The Ecotourism Development Strategy At Pandang Tak Jemu Mangrove Batam

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Abstract. The Kampung Bakau Serip Tourism Village has the Pandang Tak Jemu Mangrove Ecotourism located in Nongsa, Batam City, Riau Archipelago. Pandang Tak Jemu Mangrove Ecotourism was used as the research location for this thesis. The purpose of this study is to describe the development strategy carried out by three parties. The three parties are the government, ecotourism managers, and local communities. In this study, the method used is a qualitative approach where the data analysis instrument is SWOT analysis. The elements of the SWOT analysis in this study are linked through the development indicators of 4A Tourism Destinations (Attraction, Accessibility, Amenities, Ancillary). All the resulting data were analyzed based on the quality of the data obtained through observation, interviews, questionnaires, and literature review. The data obtained is divided into two main data sections and supporting data, both data are analyzed to obtain the results of the Pandang Tak Jemu ecotourism development strategy from IFAS and EFAS. Results Strength (The strength) of this study the highest is the affordable cost and varied types of mangrove Pandang Tak Jemu Mangrove Ecotourism. Results Weaknesses (weaknesses) of this study are the lack of optimal marketing management and the involvement of third parties in the development of Pandang Tak Jemu Mangrove Ecotourism management. The results of the opportunities from this study are to have opportunities to develop SMEs in Tourism Villages and create jobs for local communities. Results Threats from this research are the inability to manage waste or garbage and policies that do not favor local communities. Therefore, for future researchers, the results of these findings can be used as a reference for more in-depth research so that they become studies that can be used by the government as a consideration for policymakers.

Keywords: Development Strategy, Mangrove Ecotourism, Tourist Destinations, SWOT, 4A.

1 Introduction

Indonesia as an archipelagic country has a very wide coast, especially the Indonesian mangrove forest area, according to published figures 3,489,140.68 ha, located along the coasts of the Indonesian islands, and around 1,817,999.93 ha were damage[13]. Indonesia has a wider ocean than land, where the land consists of mountains, hills, and forests. Forests in Indonesia consist of tropical rainforests, monsoon forests, steppe forests, savanna forests, swamp forests, moss forests, mangrove forests, and mangrove forests [2]. Also known as mangrove forest, is an important ecosystem located between the sea and the coast, which has a rich biodiversity inhabited by various plants and animals. Mangroves or mangroves are also a source of life and livelihood for coastal communities [9]. The Directorate of Coastal and Small Islands Utilization states that the total area of mangroves in Indonesia is 3,364,076 ha, with dense mangroves covering 3,121,239 ha (93%), medium mangroves 188,363 ha (5%), the largest mangroves 54,474 ha (2%). The government has focused on mangrove restoration which is rarely carried

out by the responsibilities, principles, and functions of each ministry/agency [13]. According to the Directorate General of Reclamation, Land Rehabilitation, and Social Forestry, the current level of damage to mangrove forests is 5.9 million hectares, or around 68.8%, of which 1.7 million hectares, or 44.73%, is in the form of forests. While the damage that occurred outside the forest area reached 4.2 million hectares or 87.5 percent [5].

Mangrove forests or mangroves have high economic value and the benefits of millionaires for life. By Government Regulation Number 73 of 2012 concerning the National Strategy for Mangrove Ecosystem Management, Article 1 point 1: National Strategy for Mangrove Ecosystem Management, hereinafter abbreviated as SNPEM, is an effort in the form of policies and programs to carry out sustainable management of mangrove ecosystems and prosperous communities based on available resources [14]. available as an integral part of the national development planning system (Regulation of the President of the Republic of Indonesia Number 73 of 2012, 2012). The damage was mainly caused by the conversion of mangrove forests into cultivation, residential and industrial areas. Meanwhile, in 2021, the Riau Archipelago Province will have mangrove forests covering an area of 68,351 hectares, of which 37,364 hectares are damaged due to land clearing, illegal sand mining, and charcoal logging [8]. In the Strategic Plan (Renstra) of the Riau Islands Provincial Tourism Office for 2021 - 2026 22 important issues will be prioritized in the development of the tourism sector in Batam. Of the 22 problems in the tourism sector, some of them are related to non-optimal management of tourism objects, facility development, health, community readiness, synergy, promotion, human resources, creative economy, and government policies in supporting the development of the tourism sector [12]. Therefore, it is necessary to do mangrove conservation to preserve the existing mangroves. Mangroves and tree canopies provide habitat for birds, insects, and mammals. One form of mangrove conservation is the creation of mangrove ecotourism. Tourism Law No. 9 of 1990 article 1 (5) – everything related to tourism and companies related to this field (Law No. 9 of 1990 concerning Tourism, 1990). Indonesia in general has abundant marine wealth, which includes the life of around 28 thousand species of flora, 350 species of fauna, 110 thousand species of microbes, and around 600 species of coral reefs. The diversity of coral reefs in Indonesia reaches 600 species from 400 generations, far more than in the Red Sea which is only 40 species. There are hundreds of treasure places in the Indonesian seas [19].

Data from the Batam City Tourism Office in 2022, foreign tourists visiting Batam City from January to July 2021 are dominated by Singaporean and Malaysian tourists with a total percentage of 18.75 percent of the total number of foreign tourists from January to July 2021. Room Occupancy Rate (TPK) for star hotels in the Riau Archipelago Province in July 2021 averaged 19.30 percent, down 3.93 points compared to the TPK in June 2021 which was recorded at 23.03 percent. The average length of stay of foreign guests and Indonesian guests at star hotels in the Riau Archipelago Province in July 2021 was 2.01 days, an increase of 0.22 points compared to the average length of stay of guests in June 2021[3].

In Batam, there are several findings that destination owners have used mangroves as a tool to attract domestic and foreign tourists. Such as Kampung Terih and Bakau Serip Nongsa Pandang Tak Jemu which are tourism-based using mangroves as the main dish. Based on Edi's information above, only the Serip Nongsa Pandang Tak Jemu Mangrove Tourism is included in the 50 best tourist villages in Indonesia [6]. To restore mangrove forests so they don't become extinct, President Joko Widodo has planted 49,500 mangrove trees with 500 environmental activists in Batam. Mangrove planting itself was carried out on a 15-hectare land, which is located at Setokok Village, Bulang District, Batam City. That is why Mangrove Ecotourism has

its charm in the tourism sector. In addition to improving the welfare of the surrounding community, it also has an impact on the balance of nature. Based on the background discussion above, the problems that will be studied in this study can be formulated, namely: How is the development strategy carried out by the Pandang Tak Jemu Batam Mangrove Ecotourism manager using the SWOT analysis approach? What are the IFAS and EFAS matrices for Managers in the Mangrove Ecotourism development strategy? Gazing at Batam without boredom? and What is the sustainable development strategy (4A) in Pandang Tak Jemu Batam Mangrove Ecotourism?

Based on the discussion of the problem formulation described above, the objectives to be achieved in this study are as follows: Knowing the development strategy carried out by the Pandang Tak Jemu Batam Mangrove Ecotourism manager using the SWOT analysis approach, Knowing the IFAS and EFAS matrices for Managers in the Mangrove Ecotourism development strategy Pandang Tak Jemu Batam and Knowing sustainable development strategies (4A) in Pandang Tak Jemu Mangrove Ecotourism Batam.

1.1. Development Strategy

Strategy development can be understood as an overall effort, that must receive support from senior management that is used to improve the efficiency and health of the organization through the use of several intervention techniques by applying insights from behavioral science [17]. As explained in the definition of growth strategy, the process of improving organizational performance by integrating individual desires for growth and the development of organizational goals is also defined as strategy development. A development strategy is a method or strategy used by a forum or place to deal with a planned change that requires the support of all parties, including managers and employees [10]. Some experts consider the use of this indicator to ignore the pattern of distribution of national income, consisting of economic structure, urbanization, savings rate, and Quality of Life index [4].

1.2. Ecotourism

Ecotourism is a tool for sustainable development that provides long-term benefits in social, environmental, and economic aspects and is a priority in development. In addition, ecotourism is an effort to promote responsible tourism objects, make a positive contribution to the environment, and improve the welfare of local communities [1]. For ecotourism types according to Yoeti (1997) in [7], depending on the type and number of visitors to tourism facilities and infrastructure, ecotourism is divided into several types, namely: independent ecotourism, small group ecotourism, and hard and soft ecotourism.

Tourism potential is capital owned by a region or tourism aspect, which is used for economic interests, without forgetting the cultural aspect. The attraction is deliberately prominent and has the character of a tourist attraction. In general, tourism potential can be divided into two, namely: 1. Site Attraction Places that serve as tourist attractions and natural settings. In this case, it refers to the physical conditions of tourist attractions which may be superior to other tourist attractions. 2. Event Attraction An interesting event that can be used as a tourist activity, such as holding exhibitions, religious ceremonies, art festivals, congresses, and so on. Ecotourism indicators have three basic concepts that are most suitable for ecotourism, one of which is; Tourism in the open (outdoor), Services using tour guides, and tourism trips that prioritize the natural environment and local indigenous culture Mangrove.

1.3. Definition of Mangroves

Mangroves have important functions and benefits for land and sea. Physically, mangroves act as wave and wind absorbers, protect against abrasion, retain mud and trap sediment, dampen or neutralize increased salinity, precipitate silt so that mangrove land can grow, and prevent and protect against the threat of coastal erosion. The types of mangroves are as follows: *Sonneratia alba, Avicennia alba, Rhizopora apiculate, Aegiceras corniculatum*

Tourist Destination Development Theory

In the development of an ecotourism destination, the researchers used the 4A approach. The selection of this theory is close to the results of previous research, according to the conditions and place of research being carried out. The 4A theory consists of: Attraction: Tourist attraction is a form of cultural activity, natural beauty, and events that encourage tourists to visit (Nurbaeti et al., 2021) and is the main product of a destination that can attract tourists. Amenities: Mason (2000) and Poerwanto (1998) stated that amenities refer to facilities used to obtain pleasure, for example: accommodation, cleanliness, and hospitality (tangible and intangible products). Accessibility: Accessibility is the ability to provide tourists with the ability to access a tourist destination, including travel to all destinations [16], a means of transportation that facilitates visitors approaching tourist destinations. Ancillary: According to Utama & Bagus, (2016) ancillary is an organization that organizes tour trips including tour guides, ticket bookings, travel agents, ticketing, and availability of information centers [19].

1.4. Tourist Destinations

Explained that tourism is simply defined as the journey of a person or group of people from one place to another in a planned manner within a certain period, with the aim of recreation, and entertainment to achieve desires[11]. The activities provided by ecotourism with an endless gaze consist of: Educational Tours, Tourism Villages, and Serip Old Village. Diagram. 1. Main Framework

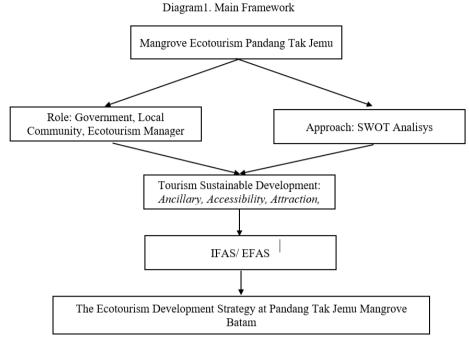


Fig 1. Flowchart

2 Research Method

2.1 Research design

The cross-check method is a technique used in qualitative research to test and determine the validity by analysis from different angles. The validity of quantitative research is assessed based on the accuracy of the measuring instrument, namely the measuring instrument. Value in qualitative research refers to whether the research results accurately reflect the situation and are supported by evidence [15]. Data Collection Techniques in terms of methods or methods of collection can be done through interviews, questionnaires, observation, and review of documentation. It is explained that the data analysis method is the process of systematically searching and summarizing data obtained from interviews, observations, surveys, and documentation, organizing data into categories, breaking into units, synthesizing, compiling into template categories, selecting things important things, and will be studied, and draw conclusions. The results of the data from the interviews were analyzed to consider statement items and questions to identify respondents and development strategy research variables using SWOT analysis. All data analyzed is divided into two parts, qualitative data such as descriptions of respondents and respondents' answers, while quantitative values or numbers are represented as answer choices, including; strongly agree is 5, agree is 4, neutral is 3, disagree is 2, strongly disagree is 1. The sample data collection method in this study is a non-probability or convenience sampling method. Sampling by convenience sampling means that the researcher determines it himself based on considerations by the researcher [18]. Therefore the researcher got a repressive sample to be used as the respondent of this study as many as 8 people. The data analyzed is all that has been selected based on the quality of the respondents. There are two types of data analyzed, the first is the main data where the researcher chooses to be 8 respondents from 19 respondents. The second data is supporting data from 11 respondents. The respondents in this study describe that the highest percentage value is 29% working as private employees and 14% as academics, students, and entrepreneurs. Diagram 2. Respondent Description Result

Respondents

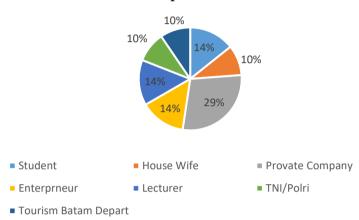


Fig 2. Respondences

SWOT analysis of respondents who were considered to have quality answers given through the Google form questionnaire consisted of seven respondents, the eight respondents consisted of number one as Deputy Director I for Academic Affairs, number two Head of Student Affairs, number three Batam City Tourism Office, number four Staff Cooperation, number five Deputy Director III for Cooperation, Student Affairs, Public Relations, number six Secretary for the Culinary Management Study Program, number seven Secretary Puslitabmas, number eight Secretary for the Internal Quality Assurance System.

Discussion

Based on the SWOT analysis of the questionnaire, the analysis of the main respondent's data resulted in a sequence of questionnaire items from 1 to 19. From SWOT 4A analysis on ancillary, accessibility, attraction, and amenity points, there were 19 statement items given to respondents. As shown in Table 4.10. The results of the SWOT analysis of the questionnaire items are based on the development strategy (4A).

Table 4.10. The results of the SWOT analysis of questionnaire items based on the Sustainable Development Strategy -4A.

Table 1. the SWOT analysis

Tourism Sustainable Development - 4A	Item Questions	Total
ancillary	2,3,8,9,12,13,18,19	8
amenity	10,11,14,16,17	5
accessibility	5,7,15	3
attraction	1,4,6	3

3 Result and Discussion

Based on the results of the data analysis, the Internal Factor matrix on the indicators of strengths and weaknesses possessed by Pandang Tak Jemu Mangrove Ecotourism is as follows, in Table 4.16. From this table it is explained that the highest weight in the indicators of strengths and weaknesses lies in item number 5 with a total weight of 0.119, with a rating of 4.625, and a score of 0.552, then number 1 with a total weight of 0.110, with a rating of 4.250, and a score owned by 0.446, then number 2 with a total weight of 0.110, with a rating of 4.250, and a score owned by 0.446, then number 3 with a total weight of 0.110, with a rating of 4.250, and a score owned by 0.446, then number 4 with a total weight 0.110, with a rating of 4.250, and a score of 0.446, and number 6 with a total weight of 0.097, with a rating of 3.750, and a score of 0.363, number 7 with a total weight of 0.087, with a rating of 3.375, and a score of 0.294, and number 8 with a total weight of 0.090, with a rating of 3.500, and a score owned by 0.316, and number 10 with a total weight of 0.097, with a rating of 3,750, and a score of 0,363.

Table 2. Internal Strategic Factor Analysis Summary (IFAS) Matrix

	Table 2. Internal Su		VALUE	•	•	
NO	INDIO	CATOR	TOTAL	BOBOT	RATING	SCORE
1		S 1	34	0.110	4.250	0.466
2		S2	34	0.110	4.250	0.466
3	S	S 3	34	0.110	4.250	0.466
4	3	S4	34	0.110	4.250	0.466
5		S5	37	0.119	4.625	0.552
6		S 6	30	0.097	3.750	0.363
7		W 1	22	0.071	2.750	0.195
8	W	W2	28	0.090	3.500	0.316
9	vv	W3	27	0.087	3.375	0.294
10		W4	30	0.097	3.750	0.363
	TOTAL		310	1.000		3.948

 Table 3. External Strategic Factor Analysis Summary (EFAS) Matrix

NO	IND	CATOR	VALUE TOTAL	BOBOT	RATING	SCORE
			TOTAL			
11		O1	38	0.118	4.750	0.562
12		O2	37	0.115	4.625	0.533
13	O	O3	36	0.112	4.500	0.505
14		O4	37	0.115	4.625	0.533
15		O5	37	0.115	4.625	0.533
16	Т	T1	28	0.087	3.500	0.305
17	1	T2	37	0.115	4.625	0.533

18		T3	36	0.112	4.500	0.505
19		T4	35	0.109	4.375	0.477
	TOTAL		321	1.000		4.486

3.1 Pandang Tak Jemu Mangrove Ecotourism Development Strategy

The main strength in the internal factor of Pandang Tak Jemu mangrove ecotourism is the cost of the ecotourism package offered by Pandang Tak Jemu is affordable, and the main weakness is that Pandang Tak Jemu Ecotourism carries out the marketing process optimally while the main opportunities in external factors arise from Pandang Tak Jemu Ecotourism has opportunities in development UKM Tourism Village and the main threat comes from the unprofessional management of waste/garbage which is a threat to the sustainable development of the Pandang Tak Jemu Mangrove Ecotourism. The results of calculations between the internal and external environment produce an internal environmental value that is more influential than the external environment in managing mangrove ecotourism businesses. The x coordinate is obtained from the difference between strengths and weaknesses. The y coordinate is obtained from the difference between opportunities and threats. Both environments produce positive values so that the quadrant area is in Region I (one) with coordinates (1.158; 1.454). As shown in Table 4.18 Internal Strategic Factor Analysis Summary (IFAS) Matrix. Table 4.18 Internal Strategic Factor Analysis Summary (IFAS) Matrix.

Table 4. Internal Strategic Factor Analysis Summary (IFAS) Matrix

NO INDICATOR VALOL TOTAL BOBOT RATING SCORE 1 S1 34 0.110 4.250 0.466 2 S2 34 0.110 4.250 0.466 3 S3 34 0.110 4.250 0.466 4 S4 34 0.110 4.250 0.466 5 S5 37 0.119 4.625 0.552 6 S6 30 0.097 3.750 0.363 Total Strenght/S 2.779 7 W1 22 0.071 2.750 0.195 8 W2 28 0.090 3.500 0.316 9 W3 27 0.087 3.375 0.294 10 W4 30 0.097 3.750 0.363				VALUE		,,	
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S S4 S4 S4 S4 S4 S5 S5 S5 S5 S7 S6 S6 S6 S6 S6 S6 S7 S7 S7 S7 S7 S7 W1 S7 W1 S7 W2 S8 W2 S8 W2 S8 W3 S7 W3 S7 S7 S7 S8 W3 S7 S8 W3 S7 S7 S8 S8 S8 S9 W3 S8 S9	2		S2	34	0.110	4.250	0.466
4 S4 34 0.110 4.250 0.466 5 S5 37 0.119 4.625 0.552 6 S6 30 0.097 3.750 0.363	3	C	S 3	34	0.110	4.250	0.466
6 S6 30 0.097 3.750 0.363 Total Strenght/S 2.779 7 W1 22 0.071 2.750 0.195 8 W2 28 0.090 3.500 0.316 9 W3 27 0.087 3.375 0.294	4	3	S4	34	0.110	4.250	0.466
Total Strenght/S 2.779 7 W1 22 0.071 2.750 0.195 8 W2 28 0.090 3.500 0.316 9 W3 27 0.087 3.375 0.294	5		S5	37	0.119	4.625	0.552
7 W1 22 0.071 2.750 0.195 8 W2 28 0.090 3.500 0.316 9 W3 27 0.087 3.375 0.294	6		S 6	30	0.097	3.750	0.363
8 W2 28 0.090 3.500 0.316 9 W3 27 0.087 3.375 0.294			Total S	Strenght/S			2.779
9 W W3 27 0.087 3.375 0.294	7		W1	22	0.071	2.750	0.195
9 W3 27 0.087 3.375 0.294	8	W	W2	28	0.090	3.500	0.316
10 W4 30 0.097 3.750 0.363	9	vv	W3	27	0.087	3.375	0.294
	10		W4	30	0.097	3.750	0.363
Total Weakness/W 1.168		Total Weakness/W					1.168
TOTAL S+W 310 1.000 3.948		$TOTAL\ S+W$			1.000		3.948

The way to determine the development strategy is the x-axis in a way, the total score of strengths - the total score of weaknesses, so, the horizontal axis (x) = sub total strengths - sub total weaknesses. Strengths - Weaknesses = 2.779 - 1.168 = 1.611 (x-axis values). So the total of internal factors showing a strong internal position of mangrove ecotourism from the view of Tak Jemu is 1,611. As shown in Table 4.19 External Strategic Factor Analysis Summary (EFAS) Matrix.

Table 5. Eksternal Strategic Factor Analysis Summary (EFAS) Matrix.

	NO INDICATOR		VALUE		RATING	
NO			TOTAL	BOBOT		SCORE
11		O1	38	0.118	4.750	0.562
12		O2	37	0.115	4.625	0.533
13	O	О3	36	0.112	4.500	0.505
14		O4	37	0.115	4.625	0.533
15		O5	37	0.115	4.625	0.533
		Total Op	portunitie/O			2.666
16		T1	28	0.087	3.500	0.305
17	T	T2	37	0.115	4.625	0.533
18	T	Т3	36	0.112	4.500	0.505
19		T4	35	0.109	4.375	0.477
	Total Threats/T					1.820
	TOTAL O+T		321	1.000		4.486

Planning a development strategy for Pandang Tak Jemu Mangrove ecotourism is carried out with the second step of analyzing the opportunities and threats that have been analyzed based on calculated data using SWOT analysis in the external environment. The way to determine the development strategy is the y axis in a way, the total score of opportunities - threats, then, the horizontal axis (y) = sub total opportunities - sub total threats. Opportunity - Threat = 2.666 - 1.820 = 0.846 (y-axis value). So the total of external factors indicating an external position that has a great opportunity in mangrove ecotourism from the view of Tak Jemu is 0.846.

3.2 Matrix Strategy and Evaluation

In the strategy matrix and evaluation of ecotourism, an unsatisfied view is found in an aggressive strategic position. The basis of IFAS analysis is 3.948 and EFAS is 4.4862, this can be illustrated in graph 4.1. Grafik 4.1. Matrix Strategi dan Evaluasi

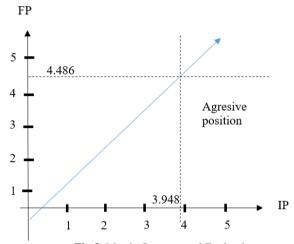


Fig 3. Matrix Strategy and Evaluation

From graph 4.1. Position strategy and evaluation found that the elements of strengths and weaknesses that need to be focused on our financial position (FP). What concerns the financial position of the data analysis is the return on investment, usability, working capital, cash flow, financial inventory turnover, and income ratio in Pandang Tak Jemu mangrove ecotourism. As for the company's position, growth potential, profit potential, financial stability, level of leverage, resource utilization, ease of entry into the market, productivity, and capacity utilization.

4 Conclusions

From the results of this study which have been described in the formulation of the problem to the results and discussion, the researchers concluded that the Pandang Tak Jemu mangrove ecotourism development strategy, namely; The results of the SWOT strategy analysis shows a strategy value (SO) of 5,446, meaning that there are two existing development strategies for Pandang Tak Jemu Mangrove Ecotourism, namely competitive prices and the development of UMKM Tourism Villages in Kampung Bakau Serip. The results of the SWOT strategy analysis show a strategy value (WO) of 3,834, meaning that there are two development strategies in Pandang Tak Jemu Mangrove Ecotourism, namely collaborating with the government, academics and the tourism driving sector in managing marketing management and human resources and maintaining facilities available and regular and measurable waste management. The results of the SWOT strategy analysis show a strategy value (ST) of 4,600, meaning that there are two development strategies, namely maintaining and preserving the existence of Mangrove species and the involvement of

Pandang Tak Jemu mangrove ecotourism managers in government programs, especially management of tourist destinations in Pandang Tak Jemu Mangrove ecotourism. The results of

the SWOT strategy analysis show a strategy value (WT) of 2,988, meaning that there are two development strategies, namely making a training schedule for Pandang Tak Jemu Mangrove Ecotourism managers regarding tourist destination management and educating the people of Kampung Bakau Serip to be aware of the existence of Pandang Tak Jemu Mangrove Ecotourism. The results of the internal factor analysis (IFAS) on the element of strength (strength), which is 2,779, is greater than the weakness (weakness) of the Pandang Tak Jemu Mangrove Ecotourism, namely 1,168. The results of the external factor analysis (EFAS) show that the element of opportunity is 2,666 greater than the threats of Pandang Tak Jemu Mangrove Ecotourism, namely 1,820. In the sustainable tourism development strategy, the manager's priority scale in Pandang Tak Jemu Mangrove Ecotourism for ancillary elements is to have opportunities to create jobs and have an impact on normal and non-formal education related to mangrove tourism. In the sustainable tourism development strategy, the manager's priority scale in Pandang Tak Jemu Mangrove Ecotourism for the amenity element is having opportunities in MSMEs and the role of mangroves in maintaining the balance of nature. In the sustainable tourism development strategy, the priority scale for managers in Pandang Tak Jemu Mangrove Ecotourism for accessibility elements is having opportunities to market products produced by local communities and competitive ecotourism package costs. In the sustainable tourism development strategy, the manager's priority scale in Pandang Tak Jemu Mangrove Ecotourism for the attraction element is the Mangrove Type which is more varied and has a Tourism Village which is the main attraction for visitors.

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