

Socialization of Waste Management in Klawalu Mangrove Forest Tourist Attraction Area of Sorong City

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Abstract

Waste can damage the beauty of the environment and is a threat to humans and ecosystems that are directly affected if not appropriately managed. Public understanding of the impact of waste needs to be improved. So, community service is carried out to provide understanding to the community about handling sound waste and its management around the Klawalu mangrove tourism area so that this place becomes a tourist attraction that the community loves. The methods used in this service are lecture and discussion methods. The results of the service activities found that the community only understood the impact caused by waste in depth. However, with this socialization, the community realizes it is necessary to manage the garbage in the area to produce a clean and beautiful area that is free from garbage. Based on the findings of this study, providing the community with training and fostering a sense of environmental stewardship is essential to cultivating a healthy and pristine environment.

Keywords: Waste, Socialization, Waste Management, Mangrove Tourism Area

INTRODUCTION

Coastal areas are one of Indonesia's potential resources, including the meeting area between land and sea. Indonesia is an archipelago because it has a coastline of about 95,181 km and 17,500 islands supporting this vast resource (Dahuri et al., 2001; Kusmana & Hikmat, 2015). Indonesia has significant potential coastal resources, including the mangrove ecosystem, which has economic and ecological functions (Nau & Sombo, 2020; R. Tabalessy, 2014). One function of mangroves is to make them a natural tourism area.

To be used as a tourist area, it is necessary to arrange a good area, starting from the arrangement of the area made as a tourist attraction to the management of waste in the area. "The Sorong City Government has followed up the implementation of Law Number 18 of 2008 concerning Waste Management through regulations or Regional Regulation (Perda) Number 15 of 2013 concerning Waste Management. Nevertheless, the waste management issue in Sorong City has yet to be effectively addressed by the requirements set out in Law Number 18 of 2008 and the Sorong City Regional Regulation (Baru et al., 2019).

The waste problem is a problem that is very much at the center of attention; based on data released by INAPLAS and BPS, Indonesia is the country that produces the second largest plastic waste in the world, which is 64 million tons/year. Of the amount of waste produced, 3.2 million tons enter the waters, and 10 billion pieces of plastic enter (Nuraya et al., 2023). For 2022, according to data from the Ministry of Environment in SIPSN, the amount of waste generated in Indonesia successfully recorded was 35,925,892.60 tons/year, with an average daily waste generation of 98,427.10 tons/day. Plastic waste that breaks down to a size of 0.3-5 millimeters can enter the body of marine animals (Labibah & Triajie, 2020; Nufus & Zuriat, 2020; Soleman, 2019). Humanity has always produced rubbish. This was not a problem when the human population was tiny and nomadic, but urbanization and big conurbations made it such. Poor waste management contaminated water, soil, and air, harming public health (Giusti, 2009).

The interdependence between waste and mangrove ecosystems has significant implications for environmental conservation. Mangrove forests, as typical coastal habitats, often fall prey to the unregulated accumulation of waste materials. Plastic waste and other pollution in these areas can adversely impact marine life, disrupting natural ecological processes and threatening the survival of several species that depend on mangrove ecosystems as their habitat and source of sustenance. The activity of dumping garbage and household waste in mangrove areas can cause damage to these ecosystems (Sinaga et al., 2022). Contrarily, mangroves assume a significant function in waste management, given that the roots of mangrove trees act as natural filters that can capture and control the transfer of waste from land-based origins to the marine ecosystem. Therefore, preserving the cleanliness of mangrove ecosystems plays a vital role in reducing waste contamination in the aquatic environment and maintaining the balance of this essential ecological system.

Klawalu mangrove tourist attraction is one of the attractions found in the middle of the city of Sorong. This location is a popular tourist destination and a versatile sports facility, accommodating running, cycling, and other recreational activities. However, this tourist spot in the mangrove area will not be beautiful if the awareness of the surrounding communities and visitor's litter.

Human settlements, tourist destinations, and sports facilities close to or inside mangrove habitats may pose a danger to the ecosystem's integrity. This risk is particularly significant when the local people or tourists are unaware of the potential negative consequences of the waste created by their activities on the environment. Improper disposal of food or beverage packaging may result in the introduction of waste into the ocean via river currents or coastal regions, primarily due to community practices of indiscriminate and inappropriate rubbish disposal. This phenomenon occurs due to the suboptimal use of temporary landfills. Consequently, the refuse becomes trapped inside the intricate network of roots belonging to mangrove plants. Apriliani et al. (2017) claim that inadequate waste management during tourist activities might lead to environmental deterioration and contamination. The significance of waste management lies in its ability to mitigate the potential health risks associated with trash and its generation via human activities (Intan et al., 2023). Hence, resolving the issue of public awareness and comprehension of environmental management is essential (R. R. Tabalessy et al., 2022). When garbage is well handled or recycled, it may be a valuable resource contributing to economic value (Apriyani et al., 2020; Hamdani & Sudarso, 2022; Sufyati et al., 2022).

Educating the locals of Sorong City's Klawalu mangrove forest, a popular tourist destination, on proper trash management is crucial. Community service activities provide a means of

engaging in several types of socialization. This socialization initiative aims to enhance community awareness about the proper handling and management of solid trash in the vicinity of the Klawalu mangrove tourism area. The ultimate goal is to transform this location into a beloved tourist destination.

METHOD

Implementation of Community Service Activities (PKM) in the Klawalu Mangrove Tourism Area with the Title of Socialization of Waste Management in the Klawalu Mangrove Forest Tourist Attraction Area of Sorong City. We will stage this activity on Monday, August 28, 2023, in the mangrove forest tourist area from 08.00–17.00 WIT. The target is the RT 007/001 Klamana Village community around the mangrove tourist area, visitors, and workers in the tourist area. In this activity, ± 50 students were also involved. The method used in this activity is socialization, or lectures and discussions with the community and related governments. They carried the following stages out during community service activities: Figure 1.

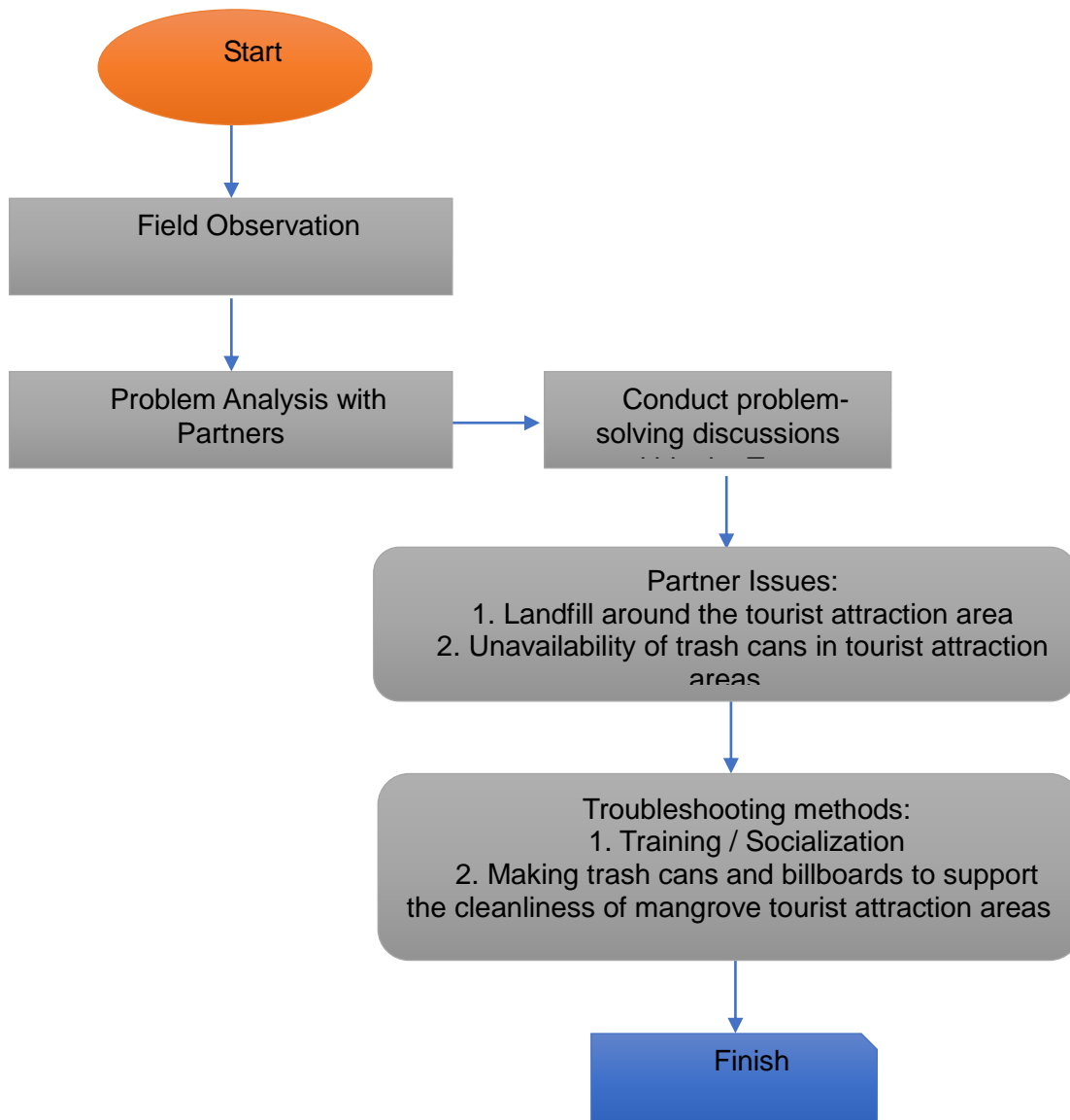


Figure 1. Flow of community service activities

RESULTS AND DISCUSSION

Community service activities in the Klamana sub-district, especially in the RT 007/001 community, are going well. The partner (Chairman of RT/RW 007/001 Klamana, Sorong) coordinates or discusses the solutions and planning that will initiate the activity. The implementation will be on July 18, 2023 (Figure 2. a). The result of this coordination is that the partners agree to actively participate in every activity to enhance public knowledge and awareness regarding waste management and environmental cleanliness, particularly in the mangrove's vicinity tourism area. Additionally, there will be an additional collaboration with the administration of the Klawalu mangrove region, overseen by the City Tourism Office Sorong. During our meeting, we discussed the intended goals and objectives of the forthcoming activities inside the tourist attraction site.

The Tourism Department has granted licenses for the intended activities at the designated tourist location, expressing its support (Figure 2. b). Coordination with the Sorong City Tourism Office was carried out thrice on July 20, July 25, and August 14, 2023. Subsequently, collaboration persisted with the KPHL service concerning the implementation of tasks in the mangrove region (Figure 2. c).



(a).



(b).



(c)

Figure 2. (a) Meeting with Klamana environmental administrators; (b) Meeting with the Sorong City Tourism Office; (c) Meeting with the Sorong City KPHL Service

The socialization activity was attended by ± 50 students, 17 people from the community, one person from the Tourism Office, seven people from the KPHL Sorong City, one person from the Sorong Regency Environmental Office, as well as resource persons in the activity, and four lecturers. The activity was opened with a prayer and continued according to the rundown of the activities. Students are divided into several groups to complete the stages of activities arranged together.

The socialization efforts in the field aim to enhance community awareness of the consequences of improper trash disposal and educate them about the potential hazards associated with introducing certain kinds of waste into the marine environment. In addition to the socialization carried out, the team also provided trash bins to be given to partners so that they could be used to reduce the disposal of garbage that was not in its place. According to Paramita et.al (2023), there still needs to be more community participation in waste management based on their observations.

During our observations, we saw a significant amount of litter that individuals had carelessly discarded at the location, resulting in its dispersal along the roadway. In conjunction with the waste discarded by the local people along the roadside, there is also waste inside the mangrove tourist area that is irresponsibly disposed of by visitors, necessitating proper waste management measures. Public awareness of maintaining environmental cleanliness needs to be improved. Some people still litter, while the government has provided temporary landfills that have yet to be fully maximized by the community. As proof, look no further than the trash heaps accumulating outside the newly constructed TPS.

Based on the evaluation of the activities carried out, several factors become obstacles and supporters in the activities, namely, not maximizing the presence of the surrounding community in participating in the activities carried out because of the activities they have to do both in the office and the sea and garden. The smooth running of the community service program carried out in the field can be carried out due to the support of the government, in this case, RT 007/001 Klamana Village, Sorong City Tourism Office, Sorong City KPHL office and Papuan Christian University students and some communities.



a)



b)



c)



d)



e)



f)

Figure 3. a) Participant Registration; b) Socialization Activities; c) Material Presentation by Roger R. Tabalessy (UKiP lecturer); d) Material Presentation by Mr. Ishak Aryanto, S.T., M.T. (Department of Housing and Settlement Areas); e) Handover of bins with Partners; f) Group Photo

The stages of socialization start from

1. Understand the importance of mangrove ecosystems in coastal areas. It is good to do so that the community is aware of how vital the mangrove ecosystem is and the role of the ecosystem in maintaining environmental balance in coastal areas (Figure 3. c).
2. Providing material by Mr. Ishak Arianto (picture 3.d) on how to manage waste properly and correctly and what impacts can be caused by littering.
3. Handover of trash can assistance to partners, in this case, the head of RT 007/001, which the community can use and visitors to the Klawalu mangrove ecotourism area (picture 3. e)

CONCLUSION

The local government, through the head of RT 007/001, a partner in the community service program, expressed his gratitude for the socialization education provided to the community in waste management in the environment and mangrove tourism areas. The hope is that this area will become cleaner and have a tourist attraction in Sorong. Based on this activity, it is essential to provide the community with training and cultivate a sense of environmental stewardship.

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