestyle of the community to be able to stay afloat by joining or trying to be in the circle of the existence of the capital owners played by the collecting traders found on several islands in the Liukang Tangaya District such as the Island Sabaru, Sabalana Island, Pelokang Island, or Flower Island Cabinets. The activity of the traders is not only as a guarantor of the implementation of the production activities of the fishermen, but also their position is considered to have a higher position not only at the level of the economic strata but also on social positions. This can be seen on several islands in the Liukang Tangaya Subdistrict, the traders are also the neighborhood heads or village heads who are trusted by the surrounding community to lead their village areas. The behavior is a model or way of life for the fishing communities in the islands of the Liukang Tangaya District.

The planned program of the Identification of the Marine Protect Area in the Liukang Tangaya district in terms of social aspects is assessed from the level of community perception of the existence of the program plan related to the way of life and service production activities owned by the Liukang Tangaya District community.

The attitude of the community's doubts about the existence of the reserve activities of the waters conservation area in the Liukang Tangaya Subdistrict, was caused more by the fear of some people about an open conflict or conflict with other fishermen who were outside their island. The perception of the fishing community towards the territorial waters is common property, giving vigilance to the people who still choose to doubt the existence of the reserve of water conservation areas because of their fear to prohibit other

fishermen who want to carry out their production activities so that it will trigger the fishermen's anger. and became an open conflict between islanders in Liukang Tangaya District.

On the other hand, the attitude of disagreeing part of the community in the Liukang Tangaya District area, is based on meeting the needs of their family's economy, assuming the activities of the Reserve of Aquatic Conservation Areas will further close access to fishing ground locations so that it can terminate their livelihoods as fishermen. In addition, there were still many respondents who were the perpetrators of illegal fishing activities using bombs or anesthesia reinforcing the community's rejection of the planned activity on the grounds that some of the core zone designs of the water conservation areas were the locations of the activities of the community carrying out bombings or anesthetics in reef ecosystem areas that still have the potential for high-value marine biota.

CONCLUSION

The activities of the fishing community towards greater water conservation activities to choose the existence of a conservation area around their waters as a form of the impact of the many conditions of waters that have been damaged and able to harm the community. Patterns of community life that are still traditional in nature and trust in local culture can be used as material in compiling rules of activity in water conservation areas based on local wisdom. In the MPA activities in the Liukang Tangaya District area, it must be able to provide more detailed community knowledge in the management of conservation areas, besides that new economic resources such as tourism potential can be held so as to avoid potential threats, especially potential conflicts between communities in Liukang Tangaya District

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

AUTHOR CONTRIBUTIONS

All authors were involved in data collection, data analysis and compilation of this manuscript in accordance with their respective fields of expertise.

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