International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.

https://ijpsat.org/
Vol. 46 No. 2 Sptember 2024, pp. 653-656

Review Article: Mangrove Ecotourism Development Potential

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Abstract— Indonesia's coastal areas have a variety of habitat typologies and high biota diversity. The development of mangrove ecosystem potential can play a direct role in the state of coastal ecosystems. Mangrove ecosystems have potential ecotourism attraction objects to support ecotourism development. The purpose of this article review is to find out how the potential of mangrove ecosystems in improving the management of ecotourism areas in several Indonesian mangrove ecosystem locations. The method used in writing this journal is a literature study. Determination of land suitability for tourism areas with parameters of mangrove thickness, mangrove density, mangrove type, tides, and biota objects. structure and community analysis and biota analysis are needed as one of the considerations for developing ecosystems because the analysis can provide information related to the condition of the mangrove ecosystem.

Keywords— Mangrove Ecosystem, Ecotourism, Suitability For Tourism

I. INTRODUCTION

Indonesia's coastal areas have a variety of habitat typologies and high biota diversity, so coastal and marine resources are very strategic to develop (Agussalim and Hartoni 2014). Mangrove ecosystem is one of the potential ecosystems to be developed as an ecotourism area (Agussalim and Hartoni 2014). Mangrove ecosystems are transitional ecosystems between land and sea that have enormous roles and functions (Prihadi et al. 2018). Mangrove forests have socio-ecological, socio-economic, and socio-cultural functions. The ecological function of mangrove forests is primarily to protect the coastline and life behind it from tsunamis and wind, prevent salination, and as a habitat for aquatic biota (Sawitri et al. 2013). The economic function of mangrove forests includes the utilization of forest products, such as building timber, firewood, paper materials, non-timber forest products, and as a natural coastal tourism area (Kathiresan 2012). The socio-cultural function of mangrove forests is to preserve social relations with local communities, as a place to find fish, crabs, shrimp, and medicinal materials (Sawitri et al. 2013).

The development of mangrove ecosystem potential can play a direct role in the state of coastal ecosystems (Saru 2014). Mangrove ecosystems have potential ecotourism attraction objects to support the development of ecotourism (Agussalim and Hartoni 2014). Ecotourism in mangrove forests is seen to synergize with real forest ecosystem conservation measures (Mulyadi and Fitriani 2012). The utilization of mangrove ecosystems for ecotourism is in line with the changing trends in the interests and motivations of tourist visits from mass tourism for leisure (pleisure) to ecotourism with special interest tourism, namely tourist trips with the motivation to visit to conduct tours in which there are elements of education and conservation (Umam et al. 2015).

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II. RESEARCH METHOD

The method used in writing this journal review is a literature study. Journal searches were conducted through the website https://scholar.google.co.id/ with the keywords used were " Suitability of Mangrove Areas as Ecotourism Attraction Objects". The criteria for articles taken are as follows: 1. Full text 2. Research located in Indonesia 3. Indonesian language.

III. DISCUSSION

Determination of land suitability for tourism areas using Yulianda (2019) guidelines with parameters of mangrove thickness, mangrove density, mangrove type, tides, and biota objects as in table 1. This article aims to find out how the potential of mangrove ecosystems in improving the management of ecotourism areas in several mangrove ecosystem locations in Indonesia. Methods that are widely used are vegetation sampling methods and sampling methods on fauna found in the area. data analysis is carried out in the form of vegetation analysis, fauna diversity analysis and tourism area suitability analysis.

Mangrove ecosystems are unique, diverse and complex ecological systems that function as protectors, buffers and life support on land and sea. Innovative efforts are needed to utilize all the potential of the mangrove ecosystem in this area to improve the welfare of the local community while maintaining sustainability. With the advantages of its natural resource characteristics. According to WWF (2009), ecotourism can be seen as a conservation-based economic alternative because it does not destroy nature, is not extractive and does not have a negative impact on the environment. With ecotourism patterns, people can take advantage of intact natural beauty, culture, and local history without destroying or selling its contents. This is in line with research conducted by Beaumont (2011); Pegas et al. (2013); Shoo and Songorwa (2013); and Widodo et al. (2018), that ecotourism can have a positive impact in the form of economic improvement, conservation, environmental preservation, and empowerment of local communities. According to Gigovic et al. (2016), to reduce the negative impact on the environment caused by conventional (mass) tourism, the concept of ecotourism as a form of tourism is increasingly important because it can contribute to environmental protection and sustainable development of an area. Ecotourism can be a conservation strategy that can open economic alternatives for the community.

In developing mangrove ecotourism, the main step that needs to be studied and identified is the condition and potential of ecotourism in the area. Given that the concept of ecotourism emphasizes the naturalness, distinctiveness and authenticity of natural resources, the criteria/parameters used to determine the suitability of ecotourism land must focus on the condition of the mangrove ecosystem resources. Determination of mangrove ecotourism land suitability is based on the multiplication of weights and scores obtained from each parameter measured (Yulianda 2019).

Table 1. Land Suitability Parameters for Coastal Tourism in the Category of Mangrove

No	Parameter	Bobot	Kategori S1	Skor	Kategori S2	Skor	Kategori S3	Skor	Kategori N	Skor
1	Ketebalan mangrove	5	> 500	4	> 200 - 500	3	50 - 200	2	< 50	1
2	Kerapatan mangrove	4	> 15 - 25	4	> 10 - 15	3	5 - 10	2	< 5	1
3	Jenis mangrove	4	> 5	4	3 - 5	3	1 - 2	2	0	1
4	Pasang surut	3	0 - 1	4	> 1 – 2	3	> 2 - 5	2	> 5	1
5	Objek biota	3	Ikan, udang, kepiting, moluska, reptil, burung	4	Ikan, udang, kepiting, moluska	3	Ikan, moluska	2	Salah satu biota air	1

Based on the matrix, it can be seen the weight of each parameter, where the highest weight is on mangrove thickness, mangrove density and fauna in the area. The weight value represents how important the parameter is to be considered in the development of ecotourism areas.

Table 2. Research results related to the suitability of mangrove ecotourism areas

Researcher	Research Location	Suitability Category
Nugroho (2018)	Muara Kubu Mangrove, West Kalimantan	Suitable
Latupapua (2019)	Siahoni village, East North Buru district,Maluku Province	Suitable
Webliana (2023)	Tanjung Batu Mangrove, Village Sekotong Tengah	Suitable

From the journals that have been collected, it is concluded that structure and community analysis and biota analysis are needed as one of the considerations for developing ecosystems because the analysis can provide information related to the condition of the mangrove ecosystem. whether in a state of damage, moderate damage or quite good. So that later it can be considered to be an ecotourism area.

IV. CONCLUSION

From the review of journals that have been conducted, it can be concluded that with this analysis, ecosystems can be developed because the analysis can provide information related to the condition of the mangrove ecosystem. whether in a state of damage, moderate damage or good enough. So that later it can be considered to be an ecotourism area.

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