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Landscape Planning Recommendations for TISKA Beach (Taman Indah Srengsem Kereta Api) Coastal Tourism in Bandar Lampung City

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ABSTRACT

The southern part of Lampung Province holds significant potential for the development of marine tourism, one of which is Taman Indah Srengsem Kereta Api (TISKA) Beach, located in Srengsem, Panjang District, Bandar Lampung City. Formerly a storage area for PT KAI goods and later abandoned, the site is now being revitalized as a tourism destination. The physical characteristics of TISKA Beach include relatively calm waves, a gently sloping shoreline, scenic hill views, and the activity of passing large vessels, all of which contribute to its distinctive visual appeal. Nevertheless, the existing condition reveals limited facilities and derelict buildings that reduce its aesthetic quality. This study employs a mixed-methods approach (quantitative and qualitative) through observation, SWOT scoring, interviews, and documentation. Data analysis was conducted using SWOT to identify the strengths, weaknesses, opportunities, and threats in the development of TISKA Beach. The findings highlight the need for improved facilities, landscape arrangement, and routine maintenance to enhance visitor comfort and safety. Development strategies include the addition of design elements (gazebos, swings, boardwalks), provision of public facilities (toilets, parking, prayer rooms, tourist information centers), and recreational features (outbound areas, photo spots, and culinary plazas). Management recommendations emphasize the integration of aesthetic, ecological, and socio-economic aspects to support

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TISKA Beach's growth as a sustainable, competitive, and community-beneficial marine tourism destination.

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1. INTRODUCTION

Tourism is a strategic sector that plays a crucial role in driving economic growth at local, regional, and urban levels. The development of a tourism destination is strongly influenced by climatic conditions, environmental quality, and the uniqueness of its natural landscape, which serve as the primary attractions (Wijaya & Furqon, 2018). In tourism development practices, the authenticity of attractions and the distinctiveness of sites are decisive factors in the success of destination management (Nurisyah, 2013). Therefore, a comprehensive assessment of tourism attractions is essential in designing destinations that are competitive, sustainable, and capable of encouraging repeat visits. Tourism resources include not only natural landscapes but also cultural heritage, community traditions, and historical assets, all of which create unique experiences for visitors. These elements shape destination identity while also serving as the main drivers of tourist visitation. Moreover, spatial comfort and landscape quality are critical factors that enhance the overall tourism experience (Soekadijo, 2000).

Coastal areas, including those in the southern part of Lampung Province, hold significant potential for development as marine tourism hubs. Several beaches are already well-known, such as Pasir Putih, Sebalang, Merak Belantung, and TISKA Beach. TISKA Beach (Taman Indah Srengsem Kereta Api), located in Panjang District, Bandar Lampung City, was originally a pier and storage facility owned by PT KAI that had been abandoned. Since 2020, the area has been revitalized into a new tourist destination, offering a gently sloping beach landscape, hillside panoramas, and views of maritime activities as its main visual attractions. Although tourism is projected to remain one of the fastest-growing sectors, global economic fluctuations and geopolitical dynamics present significant challenges. On the one hand, tourism generates positive social and economic impacts; on the other hand, without proper management, it may trigger environmental degradation, particularly in non-urban coastal areas. Such conditions may reduce the quality of landscapes, which should otherwise serve as the core attraction (Burgut et al., 2025).

The current condition of TISKA Beach still faces several limitations. Public facilities remain inadequate, supporting infrastructure has not been optimally managed, and community participation in tourism development is still relatively low (Arif & Syam, 2017). These shortcomings reduce visitor comfort and diminish the aesthetic quality of the area. In fact, the success of a tourist destination depends not only on natural beauty but also on the overall experience it offers, including the availability of recreational facilities, information media, and quality landscape design. Based on this background, this study focuses on three main objectives: (1) to describe the existing conditions of TISKA Beach, (2) to analyze the potentials and constraints of coastal landscape development, particularly from a visual aesthetic perspective, and (3) to formulate recommendations for spatial planning and area management strategies.

2. RESEARCH METHODOLOGY

Taman Indah Srengsem Kereta Api (TISKA) Beach is located in Lampung Province, specifically in Srengsem, Panjang District, Bandar Lampung City. TISKA Beach can be accessed by traveling approximately 15 km, or about 30 minutes, from the city center of Bandar Lampung (Figure 1).

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This study employed a mixed-methods approach, combining quantitative and qualitative techniques, conducted through three main stages: inventory, analysis, and evaluation. The approach was carried out through direct field observations using both quantitative and qualitative descriptive methods. Data collection techniques included observation, interviews, and documentation. To formulate tourism development strategies, SWOT analysis was applied. This analysis provides comprehensive guidance in designing management strategies for tourism destinations. According to Rangkuti (2014), SWOT analysis offers a holistic overview of the actual conditions of a destination and serves as a foundation for strategic planning to optimize strengths and opportunities while mitigating weaknesses and threats.

The field survey included site condition assessments, documentation of existing landscape data, and photographic records from specific viewpoints. Interviews were conducted with visitors and site managers to obtain detailed information regarding tourist profiles, development plans, and the aesthetic aspects of the area.

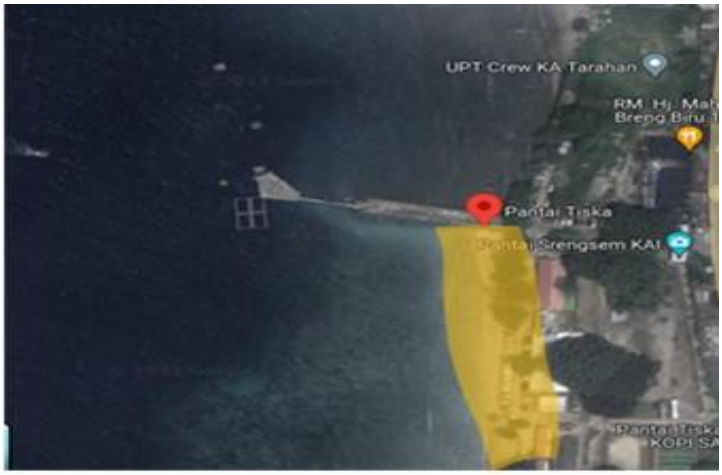

Figure 1. Research Location
(Source: analisys, 2024)

This study began with an identification phase, followed by the formulation of a mixed-methods approach that combined SWOT analysis and qualitative descriptive techniques. Data were collected through observation, interviews, and documentation, and subsequently analyzed using the SWOT method (Figure 2). Based on the analysis results, recommendations for spatial planning and implementation precedents at TISKA Beach were developed.

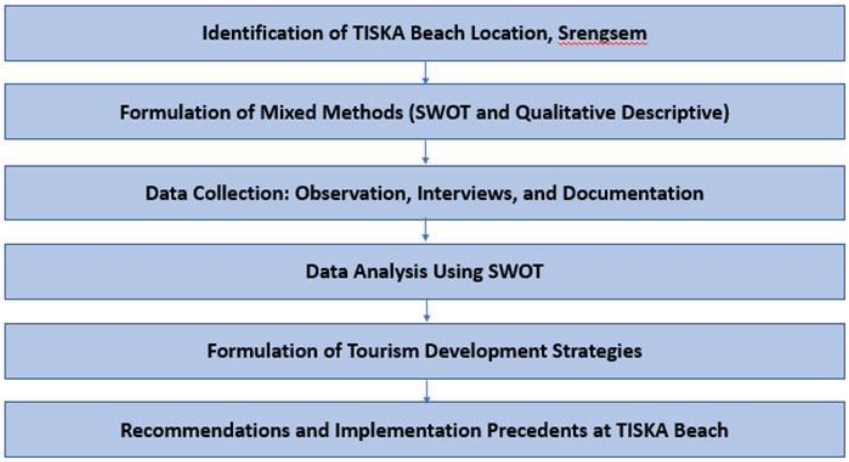

Figure 2. Diagram Tahapan Penelitian
(Source: analisys, 2024)

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3. RESULTS AND DISCUSSION

3.1 Discussion

Taman Indah Srengsem Kereta Api (TISKA) Beach is located in Srengsem, Panjang District, Bandar Lampung City, approximately 15 km or about 30 minutes from the city center. The area was developed by PT Kereta Api Indonesia in collaboration with the local community to revitalize a previously abandoned coastal site. TISKA Beach offers scenic hillside views and distinctive maritime traffic, although the presence of abandoned old buildings still reduces the aesthetic quality of the area.

The development of TISKA Beach requires the provision of tourism facilities that comply with appropriate standards and regulations, including a tourist information center, hygienic restrooms, parking areas, places of worship, disaster mitigation facilities, and sanitation infrastructure. In addition, comprehensive landscape planning should integrate vegetation and hardscape elements such as gazebos, plazas, culinary areas, souvenir kiosks, performance stages, viewing towers, pedestrian paths, and boardwalks. These facilities not only enhance tourist comfort and safety but also reinforce local identity, preserve cultural and ecological values, and promote the economic empowerment of surrounding communities.

Landscape planning should not only focus on functionality but also emphasize aesthetic values, particularly the surrounding natural beauty. As a tourism destination, this area has high visibility and should highlight preserved natural and built features, especially the conservation of existing trees. From an aesthetic perspective, vegetation and facilities function as complementary, unifying, accentuating, guiding, and framing elements of the environment, thereby providing visual value that creates a harmonious and scenic natural landscape (Kurniawan & Rizki, 2010).

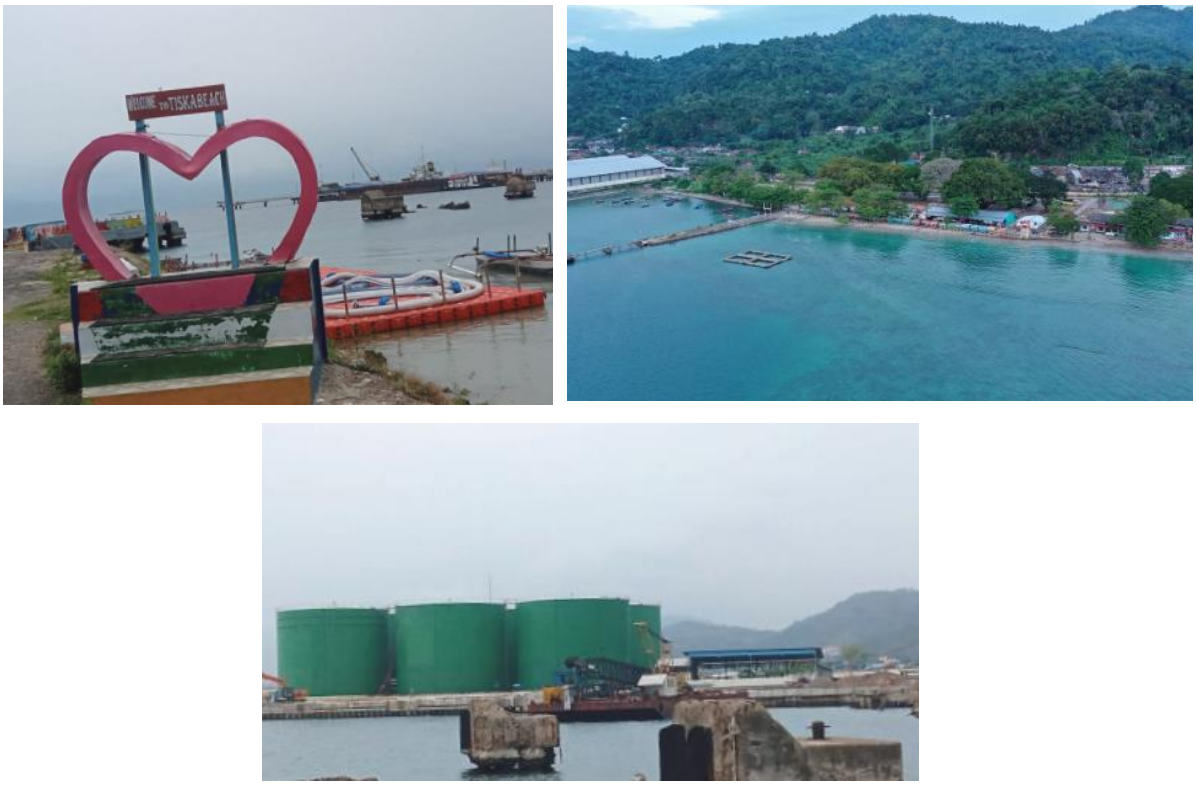

Figure 3. General Condition of TISKA Beach
(Source: Author's documentation, 2023)

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TISKA Beach presents a distinctive scenic panorama, featuring surrounding hills and the continuous movement of various types of vessels, which together create a unique aesthetic value (Figure 3). Taman Indah Srengsem Kereta Api (TISKA) Beach is one of the coastal tourism destinations in Bandar Lampung City, located in Srengsem, Panjang District. Covering an area of approximately 4 hectares, the site is situated on land owned by PT KAI Divre IV Lampung, which was formerly used as a railway storage yard. The beach is characterized by relatively calm waves, a gently sloping shoreline, and vegetation along the coast. Its uniqueness is further enhanced by the presence of large anchored ships and the surrounding hills.

A landscape can generate beauty and enhance aesthetic quality when it is well-managed and properly designed to please the eye and calm the mind. Optimal management serves as an indicator for assessing the aesthetic quality of a landscape, particularly through vegetation arrangement and other elements that embody creativity (Nurmasari, 2008). Visual assessment is strongly associated with aesthetic perception, as the appreciation of an object through visual observation is easily received by human senses. The aesthetic quality of a landscape is the result of interactions between its physical elements and the psychological processes of the observer, including perceptual, cognitive, and emotional responses (Daniel, 2001; Medyuni, 2006).

In this study, the SWOT method (Strengths, Weaknesses, Opportunities, and Threats) was employed to analyze both internal and external factors. The SWOT analysis began with identifying relevant factors within TISKA Beach. The results of this analysis provide strategic insights and facilitate more effective decision-making (Fitria et al., 2020). The EFAS (External Factor Analysis Summary) and IFAS (Internal Factor Analysis Summary) methods were further applied to evaluate external and internal factors influencing performance. These methods strengthen the identification of key factors affecting the success of development initiatives and support the formulation of strategies to address identified challenges. Moreover, opportunities for development exist through the utilization of available land around TISKA Beach. This land can be allocated for expanding tourist facilities, creating additional recreational areas, or developing supporting infrastructure to enhance the beach's attractiveness. Wise land utilization will not only improve the quality and diversity of services offered but also increase the potential to attract a greater number of visitors.

Table 1. SWOT Eksternal factor

External Factors	Opportunity	Threat
Internal factor	Potential to become a popular tourist destination (O1)	(T1) Proximity to the pier with heavy ship traffic, which may pose safety risks for swimming visitors
	Availability of land for development (O2)	(T2) Local regulations are not yet well-integrated
	Positive response from the community (O3)	(T3)Unstable management and governance, as operations are still managed individually

Source: Author's analisys, 2023

The following section elaborates on the threats identified in the SWOT analysis of TISKA Beach. These threats include potential hazards for visitors swimming near the shoreline due to the high intensity of ship traffic around the pier. The presence of these ships increases the risk of accidents and negatively affects visitor safety within the beach area. This condition

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indicates that local regulations have not yet been fully coordinated or integrated. The lack of regulatory coordination may generate uncertainty in managing and monitoring tourism activities at TISKA Beach, potentially leading to legal and safety issues. Another threat relates to the instability of management and governance systems. If management remains individually based and poorly coordinated, it may create uncertainty in addressing various aspects, including safety, facilities, and visitor services (Table 1).

The relationship between internal factors (strengths) and threats (threats) highlights that natural panoramas, attractive photo spots, and available facilities serve as strengths that attract visitors to TISKA Beach. However, threats posed by ship traffic near the pier may undermine visitor safety, particularly for those swimming. To address this challenge, strict safety policies must be developed regarding ship activities, while ensuring that the unique features and main attractions of TISKA Beach are preserved and enhanced. Thus, the strengths of TISKA Beach can be optimized while mitigating potential threats (Table 2).

Additional internal factors that enhance the attractiveness of TISKA Beach to the local community, especially in the urban areas of Bandar Lampung, include fostering collaborations with local businesses such as restaurants, souvenir shops, and transportation providers. Such initiatives not only provide a more comprehensive tourist experience but also support local economic growth. Moreover, involving the community in the management and promotion of TISKA Beach constitutes an essential strategy to ensure long-term sustainability (Table 2).

If the management team possesses strong experience in the tourism industry, this could represent a significant strength. Proper governance is required to integrate priorities in coastal landscape planning, thereby enhancing the visitor experience while preserving ecological and aesthetic values (Lukoseviciute & Panagopoulos, 2021). Furthermore, the use of information systems and technology plays a crucial role in supporting modern management practices, such as improving operational efficiency, inventory management, and data analysis tools to strengthen decision-making processes (Table 2).

Table 2. SWOT Internal Factor

Strength	Strength and opportunity	Strength and threat
Beautiful natural panorama of the beach (S1)	Increasing tourist visits through unique panoramas, attractive photo spots, and accessible supporting facilities that can be further developed (S1, O2)	Enhancing tourism quality by optimizing the uniqueness of panoramas, photo spots, and supporting facilities, while addressing safety risks from ship activity near the pier (S1, S2, S3, T1)
Availability of adequate facilities and infrastructure (S2)	Availability of land that can be developed into additional tourism support facilities such as souvenir shops, parking areas, and cultural art stages (S2, O2)	Improving service quality while anticipating unstable local regulations that have not yet been fully integrated (S2, T2)
Various types of existing vegetation (S3)	Strengthening cooperation with the local community to increase visitor interest and	Maximizing the diversity of vegetation to strengthen the landscape's ecological and aesthetic value, while managing

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Strength	Strength and opportunity	Strength and threat
	support the sustainability of the area (S3, O3)	individual-based governance systems that remain unstable (S3, T3)
Proximity to Bandar Lampung city center (S4)	Accessibility makes it easier for tourists to visit, thereby increasing potential tourist numbers (S4, O1, O3)	Proximity to the city center encourages higher tourist visits but requires stricter security measures to ensure safety in the area (S4, T1)
High public interest and positive response from visitors (S5)	Building partnerships with local businesses (restaurants, souvenir shops, transportation services) to support tourism development and improve visitor experience (S5, O1, O3)	Anticipating unstable management systems and lack of integration in governance that may reduce service quality and visitor satisfaction (S5, T3)

Source: Author's analysis, 2023

Table 3. SWOT strategy Weakness-Opportunity-Threat

Weakness	***Weakness Opportunity* (W-O)**	***Weakness-threat* (W-T)**
The location of the destination is not well-known	Enhance collaboration with schools, universities, and local communities for outbound activities. Utilize parking lots and access roads as supporting facilities (W3, W4, W5, O2, O3)	Improve site layout and maximize existing facilities (W1, T1)
Suboptimal cleanliness	Build outbound facilities in collaboration with schools, universities, and local communities (W3, W4, W5, O2, O3)	Improve cleanliness by involving community groups, schools, universities, and local government support (W2, T2)
Outbound facilities are still limited	Build outbound facilities in collaboration with schools, universities, and local communities (W3, W4, W5, O2, O3)	Improve outbound facilities and add supporting facilities (W3, W4, W5, T2, T3)
Inadequate infrastructure	Optimize parking and road access, in collaboration with stakeholders (W4, W5, O2, O3)	Improve access and infrastructure through stakeholder involvement (W3, W4, W5, T2, T3)
The area is surrounded by industrial zones	Increase green space and create buffer zones to improve environmental quality (W5, O3)	Anticipate industrial development by strengthening cooperation with government and communities, as well as adding green areas (W3, W4, W5, T2, T3)

Source: Author's analysis, 2023

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The SWOT analysis suggests the need to improve facilities and infrastructure to support tourism activities in this coastal landscape. Consequently, funding constraints emerge as the primary challenge. Alternative solutions or additional funding sources may be required (Table 3). From a landscape architecture perspective, essential facilities in coastal tourism areas should be designed not only to be functional but also to harmonize with the natural environment. Facilities that need to be provided include integrated internet and electricity networks with aesthetic considerations, road access complemented by shade vegetation, environmentally friendly clean water supply, security posts designed to blend with the landscape, and distinctive landmarks (Asmudrono, 2021).

The provision of these facilities must be aligned with established standards and visitor needs to enhance comfort and ensure sustainable tourism development (Wardana, 2018). Vegetation should be designed not only as an aesthetic element but also as an ecological component that provides shade, improves air quality, and regulates the microclimate of the area (Siregar & Marpaung, 2019). Selecting plant species with varied heights that can capture different types of pollutants is also recommended (Table 3).

Findings regarding opportunities and weaknesses highlight the importance of developing a documented maintenance plan, which can be considered a strength. Such a plan may include routine schedules, maintenance procedures, and asset inventories. Opportunities to partner with maintenance service providers may also offer access to additional expertise and resources (Table 3). Sustainable tourism development requires a strategic SWOT analysis (strengths, weaknesses, threats, and opportunities) that comprehensively examines internal and external factors. It has been demonstrated that SWOT analysis plays a crucial role in developing sustainable ecotourism models across different tourism sectors and has become a widely adopted tool among researchers and tourism developers (Acharryya, 2023).

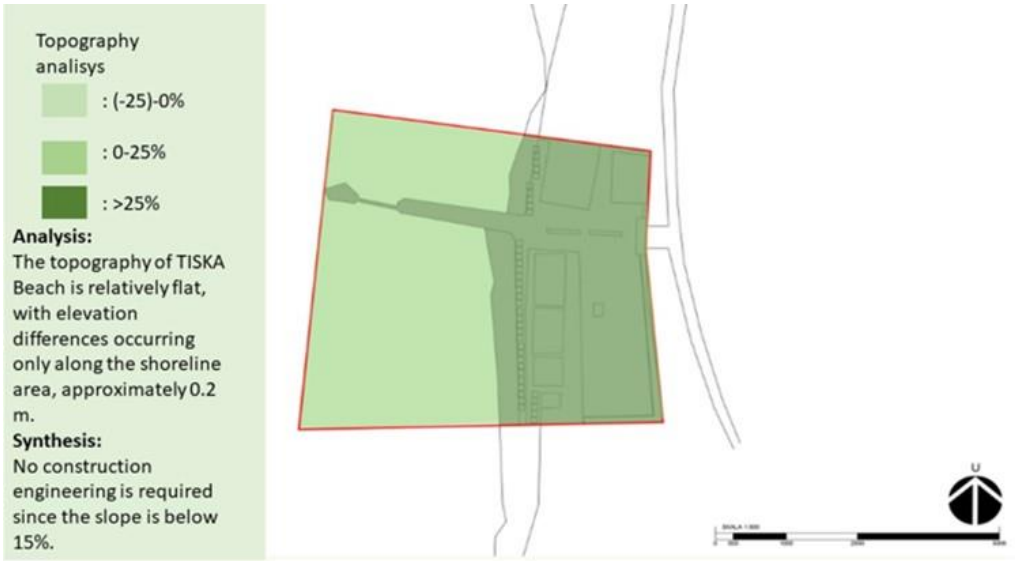

Figure 4. Topography analisys
(Source: analisys, 2023)

The topographic analysis of the beach reveals an elevation difference of approximately 0.2 meters from the shoreline. Although seemingly minor, such a variation can significantly influence water flow patterns along the coast. In the context of tourism, even slight differences in elevation may affect panoramic views, beach accessibility, and overall visitor comfort. Therefore, while a 0.2-meter topographic variation may appear negligible, it requires

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careful consideration in coastal planning and management, particularly regarding its potential impact on the visitor experience (Figure 4).

Figure 5. Disaster analisys
(Source: analisys, 2023)

Disaster analysis illustrates categories ranging from low to high, represented by yellow, orange, and green, referring to a map or graph that indicates the level of disaster risk in a specific site or area. Each color corresponds to a particular level of risk. At the site, the categories range from low to high, with yellow representing low risk, orange indicating medium risk, and green denoting high risk (Figure 5).

Figure 6. Physic Syntesis
(Source: analisys, 2023)

The physical site synthesis, illustrated with values of suitability and unsuitability, uses green to indicate suitable areas and red to indicate unsuitable areas. This visual method provides information regarding the alignment or misalignment of the site with specific criteria (Figure 6). Suitable areas require careful planning and management to achieve sustainable tourism. Restricting the number of visitors in recreational areas with diverse habitats is a

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crucial measure to ensure ecosystem sustainability and protect biodiversity. This strategy aims to minimize the negative impacts of human activities on natural habitats and the species that inhabit them. Several scientific studies have examined this concept in depth, providing a comprehensive understanding of the importance of sustainable recreation management (Figures 7 and 8).

Figure 7. Vegetation and zoning Analisys
(Source: analisys, 2023)

Figure 8. Vegetation Analisys
(Source: analisys, 2023)

The vegetation analysis is categorized into three groups: abundant, moderate, and absent. Areas with abundant vegetation are designated as green open spaces (GOS) and represented by dark green, while areas with little or no vegetation are marked in yellow (Figure 8). The development of public green open spaces is a key strategy for creating sustainable outdoor environments. GOS includes both naturally growing vegetation and intentionally planted species in designated areas. The management of GOS may involve physical and landscape maintenance as well as organizational arrangements, with the objective of sustaining, enhancing, and optimizing ecosystem services so that they remain resilient, healthy, and functional. A comprehensive understanding of GOS characteristics is essential to support the management and strengthening of sustainable outdoor spaces (Sutapa et al., 2023).

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Furthermore, site suitability is classified into three levels: unsuitable, moderately suitable, and suitable. Unsuitable areas are represented in red, moderately suitable areas in yellow, and suitable areas in green (Figure 9). Unsuitable areas are identified due to high biodiversity, which may be disrupted by tourism activities. Moderately suitable areas are characterized by the presence of pedestrian pathways but still require further development. Suitable areas are those with shade-providing vegetation that enhances visitors' thermal comfort (Narendreswari and Riddati, 2014). In addition, the integration of vegetation analysis with site suitability mapping provides valuable insights for sustainable planning. Areas classified as suitable and moderately suitable can be prioritized for the development of recreational and ecological facilities that harmonize with existing vegetation, while unsuitable areas should be preserved as conservation zones to protect sensitive biodiversity. This approach not only ensures ecological balance but also enhances visitor experience by offering shaded, comfortable spaces that promote environmental awareness and appreciation.

Figure 9. Ecology Analisys
(Source: analisys, 2023)

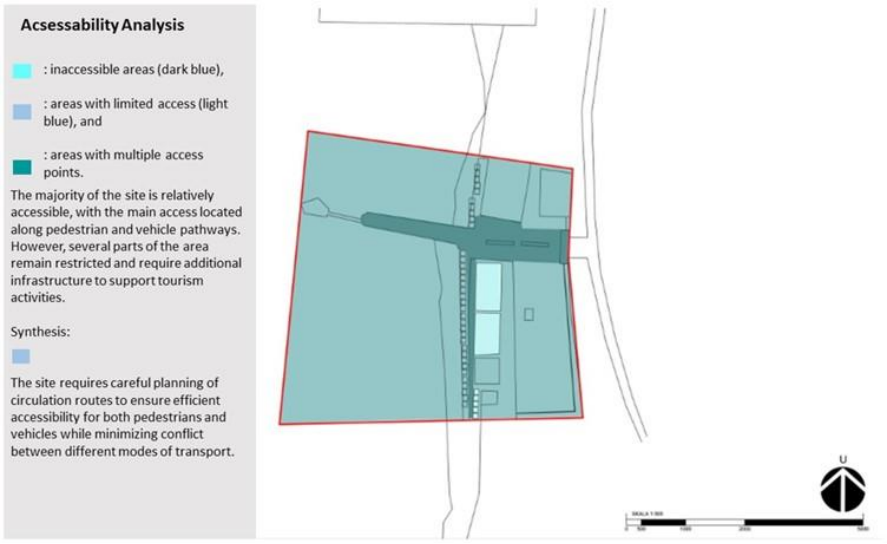

Figure 10. Aksesibility analisys
(Source: analisys, 2023)

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The accessibility analysis is classified into three categories: areas with no access (light blue), areas with limited access (dark blue), and areas with high accessibility (deep blue) (Figure 11). Within the site, most areas fall into the no-access category, unless visitors obtain special permission from the management. Meanwhile, the dark blue areas represent planned tourism zones specifically designated for pedestrian use (Figure 10).

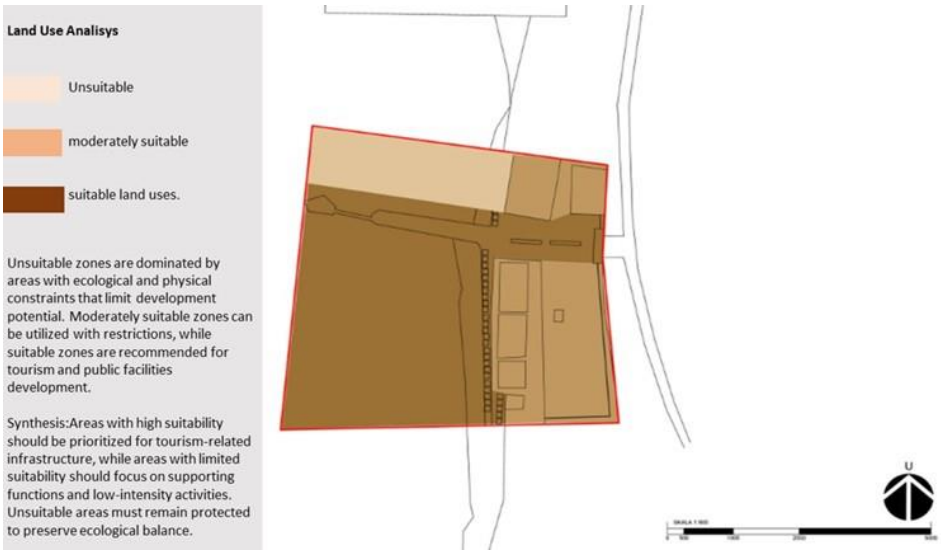

Figure 11. *Land use*
(Source: analisys, 2023)

The land-use analysis is categorized into unsuitable land (light brown), moderately suitable land (dark brown), and planned suitable land (deep brown) (Figure 11). The site contains areas that are already aligned with the plan, while some areas remain unsuitable, with a small portion located near the industrial zone.

Figure 12. Social and cultural
(Source: analisys, 2023)

Socio-Cultural Analysis

The socio-cultural analysis is categorized into three groups: unsuitable (marked in red), moderately suitable (yellow), and suitable (green). Unsuitable areas are characterized by the lack of access for socio-cultural activities. Moderately suitable areas can be accessed and hold

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potential for the development of community-based socio-cultural activities. Suitable areas, although appropriate, still require sustainable landscape management to ensure the continuity of socio-cultural practices (Figure 12).

Precedent Recommendations for Tourism Development at TISKA Beach

The economic aspect of tourism development should focus on strengthening local capacity through sustainable tourism activities, education, skills training, and the creation of distinctive marketable products. Enhancing community capacity in managing the tourism sector will lead to improved service quality while simultaneously expanding business opportunities and employment for local residents (UNWTO, 2019). Strategies to achieve this include promoting environmentally friendly tourism, empowering local communities, and diversifying sustainable tourism products. From a social perspective, direct community involvement in planning and decision-making processes is essential. Such participation fosters a sense of ownership of the destination and ensures sustainable management of the area (Susilowati, 2021). Practical implementation may include the establishment of tourism awareness groups, strengthening community participation in development initiatives, and formulating participatory-based policies (Munawar, 2018).

Findings from TISKA Beach highlight the need for an integrated landscape approach to address existing challenges. Strategic measures recommended include the provision of essential facilities, development of supporting infrastructure, and comprehensive evaluation of tourism space functions. Design recommendations encompass reorganizing parking areas, developing shaded and comfortable pedestrian pathways, structuring vendor kiosks to be more orderly and hygienic, revitalizing the watchtower with a more functional design, and managing the coastal buffer zone.

By understanding visitor perspectives, these findings provide valuable insights for local governments, policymakers, and tourism stakeholders to enhance beach tourism management strategies (Wijaya & Furqon, 2018). Integrated planning, multi-stakeholder strategies, and complementary policies are crucial to maximizing the benefits of existing infrastructure and optimizing coastal tourism landscapes (Wardana et al., 2025).

Figure 13. Illustration of the parking area at TISKA Beach before arrangement (left) and after arrangement (right)
(Source: Analysis, 2024).

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Figure 14. Illustration of the TISKA Beach shoreline area before arrangement (left) and after arrangement (right)
(Source: Analysis, 2024).

Figure 15. Illustration of the street vendors' area at TISKA Beach before arrangement (left) and after arrangement (right)
(Source: Analysis, 2024).

Figure 16. Illustration of the watchtower area at TISKA Beach before arrangement (left) and after arrangement (right)
(Source: Analysis, 2024).

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Figure 17. Illustration of the coastal boundary area at TISKA Beach before arrangement (left) and after arrangement (right)
(Source: Analysis, 2024).

Landscape maintenance is not always carried out routinely throughout the year, but rather adjusted to the type of work and climatic conditions. Some activities are conducted continuously, while others take place only a few times a year, with frequency highly influenced by the distinction between wet and dry months. Rainfall is the main factor determining vegetation growth in tropical regions (Petrovic et al., 2019). The planning of coastal tourism areas is expected to consider the needs of community activities while also enhancing regional competitiveness with other destinations, particularly in facing the increasingly competitive global tourism market (Suma et al., 2020).

4. CONCLUSION

Taman Indah Srengsem Kereta Api (TISKA) Beach, located in Panjang District, Bandar Lampung City, holds significant potential as a marine tourism destination. However, its management remains limited to date. Research findings indicate that the existing conditions reveal shortcomings in supporting facilities and landscape arrangement, which hinder optimal visitor comfort, aesthetic quality, and overall tourism appeal.

On the other hand, this beach offers unique attractions, including an open-sea view, distinctive coastal vegetation, and scenic panoramas of passing ships against a backdrop of hills that enhance the site's visual value. Nevertheless, several challenges remain, such as the lack of recreational facilities, disorganized supporting areas, and insufficient landscape maintenance efforts. Therefore, an appropriate development direction would be to integrate the natural potential with additional design elements, such as gazebos, swings, or boardwalks, in order to reinforce the site's visual identity.

The recommended strategies include providing adequate public facilities, implementing spatial planning with a comprehensive approach, and applying an integrated and sustainable landscape maintenance system. If these recommendations are realized, TISKA Beach has the potential to develop into an attractive, competitive, and sustainable marine tourism destination, while simultaneously delivering economic, social, and ecological benefits to the surrounding community.

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