



Analysis of Community Participation in Mangrove Forest Conservation in North Beo District

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Abstract. This study aims to analyze the role and participation of the community in the process of conservating mangrove forests in the North Beo District. This research uses descriptive qualitative research methods. The results showed that the main causes of people's behavior of clearing mangroves carelessly were: (1) The community belief system towards the behavior of cutting mangroves and excavating sand on the north Beo coast considers mangrove clearance to be no problem. It is due to the lack of government socialization in coastal conservation. (2) Legal awareness about the sustainability of the coastal environment by the community is still very minimal. This behavior of clearing mangroves carelessly will certainly never be separated from the influence of the surrounding environment. (3) Lack of counseling from the government or NGOs concerned about mangrove forests. Based on existing data, it can be argued that several factors cause the community to have mangroves on the coast, namely 1) The economic needs of the communities around the coast. 2) Facilities to meet the needs of making better and decent houses. 3) There is no other place to be the object of taking wood for the need for making houses. Meanwhile, the impact caused by clearing mangrove forests on the north coast of the Beo District is 1) The land used to cut mangrove trees openly will cause a terrible impression of views that affect the aesthetics of the surrounding environment. 2) Many people on the north coast of Beo District, especially those who live around the coast, are also unhappy with the tightening of mangrove forests on the coast. Many communities also oppose other communities that often clear mangroves on the coast. This attitude of the opposition will rationally continue to increase as their education and standard of living improve, so it is essential to consider this impact and take active measures to avoid it. 3) Another negative impact of clearing mangrove forests are slaughtered carelessly and poorly controlled, resulting in the loss of bird populations because the ecosystem has changed and the loss of fishing grounds. According to some respondents, some species of birds are no longer visible around mangrove forests because large trees have been lacking.

Keywords: participation · preservation · mangrove forests

1 Introduction

The development of mangrove types characterizes coastal ecosystems, so coastal ecosystems can also be called mangrove ecosystems, especially in the tropics. Mangrove forest/brackish forest/tidal forest is a type of tropical forest typical for growing and developing in coastal areas and river estuaries. Mangrove forest/brackish forest/tidal forest is a type of tropical forest typical for growing and developing in coastal areas and river estuaries.

Mangroves are characteristic of the shape of coastal plants, estuaries or river estuaries, and deltas in protected places of tropical and subtropical regions. Thus, mangroves are ecosystems between land and oceans, and under appropriate conditions, mangroves will form extensive and productive forests. Because of their life near the coast, mangroves are often called coastal, tidal, brackish, or mangrove forests.

Mangrove forests are used mainly as wood producers for construction materials, firewood, raw materials for making charcoal, and pulp (consisting of fiber fibers of paper raw materials). In addition, the mangrove ecosystem is used as a supplier of natural fish and shrimp larvae.

Mangroves are individual types of plants and plant communities that grow in tidal areas. The term mangrove combines two words, namely Mangu, and Grove [1]. In Europe, ecologists use the term mangrove to describe individual types and mangals for their communities. Mangrove forests are often called mangrove forests or brackish forests. It is called a mangrove forest because most of its vegetation is dominated by mangroves, and it is called a brackish forest because the forest grows on land that is always flooded by salty water. The meaning of mangroves in plant ecology is used for shrubs and trees that grow in shallow intertidal and subtidal areas in tropical and subtropical tidal swamps. This plant is evergreen and consists of an assortment of mixtures that have economic value both for the benefit of the household (home, furniture) and industry (animal feed, paper, charcoal).

Indonesia's mangroves are the largest in the world, but now many mangrove forests have been destroyed and damaged due to logging, either taken by wood to be used as charcoal or turned into fish ponds. Wrote that the area of mangrove forests worldwide is around 18 million hectares. 8.6 million hectares, of which 47.8% are in Indonesia [2]. Unfortunately, of the 8.6 million hectares in Indonesia, only about 32% are good, while the remaining 68% or 5.9 million hectares have been wiped out and damaged. Based on the identification and research of the Director General of Land Rehabilitation, the most significant damage to mangrove forests is found outside the forest area, which reaches 4.2 million hectares (87.5%). In contrast, the forest area reaches 1.7 million hectares (44.73%) [2].

Coastal ecosystems covered with mangrove forests have great benefits for humans. Mangrove forests provide a lot of nutrients (nutritious food) for other creatures in the ecosystem. Living creatures in this ecosystem include fish, crabs, shrimps, snails, oysters, worms, birds, and monkeys, and in some coastal ecosystems, there are also crocodiles.

The benefits of mangrove forest ecosystems include: Mangrove forests are a unique and distinctive form of forest ecosystem, found in tidal areas in coastal areas, coastal areas, and small islands, and are a potential natural resource potential. Mangrove forests

have high economic and ecological value but are vulnerable to damage if they are not wise in maintaining, preserving, and managing them [3].

Several facts show that the damage and shrinkage of mangrove forests in Indonesia are increasing daily and continue to occur. In 1982 Indonesia still had 5,209,543 ha of mangrove forests, but in 1992 the number had become 2,496,185 ha. By 1985, the island of Java had lost 70% of its mangrove forests. The area of mangrove forests in South Sulawesi was reduced from 110,000 ha in 1965 to 30,000 ha in 1985. Meanwhile, Bintuni Bay (Papua) still has 300,000 ha of mangroves, but now it continues to experience the same pressure as Makatara Village.

North Beo Subdistrict is a subdistrict in Talaud Regency, which has a mangrove forest area. The need for food, clothing, and shelter increases as the population increases. To fulfill that need, various activities are carried out by the community, such as logging mangrove trees, sand excavation, and gravel excavation around mangrove forests, all of which result in changes in the coastline. It has caused a decrease in the aesthetics of beauty, and there is damage to the environment, so it is difficult to use it again for the benefit of society.

Mangroves forest around Beo District has been damaged due to local people cutting down trees carelessly and excavating sand, gravel, and stones to construct houses and other buildings. If there is no effort to prevent damage and there is no effort to restore the condition of mangrove forests, then this coastal environment will be even more worrying for life. The economy of coastal residents who depend on mangrove forest ecosystems will also experience difficulties.

2 Research methods

This research uses descriptive qualitative research methods. This study used a sample of respondents for data sources, namely residents living in the study area, the coastline of the North Beo district. The determination of the sample of respondents in only those who live on the coast was carried out by purposive sampling. The types and sources of data used in this study are: 1) Primary Data is obtained from the first informant source through interviews conducted by researchers with community leaders who knew more about preserving coastal mangrove forests in North Beo District. This primary data is Interview results notes, The results of observations to the field directly, and the data of informants, especially those who included randomly picked community figures and the government in the North Beo District. 2) Secondary Data is primary data that has been further processed and presented by the primary data collector or other parties, for example, in tables or diagrams. This data supports preliminary information from documents and direct field observations [4].

3 Results and discussion

Indonesia has a diversity of mangrove species between one island and another. Of the 202 types of mangroves that have been known, 166 species are found in Java, 157 species in Sumatra, 150 species in Kalimantan, 142 species in Irian Jaya (Papua), 135 species in Sulawesi, 133 species in Maluku, and 120 species in the Nusa Tenggara Islands.

Forms of Participation in the process of maintaining mangrove forests: socialization activities. The existence of this socialization will motivate the community to participate in mangrove forest maintenance activities to participate both through the help of self-help funds, energy, and thoughts. The socialization activities of the maintenance program carried out are felt to be very important because, with the socialization that takes place properly, it will provide convenience and understanding to all villagers regarding the plans and objectives of the program so that the steps for implementing the program can be enforced by the implementation guidelines that have been submitted.

Based on the interview results, it can be said that in this socialization activity, the community received a notification about the event directly from the Village Head and his staff. Still, those who attended were only a few absences from the community, not caused of their unwillingness to participate in maintaining mangrove forests but because they were unaware of the event and other work that could not be left behind. From this socialization stage, it can be concluded that the form of community participation is only limited to being present in activities; they have not contributed ideas, energy, funds, or thoughts.

The above factors must be solved immediately by the community and local authorities to restore the coastal potential of North Beo. The respondent, who was interviewed directly by the author, stated that the problem of mangrove maintenance participation is complicated, and the solution goes back to the community about the benefits of mangrove forests for coastal communities. People on the North Beo District coast, especially those on the coast, are aware that the destruction of mangrove forests will harm humans, especially those who live on the coast. Community participation is essential to manage coast management and mangrove forests properly.

Based on the data obtained, it shows that the main causes of people's behavior to cut down mangroves arbitrarily are:

- 1) The community belief system towards the behavior of cutting mangroves and digging on the coast of North Beo is not a problem. It happened because of the lack of government socialization in terms of coastal conservation, so the community feels that this behavior of taking and clearing the mangrove forests carelessly is not a wrong thing.
- 2) Legal awareness of the community about the environmental sustainability of the coastal is still minimal. This behavior of clearing mangroves carelessly will certainly never be separated from the influence of the surrounding environment. Nowadays, in response to the issue of the coast, it has become a pattern of behavior in a "normal" or legal society because everyone does it. Unconsciously, the behavior of mangrove clearing will become a form of behavior that is internalized in the mind that the activity is not a wrong thing. A person will perform an action that he feels is easier because of the availability of resources. So, people will not clear mangrove forests carelessly if the impact of clearing mangrove forests is known or socialized by the government.

The most concerning thing when the author interviewed some communities was, did you know that the impact of mangrove forest clearing should not be? And the answer was that they all answered know. The problem is that they know it should not be done,

but why do they still always do it? It becomes a question to the author; why do they already know, but they still do it, probably because they see a situation that has nothing to do if it is crossed, and there is a lack of counseling from the government or NGOs that care about mangroves.

Several aspects can explain how this behavior arises. This behavior formation is very suitable if we want to look at it from the point of view of the theory of planned behavior [5]. According to Ajzen, a person's behavior arises because several things cause the appearance of this behavior, namely attitudes, subjective norms, and the ability to control behavior. These three things are the main causes of how this behavior of indiscriminate mangrove clearing can be formed and survive strongly in our behaviour.

Perhaps we can feel that kind of behavior is not wrong and innocent. The erroneous thought that can form the belief is that we tend to separate responsibility from nature and responsibility from God. This mindset will make us position nature below the human degree and the fundamental human right to wear it and finish it off. This thinking creates a man have no respect for nature.

Environmental influence is a significant factor in the emergence of behavior. Influences that are no less great than belief are the norms of the surrounding environment, such as family, neighbors, schools, and communities. There is a theory that behavior is a function of the environment, so this behavior of clearing mangrove forests will indeed never be separated from the influence of the environment around us. Nowadays, in dealing with the problem of mangrove clearing, it has become a pattern of behavior in a society that is "ordinary" or legal because everyone does it. Unconsciously, this behavior will become a form of behavior internalized in our minds that, according to those around us, the mangrove trees clearing is not wrong or sinful.

Therefore, the participation of the community in the management of the coastal and coastal environment is the willingness of the community to help the success of the coast management development program by following everyone's abilities without sacrificing one's interests. Without community participation or participation, all planned management programs will be in vain.

Based on existing data, it can be argued that several factors cause the community to grow mangroves on the coast.

- 1) The economic needs of communities around the coastline;
- 2) Facilities to meet the needs of making a better and decent home;
- 3) There is no other place to be the object of taking wood for the blindness of home-making;

The above factors must be solved immediately by the community and local governments to restore the coastal and coastal potential of the North Beo District.

The impact of mangrove clearing will affect the sustainability of mangrove forests and coastlines of the North Beo District. Mangrove wood harvesting is a by-product of daily human activities. During the mangrove tree clearing stage and many activities and facilities that, if not carried out/ provided correctly, will have an impact that has the potential to disrupt the coastal and coastal environment. The following are some of the effects caused by the clearing of mangrove forests on the north coast of the Beo District.

- 1) The land used to cut mangrove trees openly will cause a wrong impression of view, affecting the surrounding environment's aesthetics.
- 2) Many people on the north coast of Beo District, especially those who live around the coastline, are also unhappy with the tightening of mangrove forests on the coast. Many communities also oppose/opposition from other communities who often clear mangroves on the coast. This attitude of the opposition will rationally continue to increase as their education and standard of living improve, so it is vital to consider this impact and take active measures to avoid it.
- 3) Another negative impact of clearing mangrove forests is recklessly and poorly controlled, resulting in the loss of bird populations because their ecosystem has changed and the failure of fish spawning sites. According to some respondents, some species of birds are no longer visible around mangrove forests because large trees have been lacking.

The demolition of mangroves on the coast is also unresolved because it remains unresolved at the level of coastal communities, while the local government cannot handle this problem properly. So, in general, we can see that the behavior of clearing mangrove forests we can no longer take for granted because this behavior of clearing mangrove forests has become the culture of the community. Because the results of clearing are used for daily needs such as firewood and large trees used for the material of making residential houses.

4 Conclusion

As a result of the discussion above, several conclusions were obtained as follows: Community participation in North Beo in the process of mangrove forest conservation is still lacking; While at the maintenance stage, the involvement is only in the form of energy donations; Aspects related to participation include the number of prosperous families and types of work; in this case, the kind of agriculture has a close relationship with community participation at all stages, while the level of education is only related to community participation at the preparatory stage. In contrast, the homogeneity of society has no relation to community participation; The management of the coastal is ineffective or almost non-existent. It can cause misunderstandings, especially for the surrounding communities living on the coastline of North Beo; The impact of mangrove clearing carelessly on the coast is: iImpact on coastline changes, some animals will be lost, for example, the birds, and the ecosystems where fish or sea shell breed will be disappear.

Some things that need to be done include developing Mangrove conservation with a participatory approach to prosper its community and not to help the government provide funds. Of course, from the results of this study, it is stated that the level of community welfare is one of the determinants of the amount of community contribution. The coastal management of the North Beo District, carried out by the community, is essential to create a clean and healthy natural environment while delaying natural disasters on the Beo coast. Protect the coast of North Beo by making rules for protecting coastal ecosystems.

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