

Strategy of Developing Green Talao Park Marine Tourism Object in Nagari Ulakan Padang Regency, Pariaman, West Sumatra

Strategi Pengembangan Objek Wisata Bahari Green Talao Park Nagari Ulakan Kabupaten Padang Pariaman Sumatera Barat

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Abstract

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Indonesia is a country with enormous tourism potential, boasting more than 17,000 islands and a tropical climate that supports natural beauty on land and sea. However, based on data from the World Tourism Organization, the number of foreign tourists visiting Indonesia is still low compared to other countries such as Malaysia, Thailand, and Europe. This shows that Indonesia's tourism management has not been optimized. This study aims to identify and formulate a strategy for developing potential marine tourism sites in Green Talao Park, Nagari Ulakan, Padang Pariaman Regency. This study uses a qualitative approach with survey and interview methods. They use purposive sampling and accidental methods. The study was conducted by direct observation in the field. The results of this study indicate that the strategy for developing marine tourism in Green Talao is to utilize natural attractions to draw visitors and increase their numbers. Additionally, there is a need to improve the quality of human resources for the management and development of the area. Carrying capacity calculations can provide a maximum limit on the number of visitors that can be accommodated in the area. There is a need for socialization through counseling to provide an understanding of environmental pollution and the impacts of managing and utilizing potential at the Green Talao Park location.

Keywords: Ecotourism, Marine tourism, SWOT

Abstrak

Indonesia adalah negara yang memiliki potensi pariwisata yang sangat besar, dengan lebih dari 17.000 pulau dan iklim tropis yang mendukung keindahan alam di darat dan laut. Namun, berdasarkan data dari Organisasi Pariwisata Dunia, jumlah wisatawan asing yang mengunjungi Indonesia masih rendah dibandingkan dengan negara-negara lain seperti Malaysia, Thailand, dan Eropa. Hal ini menunjukkan bahwa pengelolaan pariwisata di Indonesia belum optimal. Penelitian ini bertujuan untuk mengidentifikasi dan merumuskan strategi pengembangan potensi objek wisata bahari yang perlu dikembangkan di Green Talao Park Nagari Ulakan Kabupaten Padang Pariaman. Penelitian ini menggunakan pendekatan kualitatif dengan metode survei dan wawancara. Teknik pengambilan sampel dalam penelitian ini adalah dengan menggunakan metode purposive sampling dan accidental. Penelitian dilakukan dengan pengamatan secara langsung ke lapangan. Hasil penelitian menunjukkan bahwa strategi untuk pengembangan wisata bahari Green Talao Park dengan memanfaatkan daya tarik yang masih alami sehingga dapat menarik perhatian pengunjung dan meningkatkan jumlah pengunjung. Perlunya meningkatkan

kualitas sumberdaya manusia untuk pengelolaan dan pengembangan Kawasan tersebut. Perhitungan daya dukung dapat memberikan batasan maksimal jumlah pengunjung yang dapat ditampung pada kawasan. Perlunya sosialisasi berupa penyuluhan untuk memberikan pemahaman akan pencemaran lingkungan dan dampak yang ditimbulkan akibat pengelolaan dan pemanfaatan potensi di lokasi Green Talao Park.

Kata kunci: Ekowisata, Wisata Bahari, SWOT

1. Introduction

Indonesia is a country with enormous tourism potential, boasting more than 17,000 islands and a tropical climate that supports natural beauty on land and sea. However, based on data from the World Tourism Organization, the number of foreign tourists visiting Indonesia is still low compared to other countries such as Malaysia, Thailand, and Europe. This shows that Indonesia's tourism management has not been optimized.

Tourist objects are the potential that drives the presence of tourists to a decisive position. Therefore, tourist attractions must be designed, built, and managed professionally to attract tourists (Suwantoro & Rini, 2018). A well-managed tourist attraction will be the main draw due to the uniqueness of its culture, nature, and the richness of its flora and fauna. One of the areas with this potential is West Sumatra, particularly Padang Pariaman Regency. It has various tourist destinations, including Green Talao Park in Nagari Ulakan, Ulakan Tapakis Park District. This 5-hectare area presents the concept of ecotourism, education, conservation, and local culinary experiences (Wulandari & Jannah, 2023).

Green Talao Park is one of the top 50 tourism villages selected for the 2022 Anugerah Desa Wisata Indonesia (ADWI), a program by the Ministry of Tourism and Economy. Despite its strong appeal, the area still faces challenges such as limited infrastructure, a lack of community empowerment, and inadequate accessibility. Therefore, an appropriate and sustainable development strategy is required. Problems that become obstacles from both internal and external factors, such as tourism development in Green Talao Park, include only focusing on development without empowerment, leading to significant infrastructure damage, and accessibility to attractions that remain difficult to reach by public transportation. Therefore, a plan is needed to develop a strategy that can attract investors, allowing it to be further improved and become a leading tour in Indonesia.

Tourism development requires good and appropriate planning techniques. The development technique must combine several aspects of accessibility (transportation and marketing channels), tourism infrastructure characteristics, the level of social interaction, linkages with other sectors, resilience, and the impact of tourism. One of the benchmarks of tourism development is the growth in the number of tourist visits, as an increase in tourists will indirectly lead to the development of supporting tourism facilities and infrastructure in accordance with the service needs of tourists (Pitana, 2009).

The internal factors that can affect the development of attractions include tourist attractions, institutions, promotion, accessibility, and capital/budget. External factors that can affect the development of attractions are competition and government policy. These internal and external factors can affect tourism objects as strengths, weaknesses, opportunities, and threats to tourism object development (Masrurun, 2020). The research objectives are to identify marine tourism sites needing development at Green Talao Park in Nagari Ulakan, Padang Pariaman Regency, and to formulate a marine tourism development strategy for the park.

2. Material and Method

2.1. Time and Place

This research will be conducted in February 2023 at Green Talao Park, which is located on Jl. Sheikh Burhanuddin, Ulakan Tapakis District, Padang Pariaman Regency, West Sumatra (Figure 1). The location of this research was determined purposively (purposive sampling) with consideration of the potential of ecotourism and its very strategic location.

2.2. Methods

This research used a qualitative approach with survey and interview methods. Data were obtained through in-depth interviews with informants, as well as field notes, photos, videos, and a literature review. SWOT analysis is aimed at formulating a development strategy for the Green Talao Park marine ecotourism area based on internal and external factors, including the area's potentials, problems, and threats.

2.3. Procedures

The sampling technique in this study employs purposive and accidental sampling methods. Purposive sampling targets tourist attraction managers/local governments, while accidental sampling focuses on visitors,

business people, and residents around Green Talao Park. The research was conducted through direct observation in the field, utilizing both primary and secondary data. All research activities, such as interviews and documentation, were conducted at the research location. The results of interviews with 20 competent informants, selected through purposive sampling, were used to understand perceptions in planning ecotourism development strategies. The data collection methods used in qualitative research are observation, interviews, documentation, and field notes. Researchers can adjust the data collection techniques to the circumstances at the research location. According to [Sugiyono \(2017\)](#), data collection techniques are the most crucial step in research because the primary purpose is to get data. The researcher will not get data that meets the specified standards without knowing the data collection method.



Figure 1. Research location map

Descriptive analysis is used to identify the potential and constraints in developing the Green Talao Park tourist area. Descriptive analysis is a method to describe the condition of tourist objects, including environmental conditions and existing facilities. Descriptive analysis is a method of formulating and interpreting existing data to provide a clear picture of a tourist attraction's strengths, weaknesses, opportunities, and threats.

To address the second problem formulation, SWOT analysis is employed, an activity to identify the opportunities, threats, strengths, and weaknesses of the company itself. This is very important for the progress and success of a business. SWOT analysis is based on a logic that can maximize strengths and opportunities while simultaneously minimizing weaknesses and threats. SWOT analysis can be applied by analyzing and sorting out various things that affect the four factors, then them in a SWOT matrix image, where the application is how strengths can take advantage of existing opportunities, how to overcome weaknesses that prevent the benefits of existing opportunities, then how strengths can deal with existing threats, and finally how to overcome weaknesses that can make threats real or create a new threat.

After that, proceed with compiling strategic factors using a SWOT matrix and will produce four types of strategies: a) SO (Strengths-Opportunity) strategy, using strengths to take advantage of opportunities; b) ST (Strengths-Threat) strategy, using strengths to overcome threats; c) WO (Weakness-Opportunity) strategy, overcoming weaknesses to take advantage of opportunities; and d) WT (Weakness-Threat) strategy, overcoming weaknesses to deal with threats ([David, 2006](#))

3. Result and Discussion

3.1. Overview of Research Location

Tourist attractions (attractions), accessibility, tariffs, facilities, and tourist information are tour packages that become tourist products that affect tourists' interest in visiting a destination ([Soekadijo, 2000](#)). Green Talao Park is a destination that is quite attractive to visitors, as evidenced by the increasing number of visitors since it opened.

Table 1. Total number of visitors to Green Talao Park

No	Year	Total Number of Visitors
1	2021	73,063
2	2022	78,987

Green Talao Park Nagari Ulakan is a destination of interest due to the following factors: First, accessibility, including convenience, safety, and the time taken, can make it easier for tourists to visit tourist attractions. The easier a tourist destination is to reach, the higher the comfort level for tourists (Dzatin Amira). Green Talao Park is relatively easy to come to by land, whether by two-wheeled or four-wheeled transportation. Second, tariffs are the amount of money that tourists must spend to enter and enjoy the tourist attractions provided. Tourist characteristics by age can be seen in Table 3. The age-based attributes of tourists show that the highest percentage of Green Talao Park visitors are 15-20 years old, while the lowest number is in the 31-35 age group, with only four people (20%).

Table 2. Price list of Green Talao Park Tourism Products, Nagari Ulakan, Padang Pariaman Regency

No	Product and Package Name	Unit	Price (Rp)
1	Parkir motor	Unit	2,000
2	Parkir mobil	Unit	5,000
3	Tiket masuk dewasa	PCS	5,000
4	Tiket masuk anak-anak	PCS	2,000
5	Wahana air	PCS	10,000
6	Praweding	Paket	250,000
7	Video klip shooting	Paket	250,000
8	Booking area	Paket	500,000
9	Mangaca Talao	PCS	75,000
10	Sepeda	Unit	10,000
11	Sewa kamera	Jam	50,000
12	Retribusi food chort	Bulan	20,000
13	Tenda dan sound system	Jam	50,000
14	Pemandu wisata	Jam	25,000
15	Trip pulau pieh	Grup/hari	3,000,000

Table 3. Characteristics of respondents based on age

No	Respondent Characteristics	Criteria	Person	Presentation %
1	Age	-15-20	6	30
		-21-25	5	25
		-26-30	5	25
		-31-35	4	20
	Totally		20	100%

Table 4. Characteristics of respondents based on education

No	Respondent Characteristics	Criteria	Person	Presentation %
1	Education	-SMP	6	30
		-SMA	11	55
		-Sarjana	3	15
	Totally		20	100%

Based on education, it can be seen that six people (30%) graduated from junior high school, 11 people (55%) graduated from high school, and three people (15%) graduated from college. Tourism potential encompasses everything a destination owns that becomes an attraction, making people want to visit it. According to Sukardi (1998), tourism potential encompasses all resources owned by the region as tourist attractions that are useful for developing the tourism industry in the area. Meanwhile, Sujali (Amdani, 2008) states that tourism potential is a skill present in an area that can be utilized for development, such as in nature, human resources, and human labor itself (Fauzi et al., 2020). According to Fauzi et al. (2020), Tourism potential is divided into three types, which are as follows:

Aspects of natural tourism potential, such as the type of flora and fauna of an area, landscapes such as forests, mountains, lakes, and others. Artificial tourism potential is also included in tourist attractions deliberately created by humans, such as resting places, recreational infrastructure, and others. Cultural tourism potential means all creations, emotions, and human involvement in the form of customs, crafts, arts, and historical relics, such as buildings and monuments.

Green Talao Park has natural tourism potential, namely having unspoiled natural beauty such as the expanse of the Talao forest and also a magnificent beach view with its sunset view, both attractions can be enjoyed by tracking along the path that has been provided, so that visitors can enjoy the beauty that is in Green Talao Park, and also in addition to enjoying the scenery, visitors can also learn about the flora and fauna there, for example, such as mangrove crabs and the uniqueness of the Talao tree where everything from fruit to leaves can be processed such as the fruit can be eaten, the leaves can be used as wicker and others. In addition to natural tourism, the Green Talao Park also offers artificial tourism options like tree houses, water rides, and love docks, which visitors can combine to play, take pictures, or relax.

Green Talao Park offers artificial attractions, including tree houses, gazebos, water rides like water ducks and canoeing, and love docks. Because there is still a large area in the Green Talao Park, other tourist attractions can be developed, such as children's games, water rides like water bikes and hanging bikes, parks, outdoor activities, bicycle paths, and other potential rides. Taman Talao Hijau has cultural potential, namely a variety of arts such as Galombang dance, consisting of (Rantak Dance, Piring Dance, Tambua Tasa), which is usually played at wedding ceremonies or welcoming guests. Tambua Tasa aims to capture visitors' attention by creating a lively atmosphere during various traditional and religious ceremonies. Rantak dance features dynamic movements and is inspired by silat. Plate dance is a ritual of gratitude for the community after getting a bountiful harvest.

Green Talao Park has enormous potential to be developed into a more advanced tourist village. Some of the potential areas for development include improving the quality of infrastructure to facilitate accessibility to tourist destinations, adding children's games, and developing adventure tourism, culinary tourism, and shopping tourism. Thereafter, Green Talao Park can be a complete and attractive tour for various groups.

3.2. Development Strategy of Green Talao Park

The development strategies in this study were formulated using SWOT analysis techniques, as [Rangkuti \(2006\)](#) explains that SWOT analysis systematically identifies various factors to formulate a company strategy. This analysis is based on logic that can maximize strengths and opportunities while simultaneously minimizing weaknesses and threats. The decision-making process in this way is carried out by comparing external factors (opportunities and threats) and internal factors (strengths and weaknesses) to determine strategy formulation (strategic planning) to formulate long-term strategies. Identifying strengths, weaknesses, opportunities, and threats in the development of Green Talao Park tourist attractions.

Based on observations made at the research location, there are six strengths in the development of marine tourism objects at Green Talao Park, including its natural beauty. Green Talao Park has a nipa forest with flora and fauna. Fauna that populate the nipa forest, such as white stork, action crab, lokan, mangrove crab, kalong, glodok fish, and others. The flora that inhabits the nipah forest includes ketapang trees, mangroves, lamtaro, nipah, kalimuntung, and others. Providing toilet facilities, prayer rooms, and dining areas is one part of modern tourism standards. Visitors will feel more appreciated and satisfied because their needs are met, which can add value to tourist attractions.

Tourist attractions with adequate parking areas are significant because they provide comfort and safety for visitors. It also affects the level of tourist visits, because parking access is one of the determining factors. The implementation of cashless payment in tourist attractions can increase transaction efficiency, reduce the risk of fraud and corruption, and facilitate financial management. It also increases tourist convenience and supports the adaptation of new habits. Wooden tracks can provide safe and structured access to various points of interest in tourist areas such as forests, parks, or areas with beautiful views.

Gazebos play an important role, especially in enhancing the comfort and attractiveness of tourism. The gazebo functions as a place to rest, relax, and enjoy the view, and can be used for various activities such as taking pictures. Based on the observations made at the research location, there are weaknesses in the development of marine attractions in Green Talao Park, including infrastructure damage, which can affect the number of tourist visits, loss of income from the tourism sector, and damage to the image of tourist attractions. Damaged roads, limited transportation, and inadequate public facilities will discourage tourists from visiting a tourist destination. Creativity from business actors is crucial in attracting tourists to visit Green Talao Park, thereby increasing the economic prospects of business actors. Based on observations at the research location, business actors in the Green Talao Park area primarily sell and offer fast food and drinks. There are no souvenirs sold at Green Talao Park that can be used for souvenir promotions. This is because much of the vacant land around Green Talao Park could be used to make souvenirs, attracting tourists to visit again and providing something to take home. Parking area facilities without parking lines (road markings) can lead to problems in parking management, such as difficulty managing vehicle positions, potential clashes, and reduced land use efficiency. Parking lines help create order and increase parking capacity.

Based on observations made at the research location, there are three opportunities, among others: The existence of Green Talao Park can affect the welfare of the local community. The community can use tourist visits to increase income through buying and selling activities and services for visiting tourists. Through the development of potential tourist attractions at Green Talao Park, it is hoped that it will later increase the interest of tourists who visit. The development of tourist attractions in Green Talao Park can later offer the community insights into managing tourist areas and utilizing existing natural resources. This will enhance the community's creativity in developing the tourist area.

The emergence of threats has had a disruptive effect on the development of attractions in Green Talao Park. It is imperative to acknowledge this phenomenon to ensure the sustainability of tourism. The subsequent list enumerates some of the threats: The rapid growth of the tourism industry at the national and global levels has led to a decline in the number of visitors. The presence of competition invariably offers consumers a multitude of options. Consequently, tourist destinations are compelled to implement competitive strategies to thrive in this environment. The unrestrained development of tourism infrastructure, environmental degradation, and inadequate waste management can inflict harm upon the natural environment, thereby jeopardizing the viability of tourism as a sustainable economic sector.

3.3. SWOT Matrix

The purpose of this research is to develop a strategy for marine tourism development in Green Talao Nature Park. This strategy will be formulated using SWOT analysis, a systematic examination of various factors. This analysis is based on a logical approach that can minimize weaknesses and threats ([Rangkuti, 2006](#)). The SWOT strategy model is used to formulate various available alternative strategies. Green Talao Park has many interesting natural resources to be developed, but the lack of community participation and supporting facilities makes this tourist attraction less appealing to tourists. In developing the Green Talao Park tourist attraction, several development strategies are offered, as seen in the SWOT analysis comparing external and internal factors ([Rangkuti, 2006](#)). This study shows that the strategy for the development of marine tourism at Green Talao Park, Nagari Ulakan, Padang Pariaman Regency, West Sumatra, in general, can be formulated:

The S-O strategy is to leverage all strengths to seize and capitalize on opportunities as much as possible. Based on these strengths and opportunities, an alternative strategy is to utilize natural attractions to capture visitors' attention and increase their numbers, enabling Green Talao Park to become a leading tourist attraction in West Sumatra. Yulianda & Butet (2017) State that ecotourism itself contains important elements based on the natural environment, supports conservation and ethical utilization, provides sustainable socio-economic benefits for the community, maintains cultural integrity, ensures tourist satisfaction is not mass, and includes management that supports all these elements.

Table 5. SWOT matrix

Internal dan Eksternal	Strengths (S)	Weaknesses (W)
	<ul style="list-style-type: none"> Green Talao Park has natural attractions There are toilets, prayer rooms, and places to eat and drink Has a large parking lot Cashless ticket payment Wooden track The existence of a gazebo 	<ul style="list-style-type: none"> Infrastructure damage Lack of creativity from tourism businesses in the local community Parking areas that do not have parking lines
Opportunities (O)	Strategy SO	Strategy WO
<ul style="list-style-type: none"> Affect the welfare of the community Through the development of potential tourist attractions Increased community insight and knowledge of ecotourism 	<ul style="list-style-type: none"> The potential of natural resources around the tourist site is significant. Attract tourists to Green Talao Park with a wooden track around the forest. Clean and a sufficient number of toilets 	<ul style="list-style-type: none"> There is a need for renewed infrastructure development to increase the number of tourists. Enhance the creativity of local tourism businesses to boost the community's economy and make it an attraction through this creativity. Increase the number of places for local people who want to sell food and drinks.
Threats (T)	Strategy ST	Strategy WT
<ul style="list-style-type: none"> Development of other attractions. Damage to the environment. 	<ul style="list-style-type: none"> Provide education to all parties on the utilization of natural resources. Provide strategies (marketing) to businesses through education. Keeping the quality of the track maintained by forming a professional management team. 	<ul style="list-style-type: none"> Increase awareness among all authorities and educate public tourists about maintaining cleanliness and preserving the beauty of the existing ecosystem.

Weaknesses in tourist sites can be minimized by taking advantage of existing external opportunities. The lack of infrastructure development, such as the construction of public facilities, is, of course, an obstacle to developing tourism potential at Green Talao Park. The lack of creativity of businesspeople is also an obstacle to the development of tourist areas in Green Talao Park. Therefore, it is necessary to improve the quality of human resources for the management and development of the area.

Ecotourism is the right step to build sustainable marine tourism that includes environmental conservation and utilizes tourism potential without exceeding the environment's carrying capacity. Calculation of carrying capacity can provide a maximum limit on the number of visitors that can be accommodated in the area. This limit can be used to minimize the impact of visitors exceeding the capacity, with the hope that projects and tourist attractions can be preserved. There is a need for socialization through counseling to provide an understanding of environmental pollution and the impacts caused by the management and utilization of potential at the Green Talao Park location. The socialization that can be provided includes counseling on saving the environment from pollution, information related to environmental aspects, and strategic locations in Green Talao Park for these activities.

4. Conclusions

Based on observations at the research site, it can be concluded that Green Talao Park is suitable for marine tourism. The development of supporting facilities (toilets, prayer rooms, talao forest entrance track, large parking area, places to eat and drink) is limited due to the unrepresentative locations and the poor cleanliness. The strategy that can be carried out for the development of supporting facilities is that the manager provides clean toilets and in sufficient quantities to support tourists, expand the prayer room to accommodate tourists to worship, provide lines in the parking area, and improve the track to enter the talao forest by forming professional management and creating neatly organized places to eat and drink to increase the number of places for local people who want to sell food and drinks. The suggestions in this study, based on its results, are for tourism managers to properly increase the maintenance and management of facilities, as it is vital. The government should allocate sufficient funds for tourism development, which is the leading sector of the region.

5. References

- Amdani, S. (2008). *Analisis Potensi Obyek Wisata Alam Pantai di Kabupaten Gunung Kidul*. Fakultas Geografi UMS. Surakarta.
- David, F.R. (2015). *Personal Swot Analysis*. Gramedia Utama. Jakarta.

- Fauzi, M., Oktarina, R., Padalarang, C., & Ciamis, S. (2020). Usulan Perancangan Jaringan Distribusi dan Penentuan Titik Lokasi Pusat Distribusi Bantuan Logistik Medis Covid-19 di Jawa Barat. *Jurnal Rekayasa Sistem & Industri (JRSI)*, 7(1): 1.
- Masrurun, Z.Z. (2020). Kajian Strategi Pengembangan Pariwisata Olahraga Paralayang di Kabupaten Wonosobo. *Jurnal Khatulistiwa Informatika*, 7(1): 1-11.
- Pitana, I.G.I.K.S.D., & Diarta, I. (2009). Pengantar Ilmu Pariwisata.
- Purniawati, I., Aida, N., Ratih, A., & Murwiati, A. (2022). Pura Giri Sutra Mandala. *BULLET: Jurnal Multidisiplin Ilmu*, 1(03): 381-390.
- Rangkuti, F. (2006). *Analisis SWOT Teknik Membedah Kasus Bisnis*. Gramedia Pustaka Utama. Jakarta.
- Soekadijo, R.G. (2000). *Anatomi Pariwisata: Memahami Pariwisata sebagai" Systemic Linkage*. Gramedia Pustaka Utama.
- Sugiyono, S. (2011). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta. Bandung:
- Sukardi, N. (1998). *Pengantar Pariwisata*. STP Nusa Dua Bali, 8 pp.
- Suwantoro, F., & Rini, T.S. (2018). Faktor-faktor yang Mempengaruhi Terjadinya Limbah pada Proyek Hotel Howard Johnson Surabaya. *Axial: Jurnal Rekayasa dan Manajemen Konstruksi*, 6(2): 133-140.
- Wildan, W., Sukardi, S., & Syaib, M.Z. (2016). *The Feasibility of the Development of Social Capital-based Ecotourism in West Lombok*. *Mimbar*, 32(1): 214- 222.
- Wulandari, O.T., & Jannah, M. (2023). Strategi Pemasaran Pariwisata 4A (Attraction, Accessibility, Amenity, dan Ancillary) terhadap Minat Wisatawan Mengunjungi Kembali Pantai Camplong Kabupaten Sampang. *Jurnal Administrasi dan Manajemen*, 13(4): 411-418.
- Yulianda, F., & Butet, N.A. (2017). Pengembangan Ekowisata Bahari Berbasis Sumberdaya Pulau-Pulau Kecil di Pulau Sayafi, Kabupaten Halmahera Tengah. *Jurnal Teknologi Perikanan dan Kelautan*, 8(1): 1-17.