Community participation in the utilization of Mansinam Island as an ecotourism object

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ABSTRACT
As an ecotourism attraction in Manokwari Regency, West Papua Province, Mansinam Island offers a unique combination of natural beauty, historical sites, and religious values. However, it still faces challenges such as attraction diversity and lack of infrastructure. This study aimed to understand the interaction of the local community with aspects of ecotourism, including environmental preservation, economic development, and socio-culture. Using interview and questionnaire methods, this study collected data from 38 respondents purposively selected from the residents of Mansinam Island. Data analysis was conducted through a tabulation process to identify three main variables: the role of the community in economic, environmental, and social activities related to ecotourism. The results showed that, although Mansinam Island has excellent potential as an ecotourism destination, there is still significant room for improvement in community participation. Economically, many opportunities, such as equipment rental and tourist product development, have not been fully utilized. On the environmental conservation side, although awareness has developed, active community participation still needs to be improved. From a social aspect, despite the existence of art and cultural studios, community involvement in promoting and developing local cultural values is still limited. The conclusion of this study is the need to increase community participation in every aspect of ecotourism on Mansinam Island. This includes local economic development, environmental preservation, and the preservation and promotion of local culture. Through increased community participation, Mansinam Island can optimize its potential as a sustainable ecotourism destination and provide more comprehensive benefits to the local community.

KEYWORDS: community participation; ecotourism; environmental preservation; local economic development; mansinam island

1. Introduction
Ecotourism is a concept of sustainable tourism development that aims to support efforts to preserve the environment (nature and culture) and increase community participation in conservative management, thus providing economic benefits to local communities. Ecotourism is a form of tourism responsible for an area or environment that is visited and preserves a place or environment that is still natural, provides economic benefits, and preserves culture for the local community.

In Indonesia, ecotourism has been implemented in various areas, such as Komodo National Park, Gunung Leuser National Park, and Bali tourist areas. These programs are designed to involve local communities in natural resource management and provide them...
with economic opportunities (Suryawardani, 2017). West Papua is one of the provinces included in the category of new expansion areas. Of course, development in all aspects is still in the process of structuring, improving, and developing. One sector that is quite important and has potential is the tourism sector. The shape and variety of tourist attractions in West Papua certainly vary, including natural attractions in Raja Ampat and Triton Bay in Kaimana, cultural attractions of Mansinam Island, the Arfak Mountains in Manokwari, and many others.

Through Regional Regulation No. 10 of 2019, West Papua is also designated as a conservation province and administrative government that organizes development by applying the principles of protection, preservation, and utilization of natural resources, including biodiversity wisely and sustainably, as well as restoring the environment and essential ecosystems that have been degraded. Conservation area management is to conserve biological resources and ecosystems whose utilization is carried out wisely to ensure the sustainability of supplies while maintaining and improving the quality of biological diversity and ecosystems to support efforts to improve community welfare and the quality of human life. The existence of conservation areas can also fulfill the needs of life and natural tourism functions around the buffer zone. It can also provide opportunities for community-based ecotourism development in areas focusing on ecotourism development.

Manokwari Regency has several potential tourist attractions, including Mansinam Island tourism, which has natural potential in the form of beautiful natural coastal panoramas beaches with long and wide white sand. As well as historical/cultural heritage and religious potential. By looking at the existing potential, attractions are less diverse and still natural, and no facilities and infrastructure can support tourism on the Mansinam Island ecotourism object. The diversity of attractions that are still less diverse and still lacking adequate facilities and infrastructure can affect the attractiveness of someone to visit these tourist attractions and the lack of well-known tourist attractions; therefore, it is necessary to promote these tourist attractions by updating social media.

Mansinam Island has an area of ± 410.97 Ha; Mansinam Island is about 6 km from the center of Manokwari City. Reaching Mansinam Island takes 10 to 15 minutes using a machine boat (long boat). Mansinam Island is located in Doreri Bay, part of West Papua’s capital city, Manokwari Regency. Every year on February 5, thousands of people from various islands from outside Manokwari Regency come to this place to hold celebrations commemorating the arrival of Carel Willem Ottow and Johann Gottlob Geissler. These two German nationals arrived on Mansinam Island with a mission to spread the gospel. At that time, the tribe inhabited Mansinam Island was the large Numfor tribe. Mansinam Island has several historical sites that are relics of two significant figures, Carel Willem Ottow and Johann Gottlob Geissler, which are still maintained by the local community and government.

The establishment of Mansinam Island as a cultural and religious tourist attraction certainly has a substantial and robust value for the local community and even the Papuan people as a whole, reflected in the history of the first gospel entry in the Land of Papua in 1855. Even the West Papua Provincial Government has declared the Gospel Preaching Day every February 5 as an official holiday and as a foundation for development in all fields according to the motto: "Papua's development starts from Mansinam" to maintain and develop a fighting spirit based on spirituality and comprehensive community service (Scheunemann, 2004).

As a form of appreciation for Mansinam Island as a historical site, on August 24, 2014, President Susilo Bambang Yudhoyono, who at that time was still serving as President, came
to inaugurate the historic site directly. These sites include: 1) Old Church 2) Commemorative Monument of the Entry of the Gospel in the Land of Papua 3) Old Well 4) Former Dormitory of the Zending Followers 5) Tomb of the Zending Followers 6) Former Pastory Building (Tourism Office 2014).

This condition is an attraction that encourages tourists, both locals and those who come from outside the city, to visit Mansinam Island. However, it cannot be denied that the natural beauty of Mansinam Island does not necessarily limit them from visiting historical heritage sites. However, they can enjoy its natural beauty, including beautiful sand beaches, underwater parks, bat caves, and circle roads. In addition to religious tourism, Mansinam Island also has the natural potential to be developed for the breeding and cultivation of canary crabs or coconut crabs, which are endemic animals that need to be protected and can be a superior program on Mansinam Island, Manokwari Regency. To cross to Mansinam Island, visitors can go to a small port, and there, visitors can board a motorized boat with a maximum capacity of 12 adults within 10 to 15 minutes. The cost required to board this boat is 10,000 Rupiah per person. Many visitors rarely visit this tourist spot, except on certain days, such as February 5, when the gospel entered the Land of Papua. There will be lots of visitors who come from various parts of Papua. Based on the explanation above, it is necessary to ask, "How is community participation in the utilization of Mansinam Island as an ecotourism object in Manokwari Regency, West Papua Province."

2. Literature Review

Sustainable tourism has become essential in environmental conservation and local economic development discourse. Ecotourism, as part of sustainable tourism, is an approach that emphasizes nature and cultural conservation and empowers local communities (Weaver, 2008). In Indonesia, ecotourism is a way to preserve natural and cultural wealth and an economic strategy to improve community welfare (Spenceley, 2008).

The organization The Ecotourism Society (1990) introduced the first definition of ecotourism, which is as follows: Ecotourism is a form of tourist travel to natural areas to conserve the environment and preserve the lives and welfare of residents. Initially, ecotourism was carried out by nature-loving tourists who wanted the tourist destination to remain intact and sustainable, in addition to the culture and welfare of the community being maintained. Ecotourism is defined as "responsible travel to natural areas that conserve the environment and enhance the well-being of local people" (TIES, 2015). The concept emphasizes three main principles: environmental conservation, socio-economic participation of local communities, and interpretation and education (Fennell, 2008). The benefits of ecotourism are not only limited to environmental conservation but also to social and economic aspects. Research shows that ecotourism can increase environmental awareness, support biodiversity conservation, and provide alternative income for local communities (Stronza & Gordillo, 2008).

A tourism area is an area that is developed and managed to provide various services and facilities to meet the recreational, educational, and satisfaction needs of visitors who come. These areas often have specific characteristics that make them attractive, such as natural beauty, cultural uniqueness, or high historical value. The development of tourist areas focuses not only on the entertainment aspect but also on environmental conservation and empowerment of local communities.

According to Law No. 10/2009 on Tourism, tourism is defined as activities supported by facilities and services provided by various parties, including the community, entrepreneurs, and government. In line with that, tourist areas are designed as attractive
destinations for tourists, both domestic and international. (Hadi, W. 2018). In the Indonesian context, tourist areas are often associated with coastal areas with outstanding natural and cultural potential to attract tourists. This follows the understanding given by Kardini, N. L., & Sudiartini, N. W. A. (2020), which says that a tourist area is an area that has unique attractions, such as waters, which are explicitly provided for tourism activities.

In addition, Indonesian Tourism in the Law of the Republic of Indonesia further explains that tourism is a travel activity carried out for recreation or personal development by temporarily visiting places with unique tourist attractions. Thus, Hidayat, M. (2011) explains that tourist areas must provide a memorable experience and improve visitors' quality of life.

The tourism area business is organized to build or manage an area with a particular area to meet tourism needs. Activities that can be carried out to organize this business include leasing land equipped with infrastructure to organize tourism businesses, leasing other supporting facilities, and providing buildings to support tourism business activities in the tourism area.

Determining an area as a tourism area is the government's authority, which is adjusted to the regional spatial planning and tourism development plan. When examined, various business activities directly utilize the environment. Some tourism businesses that can be expected to have a substantial impact on the environment are a) The tourism service business sector, concerning the activities of providing tourist transportation services that are possible in the organization of travel agency services; b) The business sector of tourist objects and attractions, among others in terms of Determination of the location of water tourism and the development of natural resource management as a tourist attraction, in the business of natural tourism objects and attractions, management of cultural heritage and historical relics and the development of new cultural tourism objects and attractions in the business of cultural tourism objects and attractions.

The utilization of ecotourism objects, as we have seen following the definition that the benefits of ecotourism can be divided into three main points, namely: Providing environmental education to the community to preserve nature, respect and maintain the existence of nature, complete with the surrounding environment, As a nature conservation activity that involves material community participation. This community participation is used to maintain biological sustainability and develop biological diversity. Ecotourism activities will indirectly require the surrounding community's labor to maintain and develop potential and biological diversity. This recreational activity is instrumental in empowering the surrounding community's economy.

Etymologically, participation means participation, so community participation in tourism development is the willingness of the community to help the success of tourism development programs according to everyone's ability without sacrificing their interests. According to Veizel Rivai (2006), participation is a person's mental involvement, thoughts, and emotions (feelings) in a group situation that encourages him to contribute to the group to achieve goals and take responsibility for the efforts concerned.

Sirfefa I. et al. (2023) stated that community-managed tourism projects intend to make the community decide the type of growth they want to see and then help the community implement the plan. Ecotourism projects must involve local communities to stop activities or practices that might damage existing resources regardless of the social and economic changes around the tourist site. Local participation provides more opportunities for people to participate effectively in development activities.
It means giving people the authority or power to mobilize their abilities, become social actors rather than passive subjects, manage resources, make decisions, and exercise control over activities that affect their lives. Community participation will arise when nature/culture provides direct/indirect benefits to the community. In order to provide direct benefits, nature/culture must be managed and maintained. That is how the relationship arises between tourist attractions, management of benefits obtained from ecotourism, and participation. (Harewan, Y., et al. 2023).

Bleszeinsky, G. (2019) explains that in the context of community participation towards the preservation of the environment and historic sites, some essential steps include maintaining historic sites, cleanliness and beauty, and preservation from damage. For beaches, it is essential to maintain cleanliness by providing facilities such as trash bins and public toilets. In addition, communities can also play a role in providing buying and selling and rental services to meet visitors' needs, such as selling essential items and renting tourist equipment. This includes umbrellas, mats, mineral water, and boat and swimming equipment rentals.

Participatory approaches involve people in their development process. Local or community participation is seen as simply sharing social and economic benefits. Participatory processes help people to have sufficient control over their own lives. One of the factors that can encourage community involvement is the creation of positive perceptions from the community, especially those related to the value-added aspects that can provide tourism to the community’s economy.

In the context of community roles in environmental, economic, and social activities, economic activities receive special attention. Alfred Marshall defined economics as studying how individuals work and use their income. Ecotourism activities, as part of the economic field, are considered professionally planned tourist trips that provide an educational element. It aims to generate income and pays attention to cultural heritage, local community participation, and conservation of resources and the environment, as Nugroho (2004) described. This reflects a comprehensive approach, combining economic, social, and environmental aspects of ecotourism activities.

To realize this, the critical thing to do is to provide the best quality tourism services and products. To be able to provide quality tourism services and products, it would be better if tourism revenues were not only used for conservation activities at the local level but also help develop the knowledge of local communities, for example, by developing skills through training to increase the types of businesses that can be developed around the tourist area.

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Abdul Aziz’s (2008) research on community participation in ecotourism development in the Pekalongan Regency used a qualitative descriptive method. The results showed that this area has significant natural and cultural potential for ecotourism. Shinta Nuriya’s (2002) research in Srikaton Village, South Lampung, focused on community participation in ecotourism development. Through field research and a qualitative approach, this study
revealed that the community actively participated in the form of thoughts, energy, and money, primarily through deliberation.

Erwiantono et al. (2016) identified sustainable ecotourism's land suitability and economic benefit value in the Labuan Cermin area, East Kalimantan. Using survey and interview methods, they found that the area was highly suitable for ecotourism, with a suitability index of 78%. Joko Tri Haryanto (2014) formulated a sustainable ecotourism model in Yogyakarta based on cultural, social, and environmental wisdom. This research suggested community-based tourism management, such as tourism villages, as a model for sustainable tourism development.

Reydi Marco Manahampi and his team examined the role of ecotourism for community welfare in Bohai Village, West Likupang, using a survey method with 16 respondents. They found that ecotourism is essential in increasing community income and welfare. Finally, Hendra Kurniawan (2019) identified and strategized ecotourism development in Sidrap Nature Park. Through survey, interview, and SWOT analysis methods, this study found that the park has diverse physical, biological, and socio-cultural potential for ecotourism development.

3. Methods

This research was conducted on Mansinam Island, East Manokwari District, Manokwari Regency, West Papua Province, for about three months after the proposal was approved. The type of research chosen is descriptive quantitative, which aims to describe the situation objectively using numerical data, from collection to presentation of data (Kuncoro, H. 2023). Primary data sources were obtained from people living on Mansinam Island and visitors to tourist attractions. Secondary data included related literature and publications from the Central Bureau of Statistics and the Culture and Tourism Office.

Data collection techniques involved observation, which was used to observe social phenomena on Mansinam Island, and interviews to gather information from respondents (Nurgiyantoro, 1988). Questionnaires were also used to obtain primary data directly from respondents. The population of this study was the people living on Mansinam Island, totaling 245 households, with 38 samples selected using the purposive sampling method.

Data analysis was conducted through tabulation, which is practical for presenting data in frequency distribution tables and cross tables. This study also defines operational variables to measure community participation in economic, environmental, and social aspects related to ecotourism on Mansinam Island. These variables include community involvement in maintaining tourist sites, environmental activities such as cleaning and socialization, and economic and social activities related to ecotourism.

4. Results and Discussion

Mansinam Island, located in East Manokwari District, Manokwari Regency, West Papua Province, has a geographical location at the coordinates 0°54′6-575 S and 134°6′6-038 E. The island occupies an area of 410 hectares with an altitude of 5 Km from sea level, average rainfall of 2,700 ml/year, and an air temperature of about 23.21 °C. Mansinam Island, which is about 10 km from the capital city of Manokwari Regency, can be reached in 15 minutes. Mansinam Island, about 10 km from the capital of Manokwari Regency, can be reached within 15 minutes.
Administratively, Mansinam Island is located in Mansinam Village, East Manokwari District. Pasirputih Village bounds its territory to the north, the Arfak Mountains to the south, the Pacific Sea to the east, and Doreri Bay to the west. The island comprises four villages: Mansinam, East Mansinam, North Mansinam, and West Mansinam. The government on Mansinam Island is led by the Village Head, Welly Rumsayor, with the support of village officials and neighborhood associations elected by the community.

The population of Mansinam Island amounted to 1,493 people in 2023, divided into 245 households, with women being the majority (52%). Almost the entire population is of the Doreri Tribe, whose origin is from Numfor in Biak, with nine main clans or clans.

On the economic front, Mansinam Island has a village-owned and 18 community-owned kiosks. There are also 20 small traders and residents’ houses around the beach. Unfortunately, the market built by the village government is not effectively utilized by the community. There are historical sites for socio-cultural facilities, but some facilities still need physical improvements and facilities. The main transportation to the island is by sea, and on the island, the community widely uses two-wheeled vehicles.

Education on Mansinam Island is supported by educational facilities that include early childhood education and elementary and junior high schools. In the health sector, there is one unit of the health center, with medical personnel consisting of doctors, Mantri, nurses, and midwives. These facilities and infrastructure show sustainable development efforts on Mansinam Island.

Research on Mansinam Island shows the characteristics of respondents based on various demographic factors. Based on gender, out of 38 respondents, 35 were women, and 3 were men, indicating that women use ecotourism objects on Mansinam Island, especially in economic, environmental, and social aspects. Based on age, the 36-50 age group is the largest group with 18 respondents, followed by the under 35 age group with 13 respondents, and the over 51 age group with seven respondents. This indicates that middle-aged respondents more often utilize ecotourism objects.

In terms of occupation, most respondents were housewives, reaching 29 out of 38 respondents, compared to other occupations such as civil servants or the private sector. This shows the active involvement of housewives in ecotourism activities on Mansinam Island. Based on the latest education, most respondents, namely 22 people, had the latest high school education, nine people had elementary school education, and the rest had junior high school and DIII / S1 education.

From an ethnic perspective, almost all respondents were indigenous Papuans, with 37 out of 38 indicating local communities’ intense involvement in ecotourism. Regarding religion, most respondents were Protestant Christians, reaching 37 out of 38 respondents. The conclusion from this data is that indigenous Papuans, especially women and those of the Protestant Christian faith, make up the largest group utilizing ecotourism objects on Mansinam Island.

Research on the role of the community in utilizing Mansinam Island as an ecotourism object, especially in the economic field, reveals how local people utilize natural resources on the island. Most respondents were involved in economic activities through sales at kiosks and huts around the beach and their homes, with products such as kiosk goods and areca nut/Siri. However, no economic activities such as swimming, diving, or snorkeling equipment rentals around the beach exist.

The survey showed that 47% of respondents sold kiosks, and 35% sold bars. Most products are sold directly by the public (97%), and only a few buy through intermediaries.
(3%). Most respondents sell daily (63%), while the rest sell only on certain days (37%). In terms of sales facilities, most use private facilities (81%), while some use government facilities (16%).

Regarding income, 61% of respondents earned Rs. 50,000 – 200,000 per week, while 39% earned Rp. 300,000 – 500,000. However, the community has not maximized these economic activities, mainly due to the lack of facilities tourists need, such as the rental of swimming equipment or snorkeling. Most of the population is focused only on selling kiosks or cottages around the coast, which shows the unexplored potential of exploiting Mansinam Island as an economic resource. Despite having such biodiversity as a beautiful underwater park, local communities have not yet utilized it effectively as a significant economic impact. This differs from previous studies that showed the significant economic impact of an underwater park project on local communities in other ecosystem locations. In the study of the role of the community in utilizing Mansinam Island as an ecosystem object, in the environmental aspect, the local community showed active participation in environmental sustainability around the coast and historical sites. These include environmental cleaning activities, painting sites with faded colors, and safeguards around sites and beaches. The government supported this effort by providing garbage, painting tools, and equipment for building fences. In addition, some of the community also explored seafood, creating handicrafts such as necklaces, bracelets, earrings, and crowns decorated with frogs.

According to the survey, 45% of respondents received socialization about the environment from the Environmental Services (DLH), while 10% did socialization to other communities. Most communities participate in environmental cleaning activities at certain times, such as holidays, and use privately owned facilities. Nonetheless, 61% of respondents do not use seafood to make handicrafts, indicating a potential that has not been fully exploited.

From the results of this study, it appears that the people of Mansinam Island have participated in some environmental activities. However, there is still room for improvement, especially in terms of the socialization of the environment and the utilization of marine resources for economic activities. This study is in line with the study of Abdul Aziz (2008), who states that society is not fully involved in environmental conservation, as seen from the still frequent occurrence of environmental pollution. It shows the importance of raising public awareness and participation in environmental conservation on Mansinam Island.

Research into the role of communities in using Mansinam Island as an eco-ecosystem in the social sphere explores how local communities preserve their culture and traditions and exploit the island’s historical sites. This study revealed that 100% of respondents were involved in visiting tourist sites and other buildings on Mansinam Island, and there was an art or cultural sanggar at the site, also with the involvement of 100% of respondents. However, only 16% of the respondents actively engage in art/cultural sanggar activities, primarily teenagers and young people, while 84% do not participate. Meanwhile, only 34% of the population is involved in promoting the tourist attraction of Mansinam Island, suggesting that there is still a chance to increase the promotion of this tourist attraction. Lack of participation in social activities can negatively impact such as indifference and lack of development of individual talents.

This research shows that although the arts/culture Sanggar on Mansinam Island has been awarded, there is still room for increased participation and cultural preservation. This is different from the previous research by Soeroso, A., & Susilo, Y. S. (2008), which emphasizes the importance of cultural appreciation and preservation for contributions to
the conservation of the region. In Mansinam Island, art/cultural saggar is more often displayed at special events than as a routine activity, indicating the need to incorporate more social and cultural activities into the daily life of local communities.

5. Conclusions

The role of the community in using ecological objects in the economic activities of the island of Mansinam can be seen in economic activities, environmental activities, and social activities in the local community environment. The following conclusions can be obtained: Economic activities role, as well as the society in the utilization of ecosystem, objects economic activities is known that the society has not utilized the economic potential in the tourist attractions that exist on Mansinam Island where because there is still a lack of society to carry out other economic activities such as renting swimming gear, boats, and crafts. Environmental activities, the role of society in utilizing ecological objects in environmental conservation activities is well known that some of the society is still less involved in the exploitation of tourist objects that exist at Mansinam island tourism, so it can be said that the people of Mansinim Island have not exploited the touristic potential that exists in the environmental activity and utilizing the natural resources available in the area.

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