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SWOT Analysis–Based Development Strategy for Sea Turtle Conservation Tourism Attraction at Pangumbahan Turtle Park, Sukabumi

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Abstract

Sustainable tourism integrating conservation-based ecotourism principles is essential for balancing the utilization of natural resources with the protection of coastal ecosystems. This study aimed to examine the existing conditions of Pangumbahan Turtle Park, Sukabumi Regency, and formulate strategies for developing its tourism attractions while maintaining its function as a nesting habitat for green sea turtles (*Chelonia mydas*). A descriptive qualitative design was employed using the 4A tourism components framework—Attraction, Accessibility, Amenity, and Ancillary Services—combined with SWOT analysis. Data were collected through field observations, documentation, and in-depth interviews with purposively selected destination managers, local community members, and tourists. The data were analyzed using the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) matrices to identify the internal and external factors influencing destination development. The findings show that Pangumbahan Turtle Park obtained an IFAS score of 3.07 and an EFAS score of 3.08. The SWOT analysis positioned the destination in Quadrant I at coordinates of 1.93 and 1.88, indicating strong internal capacity

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and favorable external opportunities that support the implementation of a growth-oriented strategy. The recommended strategies include developing conservation education tourism programs, optimizing digital marketing, strengthening partnerships with educational institutions, improving supporting facilities, and reinforcing destination management regulations. The study concludes that Pangumbahan Turtle Park possesses substantial potential for sustainable tourism development, provided that destination growth is consistently aligned with conservation priorities. These findings contribute a strategic framework for developing conservation-based coastal tourism and provide practical guidance for destination managers and local stakeholders in strengthening ecological protection, visitor experiences, institutional collaboration, and long-term destination sustainability.

Keywords: Conservation-Based Ecotourism; Destination Development Strategy; Four-A Tourism Components; Sustainable Tourism; SWOT Analysis

INTRODUCTION

Travel activities undertaken by individuals for the purposes of recreation, education, or gaining experience, without the intention of earning income, are defined as tourism. This principle remains relevant to contemporary tourism trends, which place tourists' experiences at a destination as the primary focus. Beyond being merely a recreational activity, recent studies conceptualize tourism as a complex system comprising multiple interrelated and integrated components that collectively support the entire spectrum of tourism activities (Pratama & Suryani, 2023).

The availability of tourism facilities and support services constitutes a key element in facilitating tourists' mobility from their place of residence to a particular destination. As emphasized by Rahmawati and Nugroho (2022), service quality and the availability of facilities at a destination exert a substantial influence on the success of the tourism sector. Furthermore, tourism encompasses temporary activities undertaken for recreation, education, and cultural exchange, in which each experience provides travelers with new insights and meaningful encounters (Pratama et al., 2022).

Tourism is widely recognized as an industry that integrates multiple sectors, including transportation, accommodation, and tourism attractions, all of which function synergistically to fulfill the diverse needs of visitors. Fauzi et al. (2024) further assert that modern tourism

represents an integrated system that connects various economic and service sectors in supporting the sustainable development of tourism destinations.

In the management and development of a tourism destination, a comprehensive approach is required to assess the readiness and quality of a tourist area in a more structured manner. One of the most widely adopted frameworks is the 4A concept, which serves as a fundamental basis for tourism destination development.

The readiness of a tourism destination is not solely measured by the number of visitor arrivals but also by the integration of the four key components of the 4A framework, namely attractions, accessibility, amenities, and ancillary services. According to Rahmawati and Nugroho (2023), these dimensions play a crucial role in determining tourist satisfaction. In line with this perspective, contemporary tourism management no longer focuses exclusively on increasing visitor numbers but must also harmonize economic, social, and ecological dimensions. By adopting the principles of sustainable tourism proposed by Pratama et al. (2022), tourism destinations can maintain long-term operational sustainability while simultaneously ensuring positive benefits for the environment and surrounding communities.

As the world's largest archipelagic country, comprising more than 17,000 islands, Indonesia is endowed with an extensive coastline and extraordinary marine resources. Java Island, which serves as the epicenter of various economic, social, and tourism activities, encompasses West Java Province, a region widely recognized for its significant natural tourism resources, particularly within its coastal and marine tourism sectors along the southern coastline (Taofiqurohman, 2021; Widayati, 2024; Annida et al., 2026).

West Java Province is one of the regions in Indonesia with substantial coastal tourism potential, particularly in its southern area, which borders directly with the Indian Ocean. The province is home to numerous well-known marine and beach tourism destinations, including Pangandaran Beach, Pelabuhan Ratu Beach, Ciletuh Geopark, Ujung Genteng Beach, and Santolo Beach. These destinations collectively demonstrate that the coastal region of West Java possesses considerable potential to be further developed as a nature-based and conservation-oriented tourism destination (Putri et al., 2026; Sofiani & Noor, 2024; Triyono et al., 2026)

One of the most prominent coastal areas is Ujung Genteng, located in Sukabumi Regency. This destination offers several distinctive attractions, including white sandy

beaches, waves suitable for surfing activities, and relatively unspoiled natural scenery, all of which constitute its primary tourism attractions. In addition, Pangumbahan Turtle Park holds substantial ecological value as a protected habitat for endangered sea turtles. Nevertheless, accessibility to this area remains a major challenge, indicating the need for further infrastructure development to improve access and support sustainable tourism growth (Loenita et al., 2019; Kusumawati et al., 2024; Oktavan et al., 2025)

Pangumbahan Turtle Park is a conservation tourism destination with considerable potential to be developed as a sustainable ecotourism area, supported by the natural habitat of the green turtle (Chelonia mydas) and a conservation management system that prioritizes environmental preservation (Nurhayati et al., 2020). The presence of the Sukabumi Turtle Conservation Group (Kelompok Konservasi Penyu Sukabumi/KPPS) Basecamp represents an institutional support system (ancillary services) that plays a significant role in conservation activities, including monitoring nesting turtles, conducting semi-natural egg incubation, rearing hatchlings, and providing environmental education for local communities and tourists. The synergy among destination managers, government agencies, local communities, and academic institutions contributes to the establishment of an integrated destination management framework that aligns with the principles of ecotourism by balancing environmental conservation, tourism development, and community empowerment.

Sea turtle conservation tourism represents a form of marine ecotourism that not only offers recreational opportunities but also provides educational experiences regarding wildlife conservation and the preservation of coastal ecosystems. Green turtles possess a long and complex life cycle, making them highly vulnerable to habitat degradation, environmental pollution, climate change, and uncontrolled human activities. Variations in sand temperature, excessive artificial lighting, noise disturbance, and inadequately managed tourism activities may disrupt nesting behavior and reduce hatchling emergence success.

Despite its substantial tourism potential, Pangumbahan Turtle Park continues to face several challenges, including limited supporting facilities, suboptimal accessibility, insufficient conservation interpretation and educational infrastructure, and increasing threats to turtle habitats resulting from climate change and human activities. These conditions have the potential to diminish the quality of the visitor experience, reduce the effectiveness of conservation efforts, weaken the destination's competitiveness, and limit the economic benefits for local communities. Therefore, a comprehensive development strategy that

integrates the four key tourism components—attraction, accessibility, amenity, and ancillary services (4A)—in a balanced manner is essential to ensure that marine tourism development simultaneously supports sea turtle conservation while promoting environmental, social, and economic sustainability at Pangumbahan Turtle Park.

METHODS

This study employed a qualitative approach with a descriptive qualitative research design to obtain an in-depth understanding of the development strategy of Pangumbahan Turtle Park as a marine tourism destination based on sea turtle conservation. This approach was selected because the study focused on interpreting naturally occurring phenomena and aimed to describe the current condition of destination development based on the four tourism components—attraction, accessibility, amenity, and ancillary (4A)—while analyzing the strategic factors influencing the sustainable development of conservation-based tourism. A qualitative approach enables researchers to gain a comprehensive understanding of the processes, interactions, and meanings constructed by stakeholders regarding the management of the conservation area (Sahrul et al., 2025; Aulia et al., 2023; Supardi et al., 2022; Theofilus & Sofiani, 2024).

The research participants consisted of the management of Pangumbahan Turtle Park, local community members, tourists, and representatives of local government or relevant agencies involved in the management and development of the conservation tourism area. Informants were selected using purposive sampling, whereby participants were intentionally chosen based on their knowledge, experience, and involvement with the research object. The informants comprised one Head of Pangumbahan Turtle Park Management, five local community members, two tourists, and two representatives of the local government, resulting in a total of ten informants.

The primary research instrument was the researcher as the human instrument, supported by interview guidelines, observation sheets, an audio recorder, documentation, and field notes. Data were collected through in-depth interviews, direct observation, and documentation. Interviews were conducted to obtain information regarding conservation area management, marine tourism development, the condition of tourism facilities, and various challenges encountered in managing the destination. Direct observations were

undertaken at Pangumbahan Turtle Park to examine the condition of the conservation area, sea turtle conservation activities, tourism facilities, accessibility, and the interactions among park managers, local communities, and tourists. Documentation served as supporting data through the collection of relevant documents, archives, photographs, and other records related to the development of conservation-based tourism.

The trustworthiness of the data was ensured through source triangulation and methodological triangulation by comparing findings obtained from interviews, observations, and documentation so that the collected information could mutually corroborate one another. Furthermore, the researcher conducted repeated verification of the collected data to ensure the consistency, credibility, and conformity of the findings with the actual conditions observed in the field.

Data analysis followed the qualitative analytical model proposed by Lester, Cho, and Lochmiller (2020), which consists of three stages: data reduction, data display, and conclusion drawing and verification. Subsequently, the strategic factors identified in the study were analyzed using the Internal Factor Analysis Summary (IFAS) and the External Factor Analysis Summary (EFAS) to identify strengths, weaknesses, opportunities, and threats. The results of these analyses were then employed as the basis for constructing a SWOT analysis to formulate sustainable development strategies for Pangumbahan Turtle Park as a sea turtle conservation tourism destination.

The study was conducted at Pangumbahan Turtle Park, Pangumbahan Village, Ciracap District, Sukabumi Regency, West Java Province, Indonesia, with data collection carried out in May 2026. The entire research process was implemented in accordance with established research ethics principles by obtaining informed consent from each informant prior to interviews and audio recording, ensuring the confidentiality of participants' identities, and using all collected data exclusively for academic and research purposes.

RESULTS

Pangumbahan Turtle Park is equipped with a Turtle Education Room, which serves as an educational facility where visitors can gain a better understanding of sea turtle conservation activities. Through this facility, visitors are able to observe sea turtles directly while obtaining information about the conservation efforts implemented within the

protected area. Consequently, Pangumbahan Turtle Park not only offers recreational tourism activities but also contributes to enhancing visitors' environmental knowledge and awareness regarding the importance of sea turtle conservation.

Pangumbahan Turtle Park also provides several public facilities to support visitor comfort and educational experiences, including (1) a food court, (2) public toilets, (3) a parking area, and (4) sea turtle conservation information boards. The food court functions as a supporting facility that accommodates the culinary needs of visitors during their stay. The public toilets are generally functional; however, regular maintenance and improvements in cleanliness are required to enhance visitor comfort. In addition, a designated parking area is available and has sufficient capacity to accommodate visitors' vehicles. Nevertheless, improvements in parking layout and management are still necessary to provide greater convenience and safety.

Furthermore, Pangumbahan Turtle Park provides sea turtle conservation information boards containing educational materials on sea turtle species, their life cycle, habitat characteristics, and the conservation activities carried out within the park. These educational media help visitors understand the importance of protecting sea turtles and preserving their natural habitats while reinforcing the park's role as a conservation-based tourism destination and an environmental education center. Despite these existing facilities, the development of more interactive and informative interpretation media remains necessary to ensure that conservation information can be communicated more effectively and provide a more engaging educational experience for visitors.

Internal and External Factors Influencing the Development of Tourism Attractions at Pangumbahan Turtle Park

1. Internal Factors

Strengths

Based on the research findings, Pangumbahan Turtle Park possesses various internal factors that constitute its strengths in the development of a conservation-based tourism destination. The primary strength of the area lies in the presence of a well-preserved natural nesting habitat for the green sea turtle (Chelonia mydas), which plays a crucial role in supporting conservation efforts. In addition, sea turtle conservation activities that can be directly observed by visitors, including hatchling release programs, serve as the main tourist

attraction by providing educational tourism experiences while distinguishing Pangumbahan Turtle Park from other coastal tourism destinations. The pristine natural beach, the well-maintained coastal environment, and the implementation of a conservation-based tourism concept are also aligned with the growing trend of sustainable tourism that is increasingly favored by visitors. The area possesses substantial environmental educational value by providing knowledge regarding sea turtle conservation and the preservation of coastal ecosystems. Furthermore, Pangumbahan Turtle Park has considerable potential to be developed as an educational tourism destination, a research center, an environmental education site, and a conservation-based scientific tourism destination. Its dual function as both a conservation area and a tourism destination also generates sustainable ecological and economic benefits for the surrounding communities.

Weaknesses

Based on the research findings, Pangumbahan Turtle Park also exhibits several weaknesses that may affect the development of the conservation tourism destination. The diversity of tourism attractions remains limited because visitor activities are primarily concentrated on observing sea turtles and participating in hatchling release programs, while the overall tourism experience is highly dependent on the sea turtle nesting season and conservation schedules. Moreover, an integrated educational tourism package has not yet been developed, resulting in learning activities for visitors that are not systematically organized. The availability of interpretation and educational facilities, including information boards and conservation education centers, also requires further improvement. From the accessibility perspective, several road sections leading to the destination remain in suboptimal condition, public transportation services are limited, and directional signage to the site is still inadequate. Supporting tourism facilities, such as toilets, rest areas, information centers, and educational facilities, also require improvements in both quality and quantity. Furthermore, collaboration among destination managers, local communities, business actors, and government agencies has not yet been fully optimized, while local community participation in the development of conservation tourism products remains relatively limited and should be strengthened through community empowerment programs.

2. External Factors

Opportunities

Based on the research findings, several external factors provide opportunities for the development of Pangumbahan Turtle Park as a conservation-based tourism destination. These opportunities include the increasing interest of tourists in conservation-oriented and educational tourism, the growing trend of ecotourism and sustainable tourism, and the potential development of integrated tourism packages connecting Pangumbahan Turtle Park with other tourism destinations in the Ujung Genteng area. In addition, collaboration with the private sector through Corporate Social Responsibility (CSR) programs, higher education institutions, research organizations, and environmental organizations presents opportunities for improving tourism facilities, conducting research, and expanding conservation education programs. The development of information centers, mini conservation museums, interpretation facilities, and creative economy products and micro, small, and medium enterprises (MSMEs) based on sea turtle conservation also has the potential to enhance the quality of the visitor experience while generating economic benefits for local communities. Furthermore, the increasing interest of educational institutions in outdoor learning activities, together with the growing attention of conservation organizations toward sea turtle protection, further strengthens the opportunity for Pangumbahan Turtle Park to develop into a leading sea turtle conservation tourism destination in West Java with strong competitiveness and long-term sustainability.

Threats

Based on the research findings, several external factors pose threats to the development of Pangumbahan Turtle Park as a conservation tourism destination. These threats include climate change, which has the potential to increase beach sand temperatures and consequently affect the success rate of sea turtle egg incubation; marine pollution and coastal waste that may degrade sea turtle habitats; and uncontrolled tourism activities that may interfere with sea turtle nesting and hatchling release processes. In addition, increasing coastal development, limitations on infrastructure expansion due to the area's conservation status, and tourists' dependence on private vehicles also present significant challenges to destination development. Other threats include the low level of visitor awareness regarding conservation regulations, the exploitation of coastal resources and environmentally unsustainable fishing practices, the risk of coastal natural disasters such as high waves,

storms, and tsunamis, as well as competition from other beach tourism destinations in Sukabumi that offer better accessibility and more comprehensive tourism facilities. These factors should be addressed through sustainable management strategies to ensure the continued preservation of sea turtle habitats and to strengthen the competitiveness of Pangumbahan Turtle Park as a sustainable conservation tourism destination.

Based on the IFAS analysis, the total score for strengths was 2.290, while the total score for weaknesses was 0.800. These findings indicate that the strength score is higher than the weakness score of Pangumbahan Turtle Park. This condition suggests that the sea turtle conservation tourism area possesses considerable internal potential to support the development of conservation-based tourist attractions. The primary strengths of Pangumbahan Turtle Park include the presence of a natural green sea turtle nesting habitat, sustainable conservation activities, hatchling (tukik) release programs, and educational values that can be delivered to visitors. On the other hand, several weaknesses remain, including limited supporting facilities, suboptimal accessibility, and the lack of interpretive media and conservation information available to visitors. Therefore, the appropriate development strategy is to maximize and optimize all existing strengths to address the identified weaknesses. In this way, the development of sea turtle conservation tourism attractions can be carried out sustainably without compromising the park's primary function as a sea turtle conservation area.

Based on the EFAS analysis, the total score for the opportunity factor was 1.793, while the total score for the threat factor was 1.005. These findings indicate that the opportunity score is higher than the threat score, suggesting that Pangumbahan Turtle Park possesses considerable external opportunities to be developed as a sea turtle conservation tourism destination. Therefore, the initial step in formulating the development strategy for Pangumbahan Turtle Park should focus on optimizing the available opportunities while simultaneously anticipating potential threats that may hinder the development of this sea turtle conservation tourism area.

Furthermore, based on the results of the IFAS and EFAS analyses, calculations were conducted to determine the coordinate values on the X-axis and Y-axis to be used in the SWOT Matrix. These values were obtained by calculating the difference between the total strength and weakness scores for the X-axis and the difference between the total opportunity and threat scores for the Y-axis. The resulting coordinates were subsequently used to

determine the strategic position of Pangumbahan Turtle Park within the SWOT Matrix, thereby providing the basis for formulating sustainable development strategies for the sea turtle conservation tourism destination.

Based on the results of the IFAS and EFAS matrix calculations, Pangumbahan Turtle Park is positioned in Quadrant I, with coordinates of (1.490; 0.788). This position indicates that the tourism destination is in a strategically advantageous condition, supported by internal strengths that outweigh its weaknesses and external opportunities that exceed the threats it faces. Under these circumstances, the most appropriate strategic approach is a growth strategy, which emphasizes leveraging existing strengths to capitalize on available opportunities to the fullest extent.

DISCUSSION

Pangumbahan Turtle Park is a sea turtle conservation area located in Pangumbahan Village, Ciracap District, Sukabumi Regency, West Java Province, Indonesia. The conservation area is situated along the southern coast of Java Island, directly bordering the Indian Ocean, and is characterized by sandy beaches that provide suitable nesting habitats for sea turtles. Pangumbahan Turtle Park was established as a conservation initiative to protect sea turtle nesting habitats that have been increasingly threatened by anthropogenic activities. The management of the conservation area is designed to ensure the sustainability of sea turtle populations while simultaneously supporting research, environmental education, and conservation-based tourism activities. The management of Pangumbahan Turtle Park involves the collaboration of the local government, conservation management authorities, and various stakeholders committed to sea turtle conservation and the sustainable development of conservation tourism.

The primary advantage of this destination lies in the opportunity it offers visitors to directly observe sea turtle conservation activities, including the nesting process of sea turtles and the release of hatchlings into the ocean. This distinctive characteristic differentiates Pangumbahan Turtle Park from conventional coastal tourism destinations, as it provides a tourism experience that integrates educational, conservation, and recreational dimensions.

In its operations, Pangumbahan Turtle Park is open to visitors seeking a conservation-based tourism experience. The various activities available within the area

include observing sea turtle nesting, participating in hatchling release programs, engaging in educational tours on the sea turtle life cycle, exploring coastal ecosystems, and taking part in environmental research and learning activities. The existence of Pangumbahan Turtle Park not only contributes to the protection and conservation of endangered sea turtles but also generates benefits for the surrounding community through the development of tourism activities that support the local economy while promoting the principles of sustainable tourism.

In this study, the data collection technique employed was a structured interview. The structured interviews were conducted using a set of interview guidelines that had been developed in advance based on the research objectives and the indicators adopted in the study. The purpose of conducting these interviews was to obtain information related to the internal and external factors influencing the development of tourism attractiveness at Pangumbahan Turtle Park. Through this method, the researcher was able to systematically collect data concerning the four key tourism components, namely Attraction, Accessibility, Amenities, and Ancillary Services (4A), which constituted the primary focus of the research. The interviews were conducted directly with informants who were involved in the management and development of Pangumbahan Turtle Park throughout the research period.

The external factors comprise the opportunities and threats that influence the development strategy of Pangumbahan Turtle Park as a conservation-based tourism destination. Based on the results of interviews with the site management, local communities, and visitors, various external factors were identified that strategically function as opportunities and threats in the efforts to develop Pangumbahan Turtle Park.

According to Rangkuti (2020), SWOT analysis is a method used to examine the internal and external conditions of an organization, company, or research object in order to formulate appropriate strategies. This analysis is conducted by identifying strategic factors consisting of strengths, weaknesses, opportunities, and threats. The SWOT approach is founded on the principle that an effective strategy should maximize existing strengths and opportunities while simultaneously minimizing weaknesses and anticipating threats that may hinder the achievement of organizational objectives.

In its application, SWOT analysis considers two primary dimensions, namely internal factors and external factors. Internal factors encompass the strengths and weaknesses inherent within an organization or destination, whereas external factors consist of

opportunities and threats originating from the external environment. The identification of these four strategic factors serves as the foundation for determining strategic alternatives that can be implemented to support the development and improve the performance of the object under study.

In this research, SWOT analysis was employed to evaluate the condition of Pangumbahan Turtle Park as a sea turtle conservation tourism destination. The analysis was carried out by identifying the internal and external factors affecting the development of the area based on the findings of field observations, structured interviews, documentation, and relevant literature. Through this approach, the researcher was able to identify the various potentials, challenges, opportunities, and constraints associated with Pangumbahan Turtle Park, thereby providing a basis for formulating appropriate strategies for enhancing its tourism attractiveness while simultaneously supporting the sustainability of sea turtle conservation activities.

To provide a more comprehensive overview of the SWOT analysis results, it is necessary to construct a table presenting the internal and external strategic factors of Pangumbahan Turtle Park. These factors were identified through interviews with park managers, visitors, and relevant stakeholders involved in the management and development of the sea turtle conservation tourism area. The internal factors comprise strengths and weaknesses, while the external factors consist of opportunities and threats.

After all strategic factors had been identified, the subsequent stage involved assigning weights and ratings to each factor. Weights were used to indicate the relative importance of each factor in the development of Pangumbahan Turtle Park, with values ranging from 0.00 to 1.00. The higher the assigned weight, the greater the influence of the factor on the successful development of the tourism destination. The total weight assigned to the strength and weakness factors must equal 1.00, and similarly, the combined weight assigned to the opportunity and threat factors must also total 1.00.

Subsequently, each factor was assigned a rating on a scale of 1 to 4 to indicate its level of influence on the development of Pangumbahan Turtle Park. For strengths and opportunities, higher ratings indicate conditions that are increasingly supportive of tourism area development. Conversely, for weaknesses and threats, higher ratings indicate that these factors exert a more substantial influence and therefore require greater attention in the formulation of development strategies.

The Internal Factor Analysis Summary (IFAS) Matrix was developed to analyze the internal environmental conditions of Pangumbahan Turtle Park. The preparation process consisted of the following stages: (1) Identifying the internal factors that constitute the strengths and weaknesses of Pangumbahan Turtle Park based on the findings of the field research. (2) Assigning a weight to each factor according to its level of importance in the development of the conservation tourism area. (3) Assigning a rating to each factor based on the degree of its influence on the development of Pangumbahan Turtle Park.(4) Calculating the score for each factor by multiplying its assigned weight by its rating, thereby obtaining the score for each individual factor, Score = Weight × Rating (5) Summing all scores of the strength and weakness factors to obtain the total IFAS score, which serves as the basis for determining the strategic position of the destination.

In addition, the External Factor Analysis Summary (EFAS) Matrix was developed by identifying the opportunity and threat factors originating from the external environment. Each factor was subsequently assigned a weight and a rating according to its level of influence, after which the score for each factor was calculated by multiplying its weight by its rating.

The score for each factor was subsequently calculated by multiplying its assigned weight by its corresponding rating. The resulting total score was used to assess the external environmental condition of Pangumbahan Turtle Park. The outcomes of the IFAS and EFAS analyses subsequently served as the basis for constructing the SWOT Matrix to formulate development strategies aimed at strengthening Pangumbahan Turtle Park as a sustainable and competitive sea turtle conservation tourism destination.

Based on the results of the IFAS analysis, the total score for strengths was 2.290, while the total score for weaknesses was 0.800. These findings indicate that the strength score is considerably higher than the weakness score of Pangumbahan Turtle Park. This condition suggests that the sea turtle conservation tourism area possesses sufficiently strong internal potential to support the development of conservation-based tourism attractions. The primary strengths of Pangumbahan Turtle Park include the presence of a natural green sea turtle nesting habitat, sustainable conservation activities, hatchling release programs, and the educational value that can be offered to visitors. On the other hand, several weaknesses remain, including limited supporting facilities, suboptimal accessibility, and the lack of adequate interpretive media and conservation information available to visitors. Therefore,

the most appropriate development strategy is to leverage and optimize all existing strengths in order to address the remaining weaknesses. By doing so, the development of sea turtle conservation tourism attractions can be implemented in a sustainable manner without compromising the site's primary function as a sea turtle conservation area.

Based on the results of the IFAS and EFAS Matrix calculations, Pangumbahan Turtle Park is positioned in Quadrant I, with coordinates of (1.490; 0.788). This position indicates that the tourism destination is in a strategically advantageous condition, as it is supported by stronger internal strengths than weaknesses, while external opportunities outweigh the threats it faces. Under these circumstances, the most appropriate strategic approach is a growth strategy, which emphasizes leveraging existing strengths to maximize available opportunities. Although several factors continue to constrain the area's development, including limited supporting facilities, suboptimal accessibility, and various threats arising from environmental conditions and competition from similar tourism destinations, Pangumbahan Turtle Park nevertheless demonstrates strong development prospects. These prospects are supported by several key advantages, including the presence of a protected natural nesting habitat for green sea turtles, ongoing conservation activities that serve as the park's primary attraction, hatchling release (tukik) programs, and the significant educational value offered through conservation-based tourism.

On the other hand, opportunities arising from the growing public interest in conservation tourism, the increasing prominence of ecotourism and sustainable tourism, and the expanding prospects for collaboration with educational institutions, government agencies, and environmental organizations can be utilized as strategic assets to strengthen the position of Pangumbahan Turtle Park. Therefore, future development strategies should focus on optimizing its conservation and educational potential, improving the quality of tourism facilities and infrastructure, and strengthening partnerships with relevant stakeholders to support the long-term sustainability and competitiveness of this sea turtle conservation tourism destination.

The findings of this study provide practical and theoretical implications for the sustainable development of conservation-based tourism destinations. The proposed SWOT-based development strategies demonstrate that optimizing conservation resources, strengthening educational tourism, improving tourism facilities, and enhancing collaboration among stakeholders can contribute to increasing the competitiveness of Pangumbahan

Turtle Park while maintaining its primary function as a sea turtle conservation area. These findings may also serve as a reference for policymakers, destination managers, and future researchers in formulating sustainable tourism development strategies for similar conservation-based destinations.

This study is limited to the analysis of Pangumbahan Turtle Park as a single case study, using a qualitative approach based on observations, interviews, documentation, and SWOT analysis. Consequently, the findings reflect the specific conditions of the study area and may not be directly generalizable to other conservation tourism destinations with different environmental, social, and managerial characteristics. In addition, the strategic recommendations are based on the conditions observed during the research period and may require further validation through broader empirical studies or quantitative approaches.

CONCLUSION

This study concludes that the development of Pangumbahan Turtle Park as a sea turtle conservation tourism destination is influenced by both internal and external strategic factors identified through the SWOT analysis. The internal strengths include the existence of a protected natural nesting habitat for the green sea turtle (*Chelonia mydas*), conservation activities that serve as unique tourism attractions, hatchling release programs, the pristine coastal environment, a conservation-based tourism concept, high environmental educational value, and significant potential for educational tourism, scientific research, and conservation-based learning. Conversely, the main internal weaknesses consist of the limited diversity of tourism attractions, seasonal dependence of conservation activities, the absence of integrated educational tourism packages, limited interpretation facilities, suboptimal accessibility and supporting tourism facilities, insufficient stakeholder collaboration, and relatively low participation of local communities in tourism development.

The external analysis indicates that Pangumbahan Turtle Park has substantial opportunities arising from the growing demand for conservation and educational tourism, the expansion of ecotourism and sustainable tourism, opportunities for integrated tourism packages, collaboration with the private sector, higher education institutions, research organizations, and environmental organizations, as well as the development of conservation education facilities, creative economy products, and outdoor learning programs. At the same time, several external threats need to be anticipated, including climate change, marine

pollution and coastal waste, uncontrolled tourism activities, increasing coastal development, infrastructure limitations associated with conservation status, dependence on private transportation, low visitor awareness of conservation regulations, unsustainable coastal resource exploitation, coastal natural disasters, and competition from other tourism destinations with better accessibility and more complete facilities.

The SWOT analysis further demonstrates that Pangumbahan Turtle Park is positioned in Quadrant I (Growth Strategy), indicating that the destination possesses strong internal capabilities and favorable external opportunities to support an aggressive development strategy. Accordingly, the recommended strategic priorities include developing integrated conservation-based educational tourism, strengthening digital promotion, expanding collaboration with educational and environmental institutions, developing integrated tourism packages, promoting research and outdoor learning activities, improving tourism facilities and accessibility, strengthening stakeholder collaboration, enhancing visitor environmental awareness, implementing conservation-based tourism management standards, and reinforcing habitat protection to ensure sustainable destination development.

This study contributes to the body of knowledge on conservation tourism development by providing a comprehensive strategic analysis based on the integration of the Attraction, Accessibility, Amenities, and Ancillary Services (4A) framework with SWOT analysis in evaluating the development of a sea turtle conservation tourism destination. The findings also provide practical guidance for destination managers, local governments, and other stakeholders in formulating sustainable tourism development strategies that balance biodiversity conservation, environmental education, community participation, and tourism competitiveness.

Future research is recommended to examine the implementation and effectiveness of the proposed development strategies over a longer period, to evaluate the socio-economic and environmental impacts of conservation tourism on local communities, and to incorporate broader stakeholder perspectives and quantitative approaches in order to produce more comprehensive and measurable recommendations for the sustainable development of Pangumbahan Turtle Park.

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