

Study of Potential and Marine Ecotourism Development at Pasir Jambak Beach Padang City

Kajian Potensi dan Pengembangan Ekowisata Bahari di Pantai Pasir Jambak Padang

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ABSTRACT

Marine tourism is a tourism activity based on marine aspects in coastal and marine waters Pasir Jambak Beach is one of the areas that have the potential to be developed into a marine ecotourism object in Padang City. The purpose of this research was to find out the main marine ecotourism object owned by Pasir Jambak Beach, its support capability, and its development strategy. This research was conducted from July to October 2022 at Pasir Jambak Beach, Pasir Nan Tigo Village, Koto Tengah District, Padang City, West Sumatra Province. The method used was a survey method with the observation of the tourism objects that existed at Pasir Jambak beach, measuring the area large which could be utilized and interviewing the tourism businessmen. The results showed that the main marine ecotourism object of Pasir Jambak Beach is the beauty of the beach scenery with clear waters, clean, fine, and sloping sand, and the phenomenon of sunset. The total carrying capacity that can be physically accepted by Pasir Jambak beach is 26,490 people per day with different activities and times. Based on SWOT analysis, the ecotourism development strategy for Pasir Jambak beach is: (1) Development of marine tourism with the concept of ecotourism (2) Increase tourism promotion and improve the quality of human resources through education and training. (3) Form a special team to supervise marine ecotourism development activities, and develop research and conservation potential (4) Organize counseling on the importance of environmental conservation, the dangers of pollution, natural disaster management, and the development of creative industries.

Keywords: Ecotourism Potential, Supporting Capability, Development Strategy

ABSTRAK

Wisata bahari adalah suatu kegiatan pariwisata berdasarkan aspek kelautan yang berada pada kawasan perairan pantai dan laut. Pantai Pasir Jambak adalah salah satu kawasan yang memiliki potensi untuk dikembangkan menjadi objek ekowisata bahari di Kota Padang. Tujuan penelitian adalah untuk mengetahui objek ekowisata bahari utama yang dimiliki oleh Pantai Pasir Jambak, daya dukung dan strategi pengembangan potensinya. Penelitian ini telah dilaksanakan pada bulan Juli – Oktober 2022 di Pantai Pasir Jambak, Kelurahan Pasir Nan Tigo, Kecamatan Koto Tengah, Kota Padang, Provinsi Sumatera Barat. Metode yang digunakan adalah metode survei dengan observasi terhadap objek-objek wisata yang ada dipantai Pasir Jambak, mengukur luas area yang dapat dimanfaatkan serta wawancara dengan pelaku wisata. Hasil penelitian menunjukkan bahwa objek ekowisata bahari utama Pantai Pasir Jambak adalah keindahan pemandangan pantai dengan perairan yang jernih, hamparan pasir yang bersih, halus dan landai serta fenomena matahari terbenam (*sunset*). Total daya dukung yang dapat diterima secara fisik pantai Pasir Jambak adalah 26.490 orang perhari dengan kegiatan dan waktu yang berbeda. Berdasarkan analisis SWOT strategi pengembangan ekowisata pantai Pasir Jambak yaitu: (1) Pengembangan wisata bahari dengan konsep ekowisata (2) Meningkatkan promosi wisata dan peningkatan kualitas sumber daya manusia melalui pendidikan dan pelatihan. (3) Membentuk tim khusus untuk pengawasan kegiatan pengembangan ekowisata bahari, mengembangkan potensi riset dan konservasi (4) Mengadakan penyuluhan tentang pentingnya pelestarian lingkungan, bahaya pencemaran, penanggulangan bencana alam dan pengembangan industri kreatif.

Kata Kunci: Potensi Ekowisata, Daya Dukung, Strategi Pengembangan

INTRODUCTION

Marine ecotourism is a tourism activity based on marine aspects in coastal and marine waters. Pasir Jambak Beach is one of the areas that have the potential to be developed into a marine ecotourism object in Padang City. This beach has its uniqueness compared to other beaches along the coast of Padang City. Pasir Jambak Beach has a stretch of fine sandy beach and sloping and becomes a habitat for turtles to lay eggs; the waves are not too big and along the coastline are overgrown with fir, pine, and coconut trees that face directly to the Indian Ocean. The purpose of the study was to determine the main marine ecotourism objects owned by Pasir Jambak Beach, their carrying capacity, and potential development strategies.

The purpose of this research was to find out the main marine ecotourism object owned by Pasir Jambak Beach, its support capability, and its development strategy.

MATERIALS AND METHOD

This research was conducted from July to October 2022 at Pasir Jambak Beach, Pasir Nan Tigo Village, Koto Tangah District, Padang City, West Sumatra Province. The tools used in the research are a thermometer, weight rope, current drogue, secchi disk, pH meter, handrefractometer, roller meter, GPS, and digital camera, while the materials are seawater samples and questionnaires. The method used in the research is a survey method by observing objects, measuring the area that can be utilized, and interviews. The determination of station locations was carried out by purposive sampling method. This method is used to see the characteristics of each station (3 location points) and is considered to represent the condition of the waters of the study area. At each station, water quality parameters were measured.

Sample selection for interviews was conducted using a purposive sampling method (for tourists, accidental sampling method). The interview sample consisted of local communities, tourists, tourism businesses, and stakeholders. Identification and inventory of potential objects and marine ecotourism activities were carried out by exploring tourism objects and activities. After that, it is associated with the 4A concept (Attraction, amenities, Accessibility, and Ancillary service). Data processing uses beach slope, analysis of the suitability of the beach tourism area, carrying capacity, analysis of visitor comfort, SWOT analysis, measurement of WTA and WTP, and analysis of the economic potential of marine ecotourism. The location of the research station points can be seen in Figure 1.



Figure 1. Location of station points

RESULT AND DISCUSSION

General Situation of the Research Location

Koto Tangah sub-district is the gateway to Padang City from the direction of Minangkabau International Airport, this sub-district has several places that are the object of tourist areas including Pasir Jambak beach tourism, Sawo Island marine tourism, and Lubuk Minturun natural tourism. Pasie Nan Tigo Village has a beach that has its uniqueness compared to other beaches along the coast of Padang City. Pasir Jambak Beach has a beautiful panorama and is a place to enjoy the sunset, has a relatively gentle slope of the beach, the waves are not too big, directly facing the Indian Ocean, and is one of the stopover places for turtles to lay eggs in Padang City.

Water Quality Measurement of Pasir Jambak Beach

Most of the water quality parameters of Pasir Jambak Beach have met the existing standards, such as the Decree of the Minister of Environment No. 51 of 2004 and the suitability matrix for beach tourism (Table 1).

Table 1. Water quality parameters of Pasir Jambak Beach

No	Parameters	Station 1	Station 2	Station 3
1	Water temperature (° C)	32,6	32,4	32,6
2	Water depth (m)	2,21	2,35	2,4
3	Water current speed (m/s)	0,2	0,2	0,25
4	Water brightness (cm)	47,5	49	50,5
5	pH of waters	7,6	7,5	7,7
6	Water salinity (‰)	20	23	20

Based on the measurement of water quality parameters around Pasir Jambak Beach, the temperature obtained ranged from 32.4-32.6°C with an average value of 32.5°C. The water depth of Pasir Jambak Beach ranges from 2.21-2.4 m with an average value of 2.32 m. The current velocity of the waters obtained at the research site ranged from 0.2-0.25 m/s with an average value of 0.225 m/s. Water brightness at Pasir Jambak Beach ranges from 47.5-50.5cm with an average value of 49 cm. Based on the measurement results, the acidity or pH of the waters of Pasir Jambak Beach ranged from 7.5-7.7 with an average value of 7.6. The salinity of the waters at Pasir Jambak Beach ranges from 20-23‰ with an average value of 21.5‰. Based on the quality standard value that is suitable for marine tourism activities, namely the Decree of the Minister of Environment No. 51 of 2004, the salinity condition of Pasir Jambak Beach waters is considered to have met the requirements to be used as a marine ecotourism object.

The potential of Pasir Jambak Beach (Analysis of Tourism Attraction with 4A Concept)

Natural tourism attractions are the main potential owned by Pasir Jambak Beach to attract tourists to visit. The natural tourist attraction is the beauty of the beach scenery. This beach has clear waters and clean and fine sand. In addition, Pasir Jambak Beach is also the right location to watch the sunset phenomenon. Based on this, this beach fulfills the requirements to become a marine destination, namely 3S (Sun, Sea, Sand). Furthermore, Pasir Jambak Beach is also a habitat for sea turtles.

Pasir Jambak Beach has a mangrove forest ecosystem that can be found at the mouths of rivers. Coral reef ecosystems cannot be found along the coast of Pasir Jambak Beach, but if you cross to Sawoh Island, you will find the coral reef ecosystem. In terms of manufactured tourist attractions, there are several attractions at Pasir Jambak Beach, such as swings, float tubes, fishing spots, and turtle conservation buildings.

The facilities available at Pasir Jambak Beach are still inadequate. The facilities found are only in the form of simple food and beverage stalls. The absence of modern food and beverage businesses such as cafes is due to their management which is only carried out by the local community. Lodging businesses have not yet been found. The availability of transport that reaches Pasir Jambak Beach is still limited. If departing from Padang City, tourists must take public transport in the form of angkot or minibus to the Lubuk Buaya area. Therefore, tourists are advised to bring a private vehicle to travel to Pasir Jambak Beach.

The facilities available at Pasir Jambak Beach are in the form of trading stalls, toilets, mushalla, huts or gazebos, and parking lots. With the condition of these facilities, it can be concluded that Pasir Jambak Beach is not ready to be used as a leading tourist destination. Infrastructure in the form of roads, electricity, clean water, and landfills are already available at Pasir Jambak Beach. The condition of the road to the beach is quite good, but because there is no public transport that goes directly to Pasir Jambak beach, accessibility is still low. Based on this, it can be seen that transferability is still low. The only ancillary service available at Pasir Jambak Beach is the telecommunication network. The organization that manages the Pasir Jambak Beach location does not yet exist, even though it is the organization that should coordinate all activities according to regulations and agreements. Coupled with the absence of rules governing tourism actors, it causes a lack of travel safety at Pasir Jambak Beach.

Beach Slope

The results of measuring the slope of the beach at station 1 are worth 5.52%, station 2 is worth 5.87%, and station 3 is worth 6%. The slope of the beach at the three stations received a score of 4 (S-1) based on the

suitability matrix for beach tourism. Based on the Marine and Coastal Resources Management Project (2004), the slope of the beach at the three stations is included in the sloping category (>2-8%).

Regional Suitability Analysis of Beach Tourism Areas

Analysis of the suitability of the beach tourism area was carried out by considering ten parameters. For more details about the analysis at Pasir Jambak Beach, it can be seen in Table 2.

Table 2. Analysis Suitability of beach tourism

No.	Parameters	Score (N)			Weight (B)	Total Score (NxB)		
		I	II	III		I	II	III
1.	Water depth (m)	4	4	4	5	20	20	20
2.	Beach type	4	4	4	5	20	20	20
3.	Beach width (m)	4	2	4	5	20	10	20
4.	Water bottom material	3	3	3	4	12	12	12
5.	Water current (m/s)	4	4	4	4	16	16	16
6.	Coastal Slope (%)	4	4	4	4	16	16	16
7.	Water brightness (%)	2	2	3	3	6	6	9
8.	Coastal landcover	4	4	4	3	12	12	12
9.	Harmful biota	4	4	4	3	12	12	12
10.	Freshwater availability (km)	4	4	4	3	12	12	12
Land Suitability value for beach tourism (Ni)						146	146	139
Maximum IKW value for Beach tourism (Nmaks)						156		
% IKW Pasir Jambak beach for tourism [(Ni/Nmaks) x 100%]						93,59	93,59	89,1

Based on Table 2, it can be seen that the land suitability value for beach tourism activities at Pasir Jambak Beach ranges from 89.1-93.59% with an average value of 92.1%. The highest suitability value is found at stations 1 and 2, which is 93.59%, while the lowest suitability value is found at station 3, which is 89.1%. According to Yulianda (2007), the three station locations are included in class S-1 (highly suitable) as an area for beach tourism activities.

Supportability of Pasir Jambak Beach Area

Based on the results of interviews with tourists who are visiting Pasir Jambak Beach, the results of the carrying capacity based on tourist activities are shown in Figure 2.

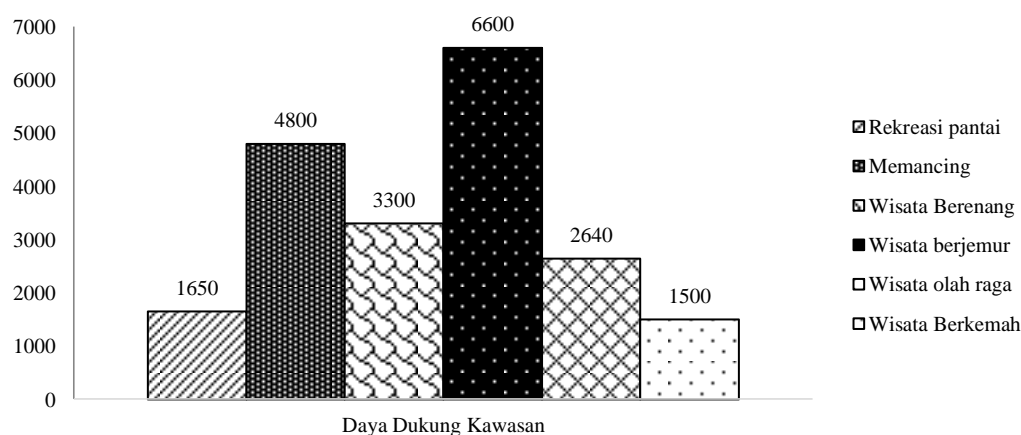


Figure 2. Carrying capacity of Pasir Jambak beach based on tourist activity

Based on Figure 2, it can be seen that the maximum number of visitors that can be physically accommodated by Pasir Jambak Beach at certain times and activities is 26,490 people per day.

The Potential of Marine Ecotourism at Pasir Jambak Beach Based on SWOT Analysis

Determination of the development strategy was carried out after knowing the potential SWOT (Strength, Weakness, Opportunity, and Threat) of marine ecotourism at Pasir Jambak Beach (Table 3).

Table 3. SWOT analysis

Internal External	Strength (S) 1. Potential natural and Coastal tourism attractions 2. Authenticity and naturalness of the beach 3. Research and conservation potential 4. The hospitality of the local community	Weaknesses (W) 1. Lack of tourist information and promotion 2. Weak ecotourism facilities 3. Lack of local community knowledge about marine ecotourism 4. Weak tourism business creativity
Opportunity (O) 1. Create jobs, increase people's income, and PAD (regional Original Revenue) for the government 2. The welfare of the local community is improved 3. Increased tourist interest in marine tourism	SO Strategy 1. Development of marine tourism with the concept of ecotourism 2. Creating jobs and preserving nature	WO Strategy 1. Increase national and international tourism promotion 2. Construction of tourist support facilities 3. Improving the quality of human resources through education and training
Threats (T) 1. Potential environmental changes 2. Lack of order among travelers 3. Existence of similar tourism concepts in areas that are not far apart	ST Strategy 1. Form a team that controls marine ecotourism activities to minimize threats that cause environmental 2. Develop research and conservation potential	WT Strategy 1. Counseling on the importance of environmental conservation, the danger of pollution, and natural disaster mitigation 2. Development of creative industries as an additional attraction for tourists, such as holding traditional art performances several times a year

Strength-Opportunity (SO) Strategy

The first strategy is the development of marine tourism with the concept of ecotourism. Pasir Jambak Beach has natural conditions and beaches that are still maintained in their authenticity and naturalness, the hospitality of the local community, and is a turtle habitat. The second strategy is to create jobs and preserve nature. The first step taken by the government is to develop the potential and construction of marine ecotourism facilities.

Weakness-Opportunity (WO) Strategy

The first strategy is to increase national and international tourism promotion. Tourism promotion that is widely pursued at this time is through the website so that more recipients of the information. The second strategy is the development of tourist support facilities (especially lodging). The construction of facilities should display special characteristics (unique) so that it can be an added attraction for tourists compared to similar tours elsewhere. The third strategy is to improve the quality of human resources through education and training.

Strength-Threat (ST) Strategy

The first strategy is to form a special team for supervision of marine ecotourism potential development activities involving government agencies, the private sector, environmental NGOs, the community, and volunteers for the supervision of marine ecotourism potential development activities, the second is to develop the potential for research and conservation in the Pasir Jambak beach area.

Weakness-Threat (WT) Strategy

The first strategy is counseling on the importance of environmental conservation, the dangers of pollution, and natural disaster management. Intensive counseling to the local community can be an alternative to reduce the potential for environmental damage and minimize the danger of natural disasters. The second strategy is the development of creative industries (souvenirs and typical food) as an additional attraction for tourists. The existence of a handicraft industry (souvenirs) and souvenirs in the form of typical food will increase the interest of tourists to come to visit.

Measurement of Willingness to Accept (WTA) and Willingness to Pay (WTP)

The average value of the willingness of local communities (tourism businesses) to receive compensation for providing goods and services to visitors is IDR78.800,00 and the average value of visitors' willingness to pay

for goods and services is IDR78.800,00. The value of visitors' willingness to pay for tourism goods and services is the same as the value expected by the community

Analysis of the Economic Potential of Marine Ecotourism at Pasir Jambak Beach

The economic potential value of marine ecotourism at Pasir Jambak Beach in one year is IDR 1.970.000.000,00. This value is the result of multiplying the average value of WTP per individual visitor by the number of tourists who come to Pasir Jambak Beach in one year. The value of the economic potential of marine ecotourism illustrates that the contribution of tourist visits can provide an increase in income so that community welfare improves.

CONCLUSION

The main attraction of Pasir Jambak beach is the beauty of the beach scenery with clear waters, smooth and sloping sand beaches and the phenomenon of sunset, and the presence of turtles that come to lay eggs. Based on the calculation of the carrying capacity of Pasir Jambak beach can accommodate as many as 26,490 people per day at different times and activities. Based on the SWOT analysis, the development strategy of the Pasir Jambak beach ecotourism is obtained, namely: (1) Development of marine tourism with the concept of ecotourism (2) Increase tourism promotion and improve the quality of human resources through education and training. (3) Form a special team to supervise marine ecotourism development activities, and develop research and conservation potential (4) Organize counseling on the importance of environmental conservation, the dangers of pollution, natural disaster management, and the development of creative industries.

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