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ENVIRONMENTAL SANITATION IN MAINTAINING THE QUALITY OF LIFE IN THE MANGROVE BEACH AREA

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Abstract

Mangrove forest is one of the plant communities that live in coastal areas. One of the causes of inhibiting the proliferation of mangrove forests is garbage disposal, the impact of garbage pollution will affect marine biota. Many tourists throw garbage in the mangrove forest area and this garbage can damage the growth of mangrove trees. The purpose of this study was to determine environmental sanitation in coastal areas and mangrove forests. This type of research is to use a descriptive qualitative research design in the form of written or spoken words from people and observed behavior. The results of the study show that the environment around the mangrove forest can be categorized as fulfilling the requirements. However, there are still several problems, such as the management of waste that is directly burned individually and not transported by the government. The availability of clean water and mangrove trees are put to good use.

Keywords: Mangrove Trees, Environmental Sanitation, Waste Management.

INTRODUCTION

Mangrove forest is one of the plant communities that live in coastal areas. Mangrove ecosystems both as natural resources and as environmental protectors have a very important role in the economic and ecological aspects of the surrounding environment. Soerianegara (1987) defines mangrove forests as forests that mainly grow on alluvial mud soils in coastal areas and river estuaries which are influenced by tides.

According to the Ministry of Maritime Affairs and Fisheries (KKP), mangrove types can be distinguished from their root structure, leaf shape, and fruit shape. The following is an introduction to the types of mangroves, namely: Lumnitzera, Excoaria, Xylocarpus, Aegiceras, Scyphiphora, and Nypa. And those commonly found in Indonesia, namely: Avicennia, Bruguiera, Ceriops, Rhizhopora, and Sonneratia.

Based on the results of research conducted by the Ministry of Environment and Forestry in 2021, it is known that the total area of Indonesian mangroves is 3,364,076 Ha. The condition of dense mangroves is 3,121,239 Ha (93%), medium mangroves are 188,363 Ha (5%), and sparse mangroves are 54,474 Ha (2%).

One of the exotic mangrove forest beaches in Indonesia is Mangrove Beach which is located in the village of Sei Nagalawan, Serdang Bedagai Regency, North Sumatra. It is a

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beach in eastern North Sumatra that was formerly used as a tiger shrimp pond. This area turned into a mangrove forest back in 2005, and until 2012 a cooperative was built which was useful for managing this beach to become a tourist spot. This mangrove forest beach is managed independently by the local community and also provides educational tours about the importance of mangrove trees. This Mangrove Beach is also under the auspices of the Social Forestry Agency and Environmental Partnership (BPSKL).

On the beach lies a very cool and lush mangrove forest which is one of the main attractions of this tour. In line with the progress of this mangrove beach tour, many residents have built houses in this coastal area as well as to improve their economy. The rapid development of tourism poses various threats, including environmental degradation, environmental pollution, and waste problems. This makes the role of mangrove forests in environmental sanitation, especially in water and waste management, more pronounced (Putra, 2014).

Environmental sanitation plays a very important role in creating a healthy environment. Sanitation conditions that need attention are the provision of clean water, disposal of human waste, waste management, and waste management (Masayoe, 2016).

One of the causes of damage to environmental sanitation in coastal areas is garbage disposal, the impact of garbage pollution will affect marine biota. Many tourists throw garbage in the mangrove forest breeding area and this garbage can damage the growth of mangrove trees.

Humans in maintaining their survival need the environment as a source of life, but many humans do not protect their surroundings. This is in line with the results of interviews conducted by subject SN who is the manager of the mangrove beach. According to him, the growth of mangroves makes the surrounding environment cooler and more beautiful, giving reciprocity on the subject of maintaining the preservation of the growth of mangrove trees. The fault is that many visitors do not preserve it by littering around the mangroves, and the people who throw away the liquid waste flowing into the mangrove trees.

Based on the above problems, it is necessary to take concrete steps to maintain the cleanliness of the surrounding environment. This is in line with the opinion (Vatria, 2010), damage to coastal ecosystems is an important matter to pay close attention to because damage to coastal ecosystems will always be followed by environmental problems. Therefore researchers are interested in researching environmental sanitation problems in maintaining the quality of life in mangrove coastal areas.

RESEARCH METHODS

In this study, researchers used a descriptive qualitative research design in the form of written or spoken words from people and observed behavior. According to Nana Syaodih Sukmadinata (2011: 73), qualitative descriptive research is shown to describe and describe existing phenomena, both natural and human-made, which pay more attention to characteristics, quality, and interrelationships between activities.

The research location was carried out in the Mangrove Beach area which is in the Sei Nagalawan area, Perbaungan District, Serdang Bedagai Regency, North Sumatra.

In determining research subjects, the sampling technique used in this study was purposive sampling. This technique was used because the selection of research subjects and informants was based on certain characteristics or characteristics which were viewed as having a close relationship with the characteristics or characteristics of the population. that meet the stated goals.

Table 1. Demographic Description of Research Informants

Information	SN	AH
Age	46 Years	50 Tahun
Religion	Islam	Islam
Last education	S1	SENIOR HIGH SCHOOL
Status	Marry	Marry
Involvement	Mangrove Beach Manager	Local people
Residence	Sei Nagalawan	Sei Nagalawan

The data collection method in this study used a qualitative data collection method in the form of observation and interviews.

a. Observation

According to Sofia (2010), observation is an observation or technique that is carried out by using the senses so it is not only by observing using the eyes. So data collection is used to obtain research data through observation and sensing, where the researcher is actually in the daily life of the informant, where the researcher can be actively or passively involved.

b. Interview

Interviews are a data collection technique that is carried out through face-to-face and direct debriefing between data collectors and informants or informants (Erga Trivaika, 2022). In this study, researchers used open interviews to obtain valid data.

c. Documentation

The documentation method is used as an additional data collection. Researchers look for sources in the form of notes and documents as well as library sources through journals, pictures, and documents. This can support research in terms of incident analysis.

RESULTS AND DISCUSSION

Interview result

Environment sanitation	Informant	
	SN (Manager)	AH (Inhabitant)
Clean water supply	In the mangrove beach area, clean water is available from drilled wells dug to a depth of >10 meters.	According to the subject, the provision of clean water in the mangrove beach area is classified as clean and can be used by residents for their daily needs.
Waste Management	1. For household wastewater, residents throw into the estuary and some of the wastewater flows into the mangrove forest. 2. For the results of bathroom wastewater around the mangrove beach, it has its septic tank to prevent contamination of the mangrove beach area.	1. The subject said that household wastewater is disposed of directly into the estuary. 2. According to residents, the average local community has a septic tank to dispose of their bathroom waste.
Waste management	Availability of trash bins in the mangrove beach area, then the garbage that has accumulated will be burned.	Availability of trash cans in every house, then the waste is burned.
Mangrove Utilization	According to the manager, when mangroves are dry/wilted, tree trunks are used as bridges. Then the leaves are used by residents.	Local people use the leaves of mangrove trees as food and drinks that can add to the economy of the local community.

Discussion

1. Provision of Clean Water

From table 2 above, it shows that the provision of clean water on mangrove beaches is classified as clean and safe for use in everyday life, by the Republic of Indonesia Government Regulation No. 20 of 1990 concerning the quality of clean water is stated by several parameters, namely physical parameters (temperature, turbidity, solids, and so on).

According to the Government Regulation of the Republic of Indonesia No. 43 of 2008 states the use of groundwater from drilled wells with a diameter of >10 meters, the use of groundwater using human labor from dug wells or drilled wells. From observations made at the mangrove beach, it was found that the drilled well at the mangrove beach area had a diameter of 10 meters and was classified as safe. This is also in line with research conducted by Darmawati (2018), which stated that in her research drilled wells or dug wells were also > 7-10 meters deep.

2. Waste Management

According to the results of Table 2 above, the management of household wastewater in the mangrove coastal area is discharged into the estuary and flows partly into the mangrove forest. If this continues to occur and is sustainable it will disrupt the development of mangrove trees. This is in line with the research of Dian Dwi Nur Rahmah (2018), that the waste produced by residents is disposed of through drainage channels that flow directly into the sea so that the waste water does not go directly to the mangrove forest, even though the forest can neutralize everything to maintain the quality of life of the mangrove forest.

The management of toilet wastewater is directly connected to the septic tank and does not cause an unpleasant odor in the mangrove beach area and prevents contamination of the mangrove beach due to human feces. This is to the research of Dian Dwi Nur Rahmah (2018), who said that human excrement must be disposed of in a saptic tank so that it does not cause an unpleasant odor and pollution does not occur in the mangrove forest area.

3. Waste management

According to Table 2 above, that waste management is carried out on mangrove beaches by collecting garbage in trash bins and then burning it. Meanwhile, according to RI Government Regulation Number 27. The year 2020 states that waste collected in temporary waste bins (TPS) must be transported to recycling sites, integrated waste processing and not burned directly by each individual.

However, according to a briefing from the management of Mangrove Beach, they have submitted a proposal regarding waste transportation at the Mangrove Beach location, but the government is still in the process of approving the submitted proposal.

4. Utilization of Mangroves

From Table 2 above, it is found that the manager says that mangrove trees that are dry or withered are used as bridges and the surrounding community works together with mangrove beach managers to manage the leaves into syrup and food to boost the economy of the surrounding community. According to Rajis (2017) that mangrove forests have high species diversity, there are approximately 47 types of mangrove tree plants that can be processed to make several food products such as dodol, jenang, jam, and syrup.

CONCLUSION

Based on the results of the research that has been done, it can be concluded that environmental sanitation in the Mangrove Beach area is classified as maintained which makes the quality of life there good, caused by:

1. Availability of clean water from drilled wells so that people can use it in their daily lives.
2. Management of household wastewater in the mangrove coastal area is discharged into the estuary and partly flows into the mangrove forest.
3. Availability of trash cans in the Mangrove Beach area, then after the garbage has accumulated it will be burned.

4. Mangrove trees that have dried or withered are used as a bridge and the local community works together with the mangrove beach manager to process the leaves into syrup and food to boost the local community's economy.

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