

Mangrove Ecotourism in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency, North Sumatra Province (Study on Sustainable Utilization of Coastal Natural Resources)

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Abstract

This paper aims to analyze mangrove ecotourism in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency as a manifestation of the utilization of coastal and marine natural resources in terms of social, economic, and cultural institutions. This research was conducted with a qualitative approach, in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency. Data collection techniques with in-depth interviews, and FGD. Data analysis was carried out by descriptive qualitative. The results showed that the fishing community of Sei Nagalawan Village managed mangrove ecotourism in Kampoeng Nipah by forming a cooperative group called Muara Baimbai. Kampoeng Nipah mangrove tourism management group offers mangrove educational tours, processing mangrove plants into food, such as jeruju crackers, mangrove syrup and mangrove tea. The mangrove eco-tourism management group aims to help the economy of the community, especially fishermen, as well as protect the condition of the coast by planting mangroves in coastal areas. Mangrove Ecotourism in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency provides an example of sustainable utilization of coastal resources.

Keywords: Coastal natural resources, mangrove eco-tourism, sustainability, utilization of coastal natural resources

1. Introduction

North Sumatra (North Sumatra) has a variety of geographical and topographical conditions, ranging from the coast, lowlands, highlands, mountains, and islands. The eastern coastal area of North Sumatra has a coastline of 545 km. This area has the potential of rich marine natural resources as revealed by the North Sumatra Bappeda (Zebua, 2020) which consists of 126,500 tons / year pelagic fish, 110,000 tons / year demersal fish, 6,800 tons / year coral fish and 20,000 tons / year shrimp. Serdang Bedagai Regency is one of the districts that has a coastal sea area in North Sumatra, covering an area of 1,900.22 Km² with 17mc districts, of which 5 are located on the coast (BPS, Serdang Bedagai Regency, 2015).

Utilization of coastal natural resources is destructive but some are conserving coastal natural resources. Some examples of the use of coastal natural resources that damage the environment are the use of fishing gear, bombardment of fish around coral reefs, converting mangrove ecosystems into oil palm plantations or shrimp ponds, destruction of coral reefs, pollution and sedimentation from land

channeled through rivers to the sea, activities ports, industries and settlements that domestic waste into the sea.

Research conducted by Hardian et al (2020) on what strategies were carried out after cantrang fishing gear was banned in all regions of Indonesia. The results showed that the strategy chosen was a diversification strategy through increasing fishermen's compliance in using fishing gear and increasing employment. Another thing that damages coastal and marine ecosystems is the use of fishing gear which causes the availability of fish to become scarce, social conflicts related to the use of natural resources (resource conflicts), between traditional fishermen and trawl owners (Marbun and Krishnayanti, 2002).

In line with that, the writings of Akbar et al (2020) which explain illegal fishing in the Pangkep Regency Islands, such as fish bombs, potassium, and trawling continue to operate and have an impact on the destruction of coral reefs and threaten the extinction of fish and other marine biota besides endangering lives people.

Research by Yovitner et al (2020) shows that the effective fishing gear is Payang, purse seine, gill nets, and boat charts. Meanwhile, ineffective fishing gears are sero, shrimp nets, drift lines and traps. For this reason, a fishing gear reconstruction program is needed to reduce fishing capacity and improve the economy.

Diversification of fishing gear is expected to provide added value for coastal communities and the environment, where with this diversification effort, coastal communities, especially fishermen, have the opportunity to increase their income when not fishing because there are other sources of income that can support their lives. Increasing income from other sectors as part of the diversification of coastal community businesses is expected to be able to encourage people not to damage the coastal environment and indirectly help restore coastal areas from previous exploitation (Laynurak, 2008). Coastal community business diversification is not only focused on fishing but can also be directed at other businesses outside the fishing sector. Harahap's research (2010, 2013) relating to efforts to develop regional planning capacity in integrated coastal ecosystem management on the East Coast of North Sumatra reveals the need to develop training on understanding coastal ecosystems, efforts to improve the economy that does not damage coastal ecosystems and develop coastal community institutions.

This study aims to analyze the utilization of coastal and marine areas by diversifying fishing gear and utilizing mangrove ecosystems into mangrove ecotourism in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency in a sustainable manner.

2. Literature Review

2.1. Coastal Zone Conditions

Dahuri, et al. (2001) define a coastal area as a transitional area between land and sea, where the landward boundary is the arbitrary distance from the average highest tide and the seaward boundary is the jurisdiction of the province or state in a country. The coastal area is a transitional area between land and sea waters. Ghofar (2004) states that naturally this area is often referred to as a nutrient trap area. However, if this area is subject to massive environmental destruction due to pollution, this area is also known as a pollutants trap. Thus, it can be understood that various biological resources and the environment in coastal areas are relatively more vulnerable to damage, compared to other areas or ecosystems. Of all the types of ecosystems that exist, usually the coastal ecosystem is the area that gets the heaviest environmental pressure

2.2. Fishermen and Sustainable Development

Hanson (1984) states that coastal communities often have lower opportunities to access fulfillment of basic needs such as education, health and fulfillment of business production facilities so that sometimes their socioeconomic conditions are still relatively low. As a coastal community group has the following characteristics: (1) humans who live together, (2) interact and work together for a long time, (3) are aware as a unit, (4) are aware as a system of living together.

According to Kurnia et al (2019), sustainable development (sustainability) aims to answer today's needs without threatening the ability to protect the next generation to meet their needs. Meanwhile, according to Kristian (2019) sustainable coastal area management is a combination of adaptive, integrated, environmental, economic and social system development.

3. Research Methods

The research approach was carried out qualitatively, with the research location being carried out in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency. Data collection techniques with in-depth interviews, and FGD. Data analysis was carried out with a qualitative descriptive beginning with a data reduction process, namely the process of selecting, concentrating attention and simplifying, abstracting and transforming raw data that emerged from records (Miles, NM and Huberman: 1992) this process was carried out as long as the researcher carried out the research process in the field, by carrying out field notes, the data obtained by the researcher is also maximized by ensuring that the data obtained is in accordance with the research theme.

4. Result and Discussion

4.1. Mangrove Ecotourism Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency

Mangrove ecotourism in Nagalawan Village offers educational tours about mangroves to tourists. Besides enjoying the beach view, tourists are also offered knowledge about mangroves, namely a guide around mangrove forests and mangrove planting. This is consistent with research conducted by Saad et al (2015) in the mangrove area on the island of Tioman Malaysia which also has the potential to be promoted as a tourist destination. Also in line with research conducted by

Miranda, Sarah J.M (2013) who examined mangrove planting in San Juan, Batangas, Philippines as a tourist attraction. This study shows that local governments support mangrove planting in terms of policy, management and planning as well as budget, so that mangroves benefit the people of San Juan, especially from an environmental / ecological, economic and health perspective.

The mangrove tourism area of Sei Nagalawan Village also offers family tour packages. The package is for 5-10 people to relax by eating seafood. In addition, seminar tours and training are also offered using the hall in the middle of the mangrove area to hold activities. Then there is also an adventure tour package, which is spending the night in the mangrove ecotourism area without having to stay at a homestay or a resident's house, but camping in a tent. Furthermore, there is a mangrove tour package, namely the experience of getting around and exploring the mangrove forest. Apart from mangrove tourism, there is Romance Bay, which is a romantic beach tour. Visitors who come to Romance Bay are teenagers. Romance Bay is managed with the help of the Sumatra Woman Foundation Non-Governmental Organization (NGO). NGO SWF is working with the fishermen group Maju. Thus the fishing community of Sei Nagalawan Village created a mangrove and beach tourism area. They combine the existence of a mangrove ecosystem with economic creativity to support ecotourism as researched by Sangchumpong, A (2019) which states that the Klong Kone Mangrove community in Central Thailand as a sustainable tourist destination is supported by creative economic activities carried out such as planting mangroves, shrimp paste and opossum, water sports activities, and a seafood restaurant.

4.2. Utilization With Mangrove Plant Processing

There are many benefits and uses of mangroves. One of them is to be processed into food and beverage ingredients such as jeruju crackers, mangrove syrup and mangrove tea. Besides helping the economy of the fishing community, the existence of mangrove tourism also protects the coast from sea water abrasion and makes it easier for fishermen to get fish.

4.3. The Role of Non-Governmental Organizations in Utilizing Coastal Natural Resources

In general, there are 6 fishing groups formed and fostered by NGOs from outside Nagalawan Village. They empower the fishing community of Nagawalan Village by forming fishing cooperatives such as the Muara Baimbai Cooperative, the Maju Bersama Cooperative. The reason why this group was created is to free the attachment between fishermen and patron (toke).

5. Conclusions and suggestions

Based on the research results that have been described and analyzed, the patterns of utilization of coastal natural resources in Sei Nagalawan Village, Perbaungan District, Serdang Bedagai Regency, North Sumatra Province are carried out in a sustainable manner, namely:

1. The people of Sei Nagalawan Village are actively utilizing coastal natural resources to support the economic situation of the community both individually and in groups.

2. The people of Sei Nagalawan Village form and manage a fishing cooperative group as a forum for utilizing coastal natural resources.
3. The form of job diversification is managing mangrove ecotourism, beach tourism and the use of mangroves planted in coastal areas to be used as food and drink.

Suggestion

Sei Nagalawan Village can be used as a pilot village for other villages in the coastal area in collaboration with the village government or private institutions.

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