

ANALISIS KELAYAKAN PENGEMBANGAN EKOWISATA DI KAWASAN MANGROVE LEARNING CENTRE (MLC) BALUNO, SULAWESI BARAT

[Feasibility Analysis of Ecotourism Development on The Baluno Mangrove Learning Centre (MLC) Area in West Sulawesi]

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ABSTRACT

Mangrove Learning Center (MLC) Baluno is one of the tourist destinations in the mangrove area that can be developed with the ecotourism concept. This study aims to calculate the potential value of the supply and the feasibility index of mangrove ecotourism development in the MLC Baluno area. The method was qualitative research. Data collection was carried out through observation, interviews, documentation studies and literature reviews. Data analysis used a modification of the Operational Area Analysis Development Criteria approach - Natural Tourism Attraction Objects (ADO-ODTWA) of PHKA (Forest Protection and Nature Conservation); and Ecotourism Development Criteria of Damanik and Weber's method. The results of the study showed that the MLC Baluno area has a potential supply value of 2,590 (moderate classification) and is included in the category of being feasible to be developed as an ecotourism area based on the identified feasibility index of 73.89%.

Keywords : ecotourism, feasibility index, mangrove, ADO-ODTWA, MLC Baluno

ABSTRAK

Mangrove Learning Centre (MLC) Baluno adalah salah satu destinasi wisata pada kawasan mangrove yang dapat dikembangkan dengan konsep ekowisata. Penelitian ini bertujuan untuk menghitung nilai potensi penawaran dan indeks kelayakan pengembangan ekowisata mangrove pada kawasan MLC Baluno. Penelitian ini menggunakan metode kualitatif. Pengumpulan data dilakukan melalui observasi, wawancara, studi dokumentasi dan kajian literatur. Analisis data menggunakan modifikasi pendekatan Kriteria Pengembangan Analisis Daerah Operasi – Obyek Daya Tarik Wisata Alam (ADO-ODTWA) PHKA dan Kriteria Pengembangan Ekowisata dari Damanik dan Weber. Hasil penelitian menunjukkan bahwa kawasan MLC Baluno memiliki nilai potensi penawaran sebesar 2.590 (klasifikasi sedang) dan termasuk dalam kategori layak dikembangkan sebagai kawasan ekowisata berdasarkan indeks kelayakan teridentifikasi sebesar 73,89%.

Kata Kunci: ekowisata, indeks kelayakan, mangrove, ADO-ODTWA, MLC Baluno

PENDAHULUAN

Introduction

Mangrove forest is unique ecosystem which has various benefits for human or environment surrounded the forest itself (Muhammad, 2012). Mangrove forest has also high value of the beauty of nature and environment in form of ecosystem components which are consist of vegetation, biota or associated organisms, wildlife, and the surrounding environment. Environmental functions of the mangrove forest that can be get include habitat for small animals, protector of coastal area, provider of nutrients, etc. Besides, mangrove forest has potential as education, research and ecotourism area.

Mangrove ecotourism is a form of tourism that focuses on environmental sustainability, where the aesthetic and natural beauty of mangrove forest and the fauna that live in the forest and surrounding environment are promoted without harming the ecosystem. Ecotourism is defined as responsible travel to the natural area to conserve the environment, maintain the wealth of the local communities, and also involving interpretation and education as the key elements.

Nowadays, the ecotourism is growing rapidly as a potential industry because ecotourism prioritizes highly the education, environmental sustainability, socio-culture and most importantly, it can improve the welfare of the local community. One of the mangrove forest areas which has ecotourism potential is Mangrove Learning Center area of Baluno in Binanga Village, which presenting the beauty of mangrove forest, including the various kind of exotic flora and fauna.

Mangrove Learning Center is a coastal mangrove ecosystem area, where managed initially and independently by the community with the total area of 60 hectares (Anwar, 2014). Mangrove Learning Center of Baluno (MLC Baluno) mangrove ecotourism located in Majene District, West Sulawesi Province, Indonesia, presents mangrove plants that overgrown abundantly the corals, which make it unique substrate structure (Massiseng, *et al.*, 2022). In 2019, MLC Baluno area was declared as Essential Ecosystem Area or EEA (Kawasan Ekosistem Esensial / KEE) by the district head of Majene Regency¹. This EEA is an ecosystem outside nature reserves (suaka alam) and conservation area where support ecologically the life through biodiversity conservation efforts for the community welfare. In development process of the MLC ecotourism area, some efforts have already been constructed include providing several facilities such as toilets, trekking trails, prayer rooms and photo spots to support visitor activities there.

Based on the description above, it needs research that examines the feasibility of the potential of the MLC Baluno ecosystem to support the successful development of mangrove ecotourism there. Therefore, this study aims to asses the value of the potential supply and feasibility of mangrove ecotourism in the MLC Baluno area, Majene Regency.

Research Objectives

This study aims to asses the value of the potential supply and feasibility of mangrove ecotourism in the MLC, Baluno, Majene Regency, West Sulawesi.

LITERATURE REVIEW

Ecotourism

Ecotourism encompasses four basic elements, namely the idea of movement or travel from one location to another, nature-based, conservation, and education (Neil and Wearing, 1999). The concept of ecotourism was presented initially as a reaction due to the mass tourism and unsustainable tourism which caused the ecological damage (Walker and Moscardo, 2014). Therefore, ecotourism aims to bring small groups of people to natural or protected areas to minimize impacts on the physical, social, and cultural environment. In some places, ecotourism plays an important role in community development and also maintains biodiversity (Blumstein, *et al.*, 2017).

Mangrove Ecosystem

The mangrove ecosystem is one of the natural resources of coastal areas that has very large

¹ <https://kehati.or.id/ekowisata-mangrove-keuntungan-dari-kegiatan-rehabilitasi-dan-restorasi/>

functions and benefits both physically, biologically and economically (Yanti, et al., 2022). Mangrove, also called halophytes, are salt-tolerant forest ecosystem and among the most particularly beneficial beachfront living spaces on the planet (Kumari, et al., 2020). Mangrove forests consist of evergreen trees and shrubs, growing mostly in tidal areas, characterized by meandering rivers, coastal lagoons, and various tributaries. (Mohit, et al., 2012). Value and use of mangrove are diverse and essential for Indonesia social-economy coming under mangrove ecosystem use for recreation and other outdoor activities (Kusmana and Sukristijono, 2016).

Ecotourism Development in Mangrove Areas

Mangrove ecosystems development for ecotourism purposes are to to conserve the resources and ecosystems within them, also to function as silvofishery and forestry education (Sambu, et al., 2018). Ecotourism packages to create by considering the visit schedule such as trekking and planting practices for mangrove education (Tau, et al., 2024). Mangrove ecotourism development strategies can also be carried out, through promoting cooperation among related institutions and agencies (Salusu, 2023). Meanwhile, mangroves growth within ecotourism areas is closely related to the wildlife itself (Ewaldo, 2023).

METHODS

Place and Time

The research was conducted in the Mangrove Learning Center (MLC) Baluno tourist area. Administratively, the MLC Baluno area is located in Binanga Village, Sendana District, Majene Regency. This research was conducted from April to December 2023.

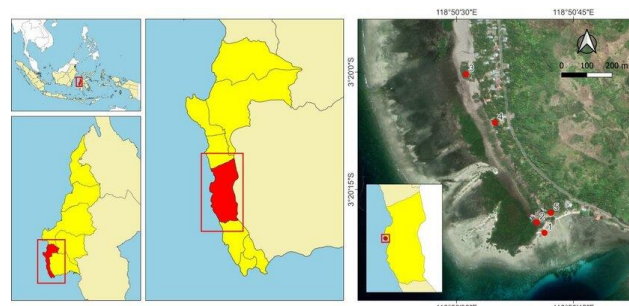


Figure 1. Research location map in Mangrove Learning Center (MLC) Baluno mangrove ecotourism of Sendana Sub-district, Majene District, West Sulawesi Province, Indonesia (Courtesy: [Andi Nur Apung Massiseng, 2023](#))

Tools and Materials

The tools used are questionnaires, interview guides, writing instruments, cameras and laptops, and the materials used was mangrove ecosystems unit in the MLC Baluno Tourism Area.

Data Types and Sources

The data used in this study consists of primary and secondary data. Primary data is real-time data collected directly by researchers to answer problems or research objectives using surveys or observations (Hermawan dan Yusran, 2017; Baker, 2020). Primary data are (1) attractions values elements (natural beauty, uniqueness of resources, integrity of potential, types of prominent natural resources, integrity of resources, sensitivity of natural resources, sensitivity of natural resources, types of tourism activities, cultural attractions, cleanliness of the location and security of the area) and (2) supporting elements (accessibility, conditions around the area, management and services, accommodation and facilities and infrastructure). Secondary data is obtained from various sources including from managers and related agencies. Secondary data composes also administrative maps of the area, socio-economic data of the community around the MLC Baluno area and other information.

Data Collection

Data collection process were conducted through observation, structured interviews and in-depth literature study. Observation was carried out directly at the MLC Baluno area. Structured

interviews using questionnaires were conducted with expert respondents and MLC Baluno managers. In-depth interviews were conducted with key informants consisting of experts, managers of the Mangrove Learning Center (MLC) Baluno area and the Village Government. Literature study was carried out by tracing documents or reports and other references containing relevant information.

Data Analysis

The assessment of ecotourism supply was carried out using scoring and weighting system according the Guidelines for Analysis of Operations and Natural Tourism Attraction Objects (Pedoman Analisis Operasi dan Obyek Daya Tarik Wisata Alam/ADO-ODTWA) of *Forest Protection and Nature Conservation* (Perlindungan Hutan dan Konservasi Alam/PHKA) year 2003 and Ecotourism Development Criteria of Damanik and Weber year 2006. The supply potentials include attraction and supporting elements. Criterion valuation uses the equation (Yuniarti, et al., 2018; Ardiansyah, et al., 2022), as follows:

$$S = N \times B$$

Where;

- S = Score/point of a criteria
- N = Total value of elements in the criterion
- B = Weight value

Determining the classification of potential supply using the following interval calculation:

$$\text{Interval} = \frac{\text{Max Score} - \text{Min Score}}{\text{Total classifications}}$$

The MLC Baluno's ecotourism supply assessed into low, medium and high classifications (Table 1).

Table 1. The score of potential of MLC Baluno's ecotourism

No	Scoring criteris	Maximal score	Minimal score	Interval	Classification
1.	Attractiveness	1.800	600	400	Low: 600 – 1.000 Medium: 1.001 – 1.400 High: 1.401 – 1.800
2.	Accesibility	475	100	125	Low: 100 – 225 Medium: 226 – 350 High: 351 – 475
3.	Surrounding area condition	600	225	125	Low: 225 – 350 Medium: 351 – 475 High: 476 – 600
4.	Management & Service	360	80	93	Low: 80 – 173 Medium: 174 – 266 High: 267 – 360
5.	Accomodation	90	30	20	Low: 30 – 50 Medium: 51 – 70 High: 71 – 90
6.	Facilities and infrastructure	180	60	40	Low: 60 – 100 Medium: 101 – 140 High: 141 – 180
Supply potential classification		3.505	1.095	803	Low: 1.095-1.898 Medium: 1.899-2.701 Tinggi: 2.702-3.505
Supply potential classification		3.505	1.095	803	

Source: Data processed by the author, 2023

Feasibility assessment of the ecotourism supply potential of MLC Baluno was scored based on the ecotourism area feasibility index (Karsudi, et al., 2010), consists of:

1. Feasibility level > 66,6%; the area is eligible to develop

2. Feasibility level 33,3% - 66,6%; the area is not eligible yet to develop
3. Feasibility level < 33,3%; the area is not eligible yet to develop

RESULT AND DISCUSSION

Potential Attraction Assessment

1. Elements of Tourist Attraction Attractiveness

The element of tourist attraction is the main and important component in a tourism product. MLC Baluno has a diversity of flora and fauna. Various types of fauna such as crabs, bats, fish, snakes, shellfish, sea cucumbers and birds. There are 6 species of birds including river kingfishers, sacred kingfishers, sea magpies, pig-billed barbets, stone kites, kepasan kemiri. Flora includes seagrass beds and various types of mangroves such as *Aegiceras cornicalatum*, *Avicennia marina*, *Bruguiera cylindrica*, *Bruguiera gymnorrhiza*, *Camptostemon philipinense*, *Ceriops tagal*, *Lumnitzera littorea*, *Phemphis acidula*, *Rhizophora apiculata*, *Rhizophora mucronate*, *Sonneratia* and *Rhizophora*.

Ecotourism activities that can be done include enjoying the sea and mountain views, seeing the flora and fauna in the mangrove forest and getting the education about the nature. The MLC Baluno area also has an area for mangrove nursery activities.

Cultural attractions that can be enjoyed by visitors in the MLC Baluno area include local culinary menus and dance performances. Dance performances can usually be watched when there are special guests, foreign tourists or visits from government officials. Informants from the MLC Baluno management stated that:

"Usually in the MLC Baluno area, we direct the children around the area to perform dances when there are guests from the government or tourists coming visit to welcome them, and we call it as a form of appreciation for tourists" (Interview with informant, 2023).

Table 2. Assesment of tourist attraction attractiveness of ecotourism in MLC Baluno

No	Assesment criteria	Weight	Score	Points	Classification
1	Natural Beauty	6	20	120	Medium
2	Uniqueness of Resources	6	15	90	Low
3	Integrity of Potential	6	25	150	High
4	Types of prominent natural resources	6	25	150	High
5	Integrity of resources	6	30	180	High
6	Sensitivity of natural resources	6	20	120	Medium
7	Types of natural tourism activities	6	25	150	High
8	Cultural attractions	6	25	150	High
9	Cleanliness of Location	6	10	60	Low
10	Security of the Area	6	20	120	Medium
Aspect value of ODTWA				1.290	Medium

Source: Data processed by the author, 2023

Based on the analysis results, MLC Baluno has a potential tourist attraction value of 1,290 or categorized in the medium classification (Table 2). The elements that categorized as high classification attractiveness are the integrity of potential, types of prominent natural resources, integrity of resources, types of natural tourism activities, and cultural attractions. The elements that categorized as low classification attractiveness are the uniqueness of resources and cleanliness of the location. In this matter, the quality of the attraction is closely related to tourist's interest to visit (Wiradiputra and Brahmanto, 2016). Meanwhile Brahmanto and Hamzah (2021) stated that the quality of natural tourist attractions influences tourist satisfaction and loyalty.

2. Accessibility

The MLC Baluno mangrove forest area is located in coastal area with altitude variations

between 0.0 and 0.16 meters above sea level. Travel time from the provincial capital, Mamuju City to Binanga Village is at least 2-3 hours by land. Based on the analysis results, the potential value of MLC Baluno ecotourism accessibility both situation or distance and duration of the journey is 400 which is categorized as high (Table 3). Meanwhile, the MLC Baluno’s distance to the airport is categorized as medium.

Tabel 3. Assesment of accesibility in MLC Baluno

No	Assesment criteria	Weight	Score	Value	Classification
1	Situation and distance from central city of province	5	40	200	High
2	International and domestic airport gate	5	15	75	Medium
3	Duration of the journey from central city of the provinsi	5	25	125	High
Aspect value of accesibility				400	High

Source: Data processed by the author, 2023

Accessibility to MLC Baluno has classified as high value, because it has already supported by good road conditions, distance that is not too far and short travel time from the provincial capital Mamuju City and district capital Majene Regency. The accessibility aspect influences highly the ease to reach the tourist destination. Therefore, accessibility influences totally tourists' decisions to visit a tourist spot (Astuti, et al., 2018). The accessibility assessment focuses only things such as ease of visiting the tourist destination, availability and type of vehicles, time required, and road conditions (Sumantri, 2019).

3. Conditions Around the Area

The spatial lay out of the area and education get high points, meanwhile the livelyhood and visitor movement space get low points. In terms of conditions around the area, MLC Baluno also has the potential to offer ecotourism development, such as fairly wide space for visitors to move, potential natural resources, and the attitude of the Binanga Village community that supports the ecotourism development.

The unemployment rate which is also included in the aspect of conditions around the area. Based on Central Bureau of Statistics (BPS) of West Sulawesi Province (2022), on August 2022, the education level of Majene Regency reached 2.19%. Most young people were graduated from High School (SMA) and higher education. Some of elderly groups mostly were graduates of Elementary School (SD) and Junior High School (SMP).

The people of Binanga Village generally work as farmers and fishermen. Based on the analysis results, the conditions around the area reached 425 points, and it is categorized in the moderate classification, then it still needs to be improved (Table 4).

Tabel 4. Assesment of surrounding condition of MLC Baluno

No	Assesment criteria	Weight	Score	Value	Classification
1	Spatial lay out of the area	5	30	150	High
2	Livelyhood	5	20	100	Low
3	Visitor movement space	5	10	50	Low
4	Education	5	25	125	High
Aspect value of surrounding condition of the area				425	Medium

Source: Data processed by the author, 2023

4. Management and Services

The management and service aspects in the MLC Baluno area are categorized in the high classification with a total value reaching 280 points (Table 5). This is supported because the management has an organizational institution and a plan to utilize natural tourism objects as a reference in managing MLC Baluno. At the district level, the MLC Baluno area has been designated as a KEE. Although there has been no follow-up to the implementation of the KEE policy, various

activities have been running and managed by the MLC Baluno management. These activities include organizing camping tourism activities, utilizing and planting mangroves, organizing local arts and culture activities, as well as facilitating and collaborating on research with educational institutions.

The management staff have already had good Indonesian language skills. Some of them also have local or mother tongue language skills. This language skill gets only 60 points and categorized as medium. Regarding other services, ability and readiness of hospitality aspects when receiving guests or visitors, and communicating, , are quite good. MLC Baluno as one of the tourist destinations in Majene Regency often receives visits from foreign tourists, include those from France, Africa and Japan.

Tabel 5. Assesment of management and service in MLC Baluno

No	Assesment criteria	Weight	Score	Value	Classification
1	Management	4	30	120	High
2	Language ability	4	15	60	Medium
3	Service	4	25	100	High
Aspect value of Management and Service				280	High

Source: Data processed by the author, 2023

The management is planning the Mangrove Learning Center location not only as a natural tourist attraction but also as a location for doing research. Based on interviews with informants from the management elements, the MLC Baluno area is a learning medium for the wider community so that they know and understand the natural wealth including flora and fauna in MLC Baluno.

5. Accommodation

The potential value of the accommodation aspect is still relatively low (45 points). The number of rooms is a variable assessed in the accommodation aspect. When this study was conducted, no homestays were found that were specifically managed to serve the needs of visitors who wanted to stay overnight. However, for this need, there are community's houses that are usually recommended as places to stay for guests or visitors. This aspect certainly needs attention to develop home stays which creating from the community's houses therefore its value or quality can be increased. According to informants, this is influenced by the number of visits that are uncertain (fluctuating). As a concept and operational aspect, there is suggestion to create acommodation type in a form of valid segmentation criterion, especially when determining in-destination tourist's behaviour (McKercher, et al., 2023). The accomodation structure is an clear aspect on how the visitor characteristic and types in certain periode in a year to maintain its quality which is appropriate with the visitors' expectation (Pjero and Gjermeni, 2019).

Tabel 6. Assesment of accomodation in MLC Baluno

No	Assesment criteria	Weigh t	Score	Value	Classification
1	Accomodation	3	15	45	Low
Aspect value of accomodation				45	Low

Source: Data processed by the author, 2023

6. Visitor Facilities and Infrastructure

There are some facilities in Binanga Village include restaurants, water tourism facilities, cultural tourism facilities (dance cultural studios) and public transportation facilities. The available infrastructure includes roads, bridges, parking areas, electricity networks, drinking water networks, telephone networks, drainage, and docks. Therefore, the potential value of visitor facilities and infrastructure supply is 150 points is categorized as high classification (Table 7). These facilities and infrastructure are the main things that need to be provided in tourist areas in order to fulfill the needs of visitors (Rudiyanto, et al., 2022).

Tabel 7. Assesment of facilities and infrastructure for visitors in MCL Baluno

No	Assesment criteria	Weigh t	Score	Value	Classification
1	Facilities	3	20	60	Medium
2	Infrastructure	3	30	90	High
Aspect value of facilities and infrastructure				150	High

Source: Data processed by the author, 2023

Facilities and infrastructure for visitors at MLC Baluno currently require repair are boardwalk due to some parts are fragile), also cleanliness of toilets and parking areas that are still relatively unorganized. This ensures the comfort of visitors while traveling in the MLC Baluno area.

7. Potential Value of Ecotourism Supply

Based on the analysis of 6 assessment criteria, MLC Baluno has a total value of potential ecotourism supply of 2,590 points, which is categorized as moderate classification. There are three aspects that have a high value classification, namely 1) accessibility, 2) management and services, 3) facilities and infrastructure. In addition, two aspects have a moderate classification value, namely the aspect of the attractiveness of tourist objects and the conditions around the area. Accommodation is an aspect of potential supply that has a low classification with a value of 45 (Table 8).

Tabel 8. Classification of supply potential of ecotourism in MLC Baluno

No	Criteria	Value	Classification
1	Tourist attraction of area	1.290	Medium
2	Accesibility	400	High
3	Condition surrounding tourism area	425	Medium
4	Management and services	280	High
5	Accomodation	45	Low
6	Facilities and infrastructure	150	High
Total		2.590	Medium

Source: Data processed by the author, 2023

Feasibility Value of Ecotourism Development in the MLC Baluno Area

The feasibility assessment is a comparison of the total score of the potential value of the ecotourism supply to the maximum score in each aspect. The analysis results found that there are five aspects included in the feasible category, namely the elements of the attraction of the tourist attraction, accessibility, conditions around the area, management and services, and facilities and infrastructure that are already feasible and ready to carry out. There is one aspect that has not been already feasible yet. Therefore, it needs attention to increase its feasibility index. Overall (from six aspects), the MLC Baluno is feasible to be developed as an ecotourism destination (Table 9).

Tabel 9. Classification of supply potential of ecotourism in MLC Baluno

No	Criteria	Total Score	Maximal Score	Potential Index (%)	Feasibility
1	Tourist attraction of area	1.290	1800	71,67	Feasible
2	Accesibility	400	475	84,21	Feasible
3	Condition surrounding tourism area	425	600	70,83	Feasible
4	Management and services	280	360	77,78	Feasible
5	Accomodation	45	90	50,00	Unfeasible
6	Facilities and infrastructure	150	180	83,33	Feasible
Total		2.590	3505	73,89	Feasible

Source: Data processed by the author, 2023

CONCLUSION

Mangrove Learning Center (MLC) Baluno has potential supply that categorize in high classification elements, they are: 1) accessibility, 2) management and services, and 3) facilities and infrastructure. Aspects with a moderate feasibility category include elements of tourist attraction and conditions around the area. The accommodation aspect has a low potential supply value, then it needs to be prioritized in the ecotourism development of the MLC Baluno.

Overall, the classification of the potential supply of MLC Baluno ecotourism is categorized in the moderate category with a potential value of 2,590 points. There is one aspect that has not been already feasible yet, namely accommodation (feasibility index 50%). However, based on the total feasibility index value, MLC Baluno is categorized in the feasible category (feasibility index 73.89%) to be developed as an ecotourism destination area.

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REFERENCES

- Anwar, A. (2014). Membangun Mangrove Learning Centre dengan Kekuatan Masyarakat Lokal. YPMMD Sulawesi Barat. Majene . Makalah diakses pada 6 Desember 2024 pada: <https://www.slideshare.net/slideshow/membangun-mangrove-learning-center-dengan-kekuatan-masyarakat-lokal/34648100> (Akses 06 Desember 2024).
- Ardiansyah, I dan & Hari Iskandar, H. (2022). Analisis Potensi Ekowisata di Taman Wisata Alam Gunung Pancar Dengan Menggunakan Metode Analisis ADO-ODTWA. *Jurnal Inovasi Penelitian*, 2621-2630.
- Astuti, D.S. & dan Yuliawati. (2018). Faktor Faktor yang Berpengaruh Terhadap Keputusan Kunjungan Wisata di Agrowisata Kabupaten Semarang. *Jurnal Agribisnis Terpadu*, 11(2), 241-259.
- Baker, L. (2020). Data Collection: Getting Started with Statistics. Lee Baker.
- Blumstein, D.T., Geffroy, B., Samia, D.S.M. dan & Bessa, E. (2017). Introduction: Ecotourism's Promise and Peril. In: Blumstein, D.T., Geffroy, B., Samia, DS.M., Bessa, E. (Eds). 2017. Ecotourism's Promise and Peril: A Biological Evaluation. Springer. Switzerland. Hal.3.
- Brahmanto, E. dan & Hamzah, F. (2021). Strategi Pengembangan Kampung Batu Malakasari Sebagai Daya Tarik Wisata Minat Khusus. *Media Wisata*, 15(2) :588-600. <https://jurnal.ampta.ac.id/index.php/MWS/article/view/112>
- Damanik Damanik, J. dan & Weber, H.F. (2006). *Perencanaan Ekowisata: Dari Teori ke Aplikasi* . Penerbit ANDI. Yogyakarta.
- Dirjen PHKA. 2003. Pedoman Analisis Daerah Objek Daya Tarik Wisata Alam (ADO-ODTWA). Pdf In *Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam (Directorate General of Forest Protection and Nature Conservation)*. Jakarta.
- Ewaldo, K., Karuniasa, M., Takarina, N.D. (2023). Carrying Capacity of Mangrove Ecotourism Area in Pantai Indah Kapuk, North Jakarta, Indonesia. *Biodiversitas*. 24(10): 5809-5819.
- Hermawan, A. dan & Yusran, H.L. (2017). *Penelitian Bisnis: Pendekatan Kuantitatif*. Kencana. Depok.
- Kumari, P., Singh, J.K., & Pathak, B. (2020). Potential contribution of multifunctional mangrove resources and its conservation. In: Patra, J.K., Mishra, R.R., & Thatoi, H. (2020). *Biotechnological Utilization of Mangrove Resources*. Charlotte Cockle. https://www.google.co.id/books/edition/Biotechnological_Utilization_of_Mangrove/YdPVDwAAQBAJ?hl=en&gbpv=1&dq=mangrove+ecosystem+is&printsec=frontcover
- Kusmana, C. & Sukristijiono. (2016). MANGROVE RESOURCE USES BY LOCAL COMMUNITY IN INDONESIA. *Jurnal Pengelolaan Sumberdaya Alam dan Lingkungan*, 6(2), 217-224.

- <file:///C:/Users/ASUS/Downloads/MangroveResourcesUsesbyLocalCommunityinIndonesia.pdf>
- Massiseng, A.N.A., Tuwo, Aa., Fachry, M.E., & Bahar, A. (2022). Characteristics of plastic waste and perceptions of coastal communities in the Baluno mangrove ecotourism area, West Sulawesi, Indonesia. *Biodiversitas*, 23(12), 6262-6272.
- McKercher, B., Prideaux, B., & Thompson, M. (2023). The relationship between accommodation type and tourists' in-destination behaviour. *Tourism Recreation Research*, 1–10. <https://doi.org/10.1080/02508281.2023.2221070>.
- Mohit, K., B, C.H., Rajawat A.S. dan Ajai. 2012. Application of Remote sensing and GIS Techniques in Understanding Change in Mangrove Cover in Parts of Indus Delta Around Kori Creek, Gujarat, India.
- Muhammad, F. (2012). Model Ekowisata Kawasan Hutan Mangrove Berbasis Daya Dukung Fisik Kawasan dan Resiliensi Ekologi. *Disertasi*. Bogor: Institut Pertanian Bogor. Bogor.
- Neil, J. dan Wearing, S. 1999. Ecotourism: Impacts, Potential and Possibilities. <https://www.google.co.id/books/edition/Ecotourism/qpYPA3hFmuUC?hl=en&gbpv=1&dq=ecotourism-is&pg=PA7&printsec=frontcover> (Akses 06 Desember 2024).
- Pjero (Beqiraj), E., & Gjermëni, O. (2020). Tourist's Satisfaction in Terms of Accommodation: A Case Study in Vlore, Albania. *Business Perspectives and Research*, 8(1), 67-80. <https://doi.org/10.1177/2278533719860022>.
- Rudiyanto, R., dan Septian, H. (2022). Analisis Potensi Wisata Alam Dengan ADO-ODTWA: Studi Kasus Desa Kempo. *Jurnal Kepariwisataaan*, 21(2), 130-143
- Salusu, F.R. (2023). Strategi pengembangan ekowisata mangrove di Taman Wisata Alam Teluk Youtefa Kota Jayapura. *Jurnal Pariwisata, Bisnis Digital dan Manajemen*, 2(2), 59-65.
- Sambu, A.H., Sribianti, I., dan Chadijah, A. 2018. Model Pengelolaan Mangrove Berbasis Ekologi dan Ekonomi. Inti Mediatama. Makassar.
- Tau, S.M., Carong, S.R. dan and Ritabulan. 2024. Potensi Penawaran dan Permintaan Ekowisata pada Gonda Mangrove Park, Polewali Mandar, Sulawesi Barat. *Jurnal ULIN*, 8(2): 344-356. <https://e-journals.unmul.ac.id/index.php/UJHT/article/view/14483/pdf> (Akses 06 Desember 2024).
- Walker, K., & Moscardo, G. (2014). Encouraging sustainability beyond the tourist experience: ecotourism, interpretation and values. *Journal of Sustainable Tourism*, 22(8), 1175–1196. <https://doi.org/10.1080/09669582.2014.918134>
- Wiradiputra, F.A. dan and Brahmanto, E. 2016. Analisis Presepsi Wisatawan Mengenai Penurunan Kualitas Daya Tarik Wisata Terhadap Minat Berkunjung. *Pariwisata*, 3(2): 129-137. <https://ejournal.bsi.ac.id/ejurnal/index.php/jp/article/viewFile/1561/1159> (Akses 06 Desember 2024).
- Yanti, D.I.W., Paruntu, C.P., Kepel, R.C., dan and Mandagri, S.V. 2022. Ekowisata Mangrove: Bioekologi Mangrove, Keberlanjutan, dan Perencanaan Strategis Pengembangan Kawasan Ekowisata Mangrove Jeflio, Kabupaten Sorong. CV. Ruang Tentor.