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Development Strategy of Babana Mangrove Ecotourism in Larompong Selatan District, Luwu Regency

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Abstract

The mangrove ecosystem in the Babana area has the potential for developing ecotourism activities. This study aims to identify the potential of the Babana mangrove ecotourism in Larompong Selatan District, and to analyze the Babana mangrove ecotourism development strategy in Larompong Selatan District. This research was conducted from May to July 2022 and was carried out in the Babana mangrove ecotourism area, Larompong Selatan District, Luwu Regency, South Sulawesi Province. Data collection was carried out through field surveys and interviews using a questionnaire. The method used in this study was SWOT analysis. The results of this study indicate that the potential for Babana mangrove ecotourism is the uniqueness of the mangrove ecosystem lies in the presence of a rainbow bridge which is the main attraction for Babana mangrove ecotourism. The Babana mangrove ecotourism development strategy has great opportunities but also has weaknesses. The strategy for developing the Babana mangrove ecotourism in Larompong Selatan District, Luwu Regency, is to create complex concepts related to the development of mangrove ecotourism by the interests of visitors and involve the community to participate in it, improve facilities and infrastructure and increase human resources for the development of mangrove ecotourism, increase the attractiveness and cleanliness and safety of ecotourism mangroves, and optimizing promotion and interpretation for visitors.

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Introduction

Indonesia is a country that has many kinds of natural potential. These potentials can undoubtedly be developed to impact Indonesia's tourism industry positively; Indonesia is famous for its various tourism potentials. Starting from its beautiful beaches, green mountains, and many historical relics such as temples are also found in Indonesia, so it is not strange if Indonesia is said to be "Zambrut on the Equator", which is a tourist attraction that cannot be found in other countries, so many domestic and foreign tourists who want to enjoy this natural beauty (Asmaria et al., 2020).

Ecotourism is a concept created for the development of sustainable tourism, which has the aim of supporting efforts to preserve the environment and increase community

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participation in its management to provide economic benefits to local communities and governments, as well as provide opportunities for present and future generations to utilize and develop them. Become a fisheries resource with economic value (Permatasari, 2020; Massiseng et al., 2022; Fachry & Alpiani, 2021).

One of the ecosystems that has the potential to be developed as an ecotourism area is the mangrove ecosystem. The role of the mangrove ecosystem as a place for biota to interact continuously and as a place for sediment storage makes mangrove forests an ecosystem with a high level of productivity with a variety of economic, social and environmental functions (Permatasari, 2020). The mangrove ecosystem is the leading ecosystem that is very productive but vulnerable to changes or external influences. Mangrove ecosystems have multiple functions, namely physical, ecological, and socio-economic. Physically, mangroves can withstand high waves, storms and tides anytime, reducing coastal abrasion. Ecologically, it is a source of germplasm, spawning grounds and nesting sites for marine biota. Socio-economically, mangroves can be used as a cultivation area, to maintain fish species with high economic value, or as a natural tourist attraction in ecotourism development, according to Sulastini (Susi et al., 2018). The development of mangrove ecotourism is an effort to sustainably utilize environmental services from coastal areas. Ecotourism in mangrove forests synergizes with concrete forest ecosystem conservation measures (Mulyadi & Fitriani, 2012). Nonetheless, in practice, ecotourism development in mangrove forests must still be managed by avoiding risks and negative environmental impacts, such as by paying attention to suitability and environmental carrying capacity (Permatasari, 2020).

The development of a tourist village is one of the efforts that can be taken to empower the community and encourage the development of the village's potential, which leads to increasing the community's productivity so that it is more independent. The Regent of Luwu is very urgent for tourism development in the Luwu Regency area, where every village in Luwu Regency is emphasized to develop tourism by utilizing the existing potential. The development of mangrove ecotourism is one of the environmental uses of coastal areas in a sustainable manner. Ecotourism development in mangrove ecosystems can be managed by avoiding risks and negative environmental impacts, such as paying attention to suitability and environmental carrying capacity (Asmaria et al., 2020).

Tembo'e Village is one of the villages located in South Larompong District, Luwu Regency, South Sulawesi, which has a beach called Mangrove Beach Tourism or commonly called Babana Tembo'e Beach. The development of the mangrove tourism area in Tembo'e village uses the budget of the Ministry of Villages (RI Ministry of Villages) and village budget sharing and the Luwu Regency APBD. Tembo'e Village has good enough mangrove potential to be developed into an ecotourism area in Luwu Regency, one of which is the mangrove ecosystem that needs further development.

The objectives of this research are to identify the potential of the Babana mangrove ecotourism in Larompong Selatan District and To analyze the Babana mangrove ecotourism development strategy in Larompong Selatan District. The results of this research can be used as information material and data indicators for interested stakeholders and used for future policy considerations.

Materials and Methods

Time and Location of Research

This research was conducted for ± 3 months, from May to July 2022. The research location was in the Mangrove Ecotourism Area in Tembo'e Village, Larompong Selatan

District, Luwu Regency, South Sulawesi Province. Location and field data collection are presented in Figure 1.

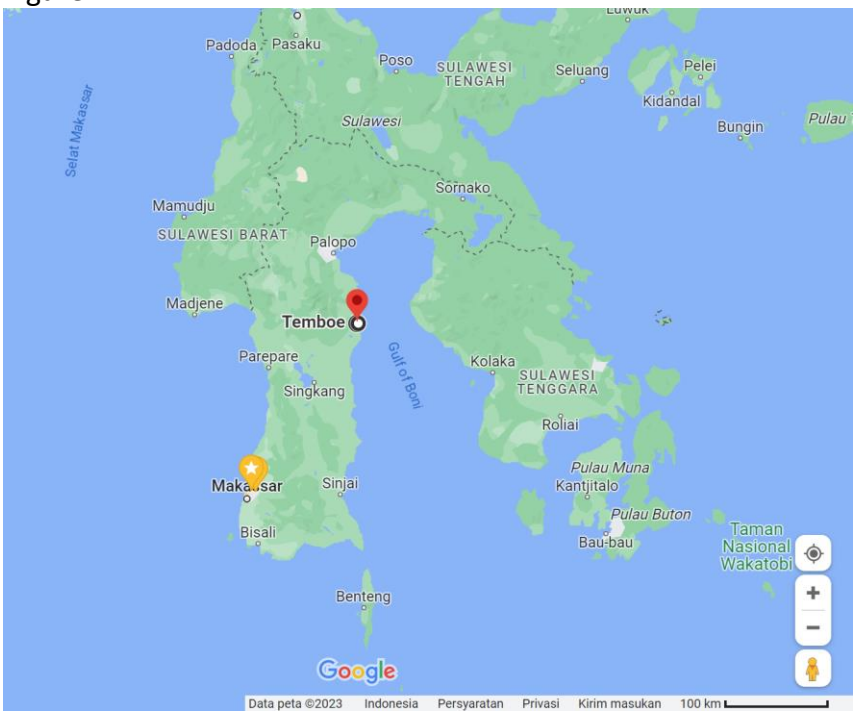


Figure 1. Research Locations

Tools and materials

During this research, the tools used in the field were cameras, recorders, stationery, and several other supporting tools.

Table 1. Tools and materials in research

No	Tools	Utility
1	Kamera	Documenting research activities
2	Recorder	A recording device at the time of the interview
3	Stationery	Record research results

Materials and equipment used in the study consisted of cameras, recorders, and stationery. Cameras are used to document research activities, recorders are used to record the results of interviews with respondents, and stationery is used to record research and interview results with respondents at research locations.

Research Procedure

The procedure in the research was to identify the potential and strategies for Babana mangrove ecotourism through observation, in-depth and structured interviews using questionnaires with community leaders, traditional leaders, village heads, cultural and tourism offices of Luwu district, South Sulawesi province and Babana mangrove tourism managers.

Data Analysis

This research was conducted using survey methods, observation and documentation. A quantitative and qualitative descriptive approach is used to identify the tourism potential of Babana mangroves in the South Larompong District. According to Sumadi (Putri, K.N. et al.,

2020), a descriptive approach is a study based on a systematic, factual and accurate formatted understanding of the objects and facts of a study. The collection of descriptive data includes interviews (interviews) and filling out questionnaires. This method determines the socio-economic and cultural conditions related to the Babana mangrove management in Larompong Selatan District. This analysis stage is also an initial observation that describes the condition of the mangroves and can also describe the problems that exist in the research location. According to Sugiyono (Rizky, 2014), a study using a descriptive statistical approach provides an overview and description of an object to be studied.

Using SWOT analysis, analyze the strategy for developing mangrove ecotourism in Tembo'e village. SWOT analysis is an analytical tool used to derive strategies for an activity (Putri, K.N. et al., 2020). SWOT analysis is an advanced analysis stage. Based on the analysis results from the descriptive approach, the next step is to identify strategic factors to identify SWOT (Strength, Weakness, Opportunity, Threats).

The SWOT analysis steps are as follows:

1. Identify management strategy factors.
2. Identify strengths (S), weaknesses (W), opportunities (O), and threats (T) from the results of the observations made.
3. From the identification results, five points were selected which were considered necessary from each of the SWOT components.
4. Next, determine the strategy to be executed by creating a combined matrix of the four SWOT components. From the results of the combined matrix, we can define strategies in general groups (SW, WO, ST, and WT), which will then be described in a more specific form.

According to Rangkuti (Rizky, 2014), SWOT analysis compares external factors of opportunities and threats with internal factors of strengths and weaknesses. Internal factors are entered into the internal strategic factor matrix or IFAS (Internal Strategic Factor Analysis Summary). External factors are entered into the external strategic factor matrix or EFAS (External Strategic Factor Analysis Summary). After the matrix of internal and external strategic factors has been prepared, the results are entered into a quantitative model, namely the SWOT matrix, to formulate the company's competitive strategy. Next is to determine the weight of internal and external factors according to their level of importance. The sum of all weights must be 1.0. After that, give a rating for each factor based on the answer/response effect. These factors affect the mangrove ecosystem's management in the Babana ecotourism (score: 4 = very good, 3 = good, 2 = not good, 1 = below average). Then multiply the weight with the rating value of each factor to determine the score value and add up all the scores to get the total score. The next stage is data analysis to develop strategic factors, processed as a SWOT matrix. This matrix can clearly describe how external opportunities and threats may arise, as well as adjustments to the strengths and weaknesses possessed. The matrix can produce four possible alternative strategies in detail in the following table:

Tabel 2. Matriks SWOT

IFAS / EFAS	STRENGTH	WEAKNESS
OPPORTUNITY	Strategy (SO) create strategies that use strengths to take advantage of opportunities—used if the manager is in quadrant I.	Strategy (WO) create strategies that minimize weaknesses to take advantage of opportunities—used if the manager is in quadrant III.
TREAT	Strategy (ST) creates a strategy that uses strengths to avoid threats—used if the manager is in quadrant II.	Strategy (WT) creates strategies that minimize weaknesses and avoid threats—used if the manager is in quadrant IV.

The manager's position in the right quadrant means that the manager can make more appropriate decisions, namely:

Quadrant I : The strategy must be implemented to support aggressive policies.

Quadrant II : Using a diversification strategy, the strategy that must be applied is to use power to take advantage of long-term opportunities.

Quadrant III : The strategy must be implemented to minimize internal problems. Quadrant III shows that managers have enormous opportunities, but on the other hand, managers have internal weaknesses.

Quadrant IV : is an unfavourable situation because managers face threats and internal weaknesses.

Results

Identification of Babana mangrove ecotourism potential in South Larompong District

A tourist attraction is "something" that exists at a tourism destination/destination location that not only offers/provides something for tourists to see and do but also becomes a magnet that attracts someone to travel (Pangastuti, W.M, 2017). The main characteristic of a tourist attraction is that it cannot be moved, and to enjoy it, and tourists must visit the place. The attractiveness of the Babana mangrove ecotourism in the South Larompong District can be seen from the potential of the plants and the uniqueness of their ecosystem.

The mangrove ecosystem is a system consisting of organisms (plants and animals) that interact with environmental factors with each other in a mangrove habitat. Bengen (Pangastuti, W.M, 2017) states that the mangrove ecosystem is a tropical coastal vegetation community dominated by several species of mangrove trees that can grow and develop in tidal muddy coastal areas. This vegetation community generally grows in areas protected from big waves and strong tidal currents. Mangrove ecosystems are found on shallow bay beaches, estuaries, deltas and protected coastal areas. From the observations of mangrove plants, several types of mangrove plants were found in the Babana ecotourism area consisting of Rhizophora apiculata (Figure 2), *Sonneratia alba, Rhizophora spp* and *Rhizophora mucronata.*

The uniqueness of the Babana Mangrove ecotourism lies in the presence of a rainbow bridge which is an attraction for tourism. This further beautifies the panorama of the Babana mangrove ecotourism.

Figure 2. Babana mangrove ecotourism rainbow bridge

Community Potential in Developing Mangrove Ecotourism

Tembo'e village consists of 5 hamlets, namely Ponnori, Matali, Simoma, Lambellang, and Tembo'e, of the five hamlets, which border and interacts directly with the Babana ecotourism area, is Tembo'e hamlet. In 2019 the recorded population was 3800 spread across five hamlets, with 700 households.

Community Characteristics

The people interviewed live around the Babana mangrove ecotourism in Tembo'e Hamlet and have activities that can support the development of the Babana mangrove ecotourism. The number of respondents is as many as 30, with details of 23 men and seven women with various educational characteristics (Table 3).

Table 3. Age characteristics of the Tembo'e village community

Age	Amount	Percentage
20-29	2	6,67
30-39	7	23,33
40-49	12	40,00
50-59	6	20,00
60-69	3	10,00
Amount	30	100

Source: Processed from primary data, 2022

Most people's age ranges from 40-49 years, with a percentage of 40%. The age range of 20-29 years is 7%, age 30-39 years is 23%, age 40-49 years is 40%, age 50-59 years is 20%, and age >59 years is 10%.

a. Educational characteristics

In general, public education still needs to be improved. This can be seen from the level of community education. Elementary and equivalent education was 40%, junior high school was 27%, high school was 17%, undergraduate was 7%, and those who did not attend school were 10% (Table 4).

Table 4. The educational characteristics of the Tembo'e village community

Level of education	Amount	Percentage
Elementary school	12	40,00
Junior high school	8	26,67
Senior High School	5	16,66
Bachelor	2	6,66
No school	3	10,00
Amount	30	100

Source: Processed from primary data, 2022

The high percentage of people who have graduated from elementary school and its equivalent indicates that the community is aware of the importance of education. However, this needs to be supported by the culture that develops in society. The culture that has developed in society since long ago was that if there were girls who had graduated from elementary school, they were considered capable of living life. So that if someone proposes to a child, it is taboo to refuse it. This is what causes the decline in the level of education achieved by the people of Tembo'e Village. Some people who are aware of the importance of education prefer to continue their daughters' schooling in the hope that these children will be able to complete higher education so they can rebuild their area again.

b. Job characteristics

Based on the interview results, the characteristics of the community's work are fishermen 30%, farmers 23%, entrepreneurs 17%, civil servants 13%, and others (pensioners, drivers) 13% (Table 5).

Table 5. Characteristics of the work of the Tembo'e village community

Work	Amount	Percentage
Fisherman	9	30,00
Farmer	7	23,33
Self-employed	5	16,67
Government employees	4	13,33
Other	5	16,67
Amount	30	100

Source: Processed from primary data, 2022

Most people in Tembo'e village have their main livelihood as fishermen and farmers who take advantage of the Babana mangrove ecotourism. People usually catch fish and crabs in the mangrove ecotourism area. Community activities utilizing mangrove ecotourism do not make its use their primary job but as additional work. This is because the community is aware of the importance of the role of mangroves in maintaining the balance of nature.

Policy Analysis (SWOT Analysis)

The strategy for developing mangrove ecotourism in Babana, Temboe Village, Larompong Selatan District, and Luwu Regency uses SWOT Analysis (Strength, Weakness,

Opportunity, and Threats). The SWOT analysis stage used in analyzing further data is to collect all information that affects the ecosystem in the study area, both externally and internally.

The results of the field study through the analysis of primary and secondary data were carried out based on research methodology, and stakeholder perceptions, namely the government, in this case consisting of the Village Head, Luwu Regency Tourism Office, local communities who live around the mangrove ecotourism, and visitors, a SWOT analysis was carried out. The first thing to do in this analysis is to identify the internal and external environmental factors that have a real influence on the development of the Babana mangrove ecotourism. Then formulate alternative strategies to obtain the chosen strategy recommended to the Luwu Regency government, especially for stakeholders directly related to Luwu Regency coastal development planning. The following results identify internal and external factors.

Internal and External Factors

a. Internal Factor Analysis

Based on the internal factor analysis of the Babana mangrove ecotourism development strategy in Larompong Selatan District, Luwu Regency, several identified strengths are as follows:

1) Babana mangrove ecotourism has begun to be developed for education-based tourism.
2) The diverse potential of mangrove resources.
3) Babana mangrove ecotourism has been designated as a tourist attraction in Luwu district.

In addition to the potential internal factors that become strengths in the Babana Mangrove Ecotourism Development in Larompong Selatan District, Luwu Regency, several internal factors become weaknesses as follows:

1) Babana mangrove ecotourism is a place that is less well-known than other mangrove ecotourism areas in Luwu Regency, especially tourists from outside the area.
2) South Larompong District has many tourist sites, such as Ponnori Beach. This makes the mangrove ecotourism area less competitive.
3) Much garbage left by the visitors.
4) Lack of understanding of the community and visitors about ecotourism.
5) Lack of maintenance of facilities and infrastructure.

b. External Factor Analysis

Based on the analysis of the external factors of the Babana mangrove ecotourism development strategy in Larompong Selatan District, Luwu Regency, there are opportunity factors that can be utilized to implement their functions and roles. Several identified opportunity factors are related to the development of the Babana mangrove ecotourism, including:

1) Good community participation and support for ecotourism development.
2) The majority of visitors are students in the South Larompong sub-district.
3) The Babana mangrove tourism area is near the Ponnori beach tour.
4) The number of visitors who come on holiday.
5) Natural potential that supports ecotourism activities.

In addition to the potential external factors that become opportunities in the Babana mangrove ecotourism development strategy in the Larompong Selatan sub-district, Luwu district, there are also external factors that become threats, namely, as follows:

1) other tourist objects are more attractive.
2) Negative impacts of mangrove tourism activities (garbage, activities that damage mangroves, etc.).

3) The community needs to be more responsive to the management and promotion of the Babana mangrove ecotourism.

Matrix of Internal Factor Evaluation Strategy (IFAS) and External Factor Evaluation (EFAS). Furthermore, the results of the accumulation of internal and external factors are entered into the IFAS and EFAS matrices to obtain weights, ratings, and scores. The results of the IFAS matrix (Table 10) and EFAS (Table 11) are as follows:

c. Internal Factor Matrix

Table 10. Matrix of internal strategic factors for Babana mangrove ecotourism

No	Internal Strategic Factors Strength (S)	Weight	Ratings	Score
1	Babana mangrove ecotourism has begun to be developed for education-based tourism.	0,15	4,4	0,66
2	The diverse potential of mangrove resources	0,12	3,7	0,444
3	Babana mangrove ecotourism has been designated a tourist attraction in the Luwu district.	0,13	3,9	0,51
	Total Strength	**0,40**		**1,614**
No	**Weakness (W)**	**Weight**	**Ratings**	**Score**
1	Babana mangrove ecotourism is a place that is less well-known than other mangrove ecotourism in the Luwu Regency area, especially tourists from outside the area.	0,12	3,5	0,42
2	Larompong Selatan District has quite a lot of tourist sites, such as Ponnori Beach etc. This makes the mangrove ecotourism area lose the competition.	0,12	3,4	0,408
3	The amount of garbage visitors leave reduces the beauty of the Babana mangrove ecotourism.	0,13	3,9	0,507
4	Lack of understanding of the community and visitors about ecotourism	0,11	3,3	0,363
5	Lack of maintenance of the infrastructure facilities and infrastructure contained in the Babana mangrove tour	0,12	3,4	0,408
	Total weakness	**0,60**		**2,106**
	Total internal factors (IFAS)	**1**		**3,720**

Table 10 shows the Babana mangrove ecotourism development strategy matrix, which has a strength of 1.614 while a weakness indicates a value of 2.106. Where this internal factor has an accumulated value of -0.492. From an internal perspective, the development of mangrove ecotourism is fragile, so it requires strength to change existing strategies. The

results of the accumulation of external factors for the development of the Babana mangrove ecotourism can be seen in the following table:

Table 11. Matrix of external strategic factors for Babana mangrove ecotourism

No	External Strategic Factors Opportunity (O)	Weight	Ratings	Score
1	Good community participation and support for ecotourism development	0,14	4,1	0,574
2	The majority of visitors are students in the South Larompong sub-district	0,11	3,3	0,363
3	The Babana mangrove tourist area is adjacent to the Ponnori Beach tourism	0,12	3,7	0,444
4	The number of visitors who come on holidays	0,12	3,4	0,408
5	The natural potential that supports ecotourism activities	0,14	4,1	0,574
	Total Opportunity			**2,363**
No	**Threat (T)**	**Weight**	**Ratings**	**Score**
1	There are other more exciting tourist objects besides the Babana mangrove ecotourism.	0,12	3,6	0,432
2	Negative impacts of Babana mangrove tourism activities (garbage, activities that damage mangroves, etc.)	0,12	3,7	0,444
3	The community needs to be more responsive to tourism activities in managing and promoting the Babana mangrove ecotourism.	0,13	3,7	0,481
	Total Threat			**1,357**
	Total External Factors	**1**		**3,720**

The external strategy matrix in Table 11 shows that the value of the opportunity component is 2.363, and the threat component is 1.367. From external factors, an accumulation of 1.006 is obtained. This situation can condition that to take advantage of existing opportunities; one must anticipate threats that might occur so that utilization can run as expected.

Based on the calculation results, the strategic position is in quadrant III at point (-0.492, 1.006). The position of the Babana mangrove ecotourism development strategy needs to be analyzed. The analysis in question includes an analysis of the internal and external environment: strengths, weaknesses, opportunities and threats. The four elements must be able to "value" to determine the right strategy to achieve the vision and mission that has been implemented. Quadrant III shows that the situation in the Babana mangrove ecotourism development strategy has enormous opportunities, but on the other hand, it also has internal weaknesses. The strategy that must be carried out in this research is to minimize internal problems.

The SWOT analysis produces four combinations of strategies, namely: 1. Strengths Opportunities (SO) strategy is a strategy that uses strengths to take advantage of

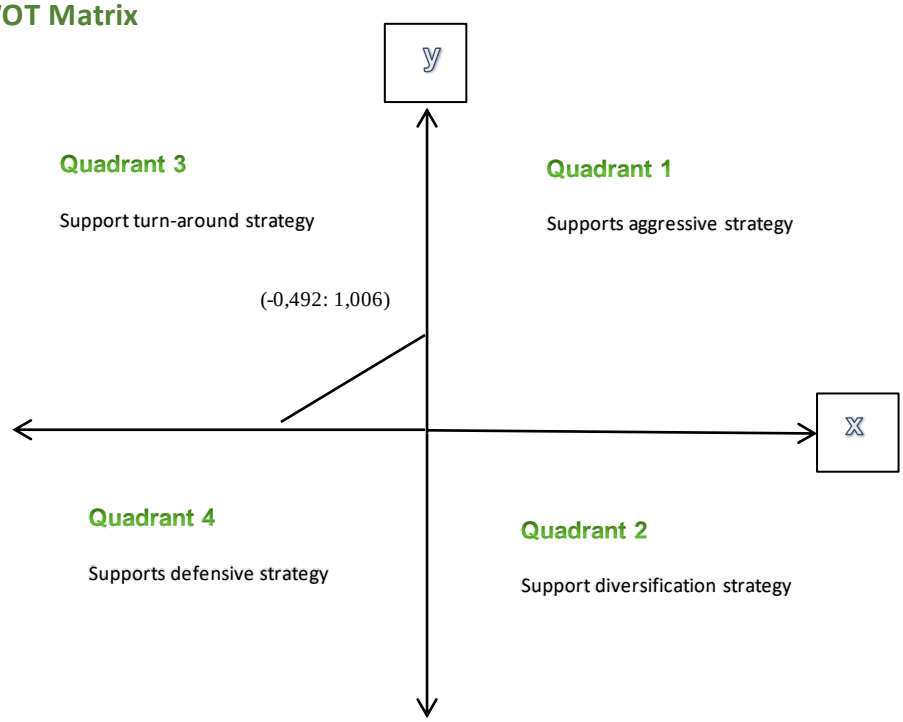
opportunities, 2. Strengths Threats (ST) strategy is a strategy that uses strengths to overcome threats, 3. Weaknesses Opportunities (WO) strategy) is a strategy that minimizes weaknesses to take advantage of opportunities, and 4. The weaknesses Threats (WT) strategy is a strategy that minimizes weaknesses and avoids threats.

Mangrove Ecotourism Development Strategy

After knowing the position from the results of the SWOT matrix analysis, the next step is to determine alternative utilization strategies that will be recommended. The following is a matrix of alternative utilization strategies for mangrove ecotourism areas in Table 4.10. Based on the SWOT matrix analysis results with a combination of internal and external factors, the development of the Babana mangrove ecotourism is in quadrant III (Figure 4.6). By looking at the considerations between opportunities and weaknesses, what is being done is to support the Turn-Around – WO (Weaknesses and Opportunities) strategy, which creates strategies by minimizing weaknesses to take advantage of opportunities.

The strategic steps taken to support the Babana mangrove ecotourism include those presented in Table 4.10 below:

Table 12. SWOT Matrix



	STRENGTH (S)	WEAKNESS (W)
	1. Babana mangrove ecotourism has begun to be developed for education-based tourism 2. The diverse potential of mangrove resources 3. Mangrove ecotourism has been designated as a tourist attraction in the Luwu district.	1. Babana mangrove ecotourism is a place that is not quite as well-known as other mangrove ecotourism in the Luwu district, especially tourists from outside the area. 2. Larompong Selatan District has many tourist sites, such as Ponnori Beach etc. This makes the Babana mangrove ecotoxurism unable to compete 3. Lots of trash left by visitors 4. Lack of understanding of the community and visitors about ecotourism 5. Lack of maintenance of facilities and infrastructure.
OPPORTUNITY (O) 1. Good community participation and support for ecotourism development 2. The majority of visitors are students in the sub-district of South Larompong 3. The Babana mangrove ecotourism area is close to Ponnori beach 4. The number of visitors on holidays 5. The natural potential that supports ecotourism activities	STRATEGY (SO) Develop complex concepts related to the development of mangrove ecotourism by the interests of visitors and involve the community to participate in it.	STRATEGY (WO) Improving facilities and infrastructure, as well as increasing human resources to develop mangrove ecotourism

THREAT (T)	STRATEGY (ST)	STRATEGY (WT)
1. Other tourist objects are more attractive. 2. Negative impacts of tourism activities (garbage, activities that damage mangroves, etc.) 3. The community needs to be more responsive to the management and promotion of Babana ecotourism.	Increase the attractiveness, cleanliness, and safety of the Babana mangrove ecotourism.	Optimizing promotion and interpretation for mangrove ecotourism visitors

By the results of the identification of internal and external environmental conditions that affect the Babana mangrove ecotourism, four strategies can be formulated, resulting in the SWOT matrix that can be carried out to develop the Babana mangrove ecotourism, namely:

1. Strategic S–O, namely by compiling complex concepts related to the development of mangrove ecotourism by the interests of visitors and involving the community to participate in it.
2. The W–O strategy is to improve facilities and infrastructure and increase human resources to develop mangrove ecotourism.
3. The S–T strategy is to increase the attractiveness, cleanliness, and safety of the Babana mangrove ecotourism.
4. The W-T strategy is to optimize promotion and interpretation for visitors.

Conclusion

Based on the research that has been done, it can be seen from the matrix of internal and external factors in the Babana mangrove ecotourism that the results of evaluating internal strategic factors obtained a strength value of 1.614 and a weakness value of 2.106. at the same time, the results of the evaluation of external factors obtained an opportunity value of 2.363 and a threat value of 1.367. So the Babana mangrove ecotourism has more vital external factors than internal ones. The Babana mangrove ecotourism development strategy obtained through SWOT analysis, namely Develop complex concepts related to the development of mangrove ecotourism according to the interests of visitors and involve the community in it; We are improving facilities and infrastructure and increasing human resources to develop mangrove ecotourism, Increasing mangrove ecotourism's attractiveness, cleanliness, and safety; We are optimizing promotion and interpretation for visitors.

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References

Asmaria, A., Akbar, M. F., & Kuswarak, K. 2020. Pemanfaatan Potensi Desa Dalam Pengembangan Desa Wisata Di Desa Pulau Legundi Kecamatan Punduh Pedada Kabupaten Pesawaran. In Prosiding Seminar Nasional Penelitian dan Pengabdian kepada Masyarakat (Vol. 1, No. 1, pp. 413-420).

Fachry, M. E., & Alpiani, A. (2021). A Model of Waste Management in Kapoposang Island South Sulawesi. JURNAL AGRIKAN (Agribisnis Perikanan),14(2), 427-437.

Kusumastanto, T. dkk. 2012. Pengelolaan Wilayah Pesisir dan Laut. Modul Materi Pokok Universitas Terbuka Cetakan Ketiga: Tangerang Selatan.

Mandar, K. P., & Alfira, R. 2014. Identifikasi Potensi Dan Strategi Pengembangan Ekowisata Mangrove Pada Kawasan Suaka Margasatwa Mampie Di Kecamatan Wonomulyo.

Massiseng, ANA., Alpiani A., Ummung A., dan Zaenab S. 2022. Supply Chain of Tuna Fishery Resources (Thunnus sp) in Maumere District, Sikka Regency, East Nusa Tenggara Province. International Journal of Applied Biology, Vol. 6 No. 1, Hal. 123-136.

Nuitja, I. N. S. 2019. Manajemen Sumber Daya Perikanan. PT Penerbit IPB Press.

Nurhidayah, A. 2017. Kajian Kesesuaian Dan Daya Dukung Kawasan Ekowisata Pantai Dan Terumbu Karang Berbasis Masyarakat Di pantai Bangsring Banyuwangi, Jawa Timur (Doctoral dissertation, Universitas Brawijaya).

Pangastuti WM, Arief H, Sunarminto T. 2015. Pengembangan Ekowisata Mangrove Di Pantai Bilik Dan Sejile Resort Labuhan Merak Taman Nasional Baluran, Jawa Timur. Bonorowo Wetlands. Vol. 6, No. 2, Hal. 92–102.

Permatasari, P. 2020. Identifikasi Potensi dan Strategi Pengembangan Ekowisata Mangrove di Desa Balang Baru Kabupaten Jeneponto (Doctoral dissertation, Universitas Hasanuddin).

Putri KN., Asgar MA., & Massiseng, ANA. 2020. Study of potential and development strategy of the Botolempangan Tourist Village in Maros Regency, Indonesia. Agrikan: Jurnal Agribisnis Perikanan, 13(2), 435-448.

Ristilia R. 2019. Aplikasi Pelayanan Jasa Berbasis Android Pada Bidang Perikanan Tangkap Pada Dinas Kelautan Dan Perikanan Provinsi Kepulauan Bangka Belitung (Doctoral dissertation, STMIK ATMA LUHUR).

Rojana ARF., & Muhsoni FF. 2021. Analisis Kesesuaian Ekowisata Pantai di Pantai Gua Manik dan Pantai Benteng Portugis Kabupaten Jepara. Jurnal Perikanan dan Kelautan . Vol 27, No. 1. Hal. 6–11.

Supriadi, B. (2016). Pengembangan Ekowisata Pantai Sebagai Diversifikasi Mata Pencaharian. Jurnal Pariwisata Pesona. Volume 1 No. 1. Hal. 1–20.

Susi, S., Adi, W., & Sari, S. P. 2018. Potensi Kesesuaian Mangrove Sebagai Daerah Ekowisata Di Dusun Tanjung Tedung Sungai Selan Bangka Tengah. Akuatik: Jurnal Sumberdaya Perairan. Volume 12, No. 1, Hal. 65-73.

Yapanto, L. M. 2021. Ekowisata Terumbu Karang. Universitas Negeri Gorontalo, 15pp.

Yuniari, S. H. 2017. Pengelolaan Ekowisata Mangrove Sebagai Penunjang Perekonomian Masyarakat Melalui Pendekatan Ekologi Dan Sosial: Studi Kasus Mangrove Blok Bedul, Resort Grajakan, Taman Nasional Alas Purwo, Banyuwangi. Agrikan. Volume 11, No. 1. Hal. 66–78.