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Community-Based Ecotourism (CBE) Development Strategy in the Pulau Pombo Nature Tourism Park Area, Central Maluku Regency

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Abstract

This research was conducted within the Pombo Island Nature Tourism Park (Taman Wisata Alam / TWA Pulau Pombo) in Central Maluku Regency. The method utilized to formulate the strategies for community-based ecotourism development was the SWOT analysis framework. The Pombo Island Nature Tourism Park serves as a marine protected area with a dual function: acting as an environmental preservation zone while concurrently providing a spatial framework to support environmental education, scientific research, and sustainable tourism development. To achieve these institutional objectives, the alternative strategic frameworks developed for the implementation of Community-Based Ecotourism (CBE) within the area encompass developing conservation-based tourism by leveraging the potential of flora, fauna, and coastal ecosystems as educational, conservation-oriented, and sustainable nature tourism attractions; empowering local communities and Pokdarwis (Tourism Awareness Groups) through the advancement of culture-based tourism and indigenous knowledge, such as the Meti Kei traditional practice, to reinforce community-based management and ecological conservation; and formulating integrated, inter-village tour packages encompassing Kailolo, Liang, Waai, Tulehu, and Pombo Island by synthesizing natural attractions, cultural heritage, traditional cuisine, and community activities to enhance destination connectivity, diversify tourism products, and extend tourists' length of stay. Furthermore, this comprehensive approach requires upgrading infrastructure, facilities, digital marketing, and community-based regular transportation services to optimize accessibility, visitor comfort, and the overall quality of tourism services en route to the area, while simultaneously strengthening community participation and institutional frameworks through inter-village cooperation forums and multi-stakeholder partnerships involving local residents, government agencies, NGOs, and park management to foster collaborative and sustainable tourism governance.

Keywords: Community-Based Ecotourism (CBE), Ecotourism Development Strategy, Nature Tourism Park, SWOT Analysis.

Introduction

The Maluku Islands are widely recognized as the “Province of a Thousand Islands” due to the presence of more than 1,400 islands with a total coastline length of approximately 10,662 km. The region comprises several major islands, including Seram Island, Buru Island, the Lease Islands, and the Aru Islands. Administratively, Maluku covers an area of approximately 712,480 km², predominantly consisting of marine waters totaling 666,139.85 km², or about 93% of the total area, while its land area accounts for only around 46,914 km², or 7%. In addition, Maluku is directly bordered by several strategic marine areas, including the Banda Sea, the Maluku Sea, and the Seram Sea (Huliselan et al., 2017). These geographical conditions position Maluku as one of the strategic regions in Eastern Indonesia for the development of nature-based tourism, particularly sustainable tourism that emphasizes the principles of environmental conservation and long-term ecological management. (Rumerung & Siaila, 2023).

The development of community-based ecotourism is recognized as a strategic instrument within sustainable tourism, capable of harmonizing environmental conservation with the improvement of local community livelihoods (Nielwaty et al., 2025). Well-planned ecotourism implementation has proven effective in stimulating ecosystem protection through accountable resource governance. At the same time, this approach generates positive economic impacts, including income diversification, job creation, and the strengthening of community sovereignty in decision-making processes related to tourism area management (Regency et al., 2023). Therefore, optimizing the contribution of ecotourism to the balance of ecological, economic, and social dimensions requires development strategies that integrate the active participation of local communities, adaptive management, and integrated conservation practices (Yan et al., 2025).

As part of the conservation areas in Maluku Province, the Pulau Pombo Nature Tourism Park (Taman Wisata Alam/TWA Pulau Pombo) plays a significant role from both ecological and economic perspectives. According to the report of the Directorate General of Natural Resources and Ecosystem Conservation (2024), the primary attraction of this area lies in its small-island and atoll typology, supported by the natural aesthetics of coastal landscapes, the presence of coastal forests, and its function as a stopover habitat for aquatic avifauna. In addition, TWA Pulau Pombo also possesses abundant marine biodiversity, including coral reefs and various other marine biota.

The implementation of community-based ecotourism in marine conservation areas has been proven to provide significant economic contributions to local communities through job creation, the stimulation of Micro, Small, and Medium Enterprises (MSMEs), and the acceleration of the tourism service sector (Rosmiza et al., 2025). Empirical evidence from marine tourism destinations indicates that such activities stimulate the growth of local businesses, including culinary services, tour guiding, and the commercialization of local cultural products. This phenomenon not only directly increases the income of coastal communities but also encourages the transformation of traditional livelihood structures—from capture fisheries toward a more sustainable tourism sector. Therefore, ecotourism development strategies in marine nature tourism parks effectively function as instruments for economic diversification and the enhancement of local welfare, while simultaneously ensuring the sustainability of marine ecosystem conservation objectives (Widianto et al., 2026).

To optimize the utilization of the Pulau Pombo Nature Tourism Park (Taman Wisata Alam/TWA Pulau Pombo) without compromising the sustainability of its natural resources, a well-planned, holistic, and sustainable development strategy is required (Putri et al., 2021). Comprehensive planning is crucial, as unregulated development may trigger over-tourism, ecosystem degradation, and unequal distribution of economic benefits among local communities. In line with this perspective, Priatmoko et al. (2025) emphasized that a sustainable development approach in the tourism sector must integrate three major dimensions in a balanced manner, namely ecological, social, and economic dimensions. Therefore, the development of TWA Pulau Pombo should be aligned with the principles of conservation and community-based ecotourism.

The management of the Pulau Pombo Nature Tourism Park (Taman Wisata Alam/TWA Pulau Pombo) must be conducted through an integrated approach that views terrestrial and marine ecosystems as a unified management entity. The strong interrelationship between the terrestrial ecosystem—characterized by the presence of endemic wildlife and coastal vegetation—and the marine ecosystem, which is rich in coral reefs and biota of high economic and conservation value, requires a governance framework that is not fragmented.

RESEARCH METHODS

Study Site and Timeline

This study was conducted in the Pulau Pombo Nature Tourism Park (Taman Wisata Alam/TWA Pulau Pombo), Central Maluku Regency, Maluku Province. Geographically, the TWA Pulau Pombo area is located between Haruku Island and Ambon Island, at coordinates 128°22'23.54"–128°22'47.40" E and 3°31'39.97"–3°31'55.03" S. The research was carried out from November 2025 to January 2026. Data collection was conducted within the TWA Pulau Pombo area and in the buffer villages that serve as access points to the TWA Pulau Pombo area. The research location is presented in the following figure:

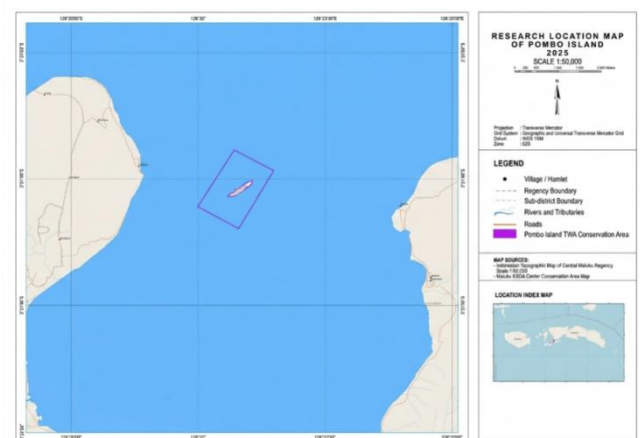


Figure 1. Research location map

SWOT Analysis

The formulation of structured and well-planned strategic steps is a primary prerequisite for the integrated development of the Pombo Island Nature Recreation Park (Taman Wisata Alam / TWA). To devise such a strategy, various analytical approaches, instruments, and methods can be implemented, one of which is the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. SWOT

analysis serves as a systematic methodology to identify various internal and external factors, which are subsequently utilized as a robust foundation for formulating strategies and action plans (Mahfud, 2020; Mashuri & Nurjannah, 2020).

As a fundamental approach to strategic planning, SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis serves to map the existing conditions of an organization or study area through the simultaneous evaluation of internal and external dimensions (Saifuddin, 2022). The application of this method enables the formulation of a more realistic and measurable program blueprint, as it is grounded in empirical field data. By identifying key priorities and strategic aspects, this analysis facilitates the establishment of policy focuses to achieve optimal targets (Tamara, 2016). Conceptually, the SWOT framework operates by maximizing the utilization of existing strengths and opportunities, while simultaneously formulating mitigation strategies to minimize internal weaknesses and anticipate external threats that could potentially impede program success (Kristanto & Muliawati, 2017).



Figure 2. SWOT Analysis Diagram

According to Rangkuty (2025), the initial stage of a SWOT analysis necessitates a comprehensive assessment of the internal and external factors of the area. The evaluation of internal factors is identified utilizing the Internal Factor Analysis Summary (IFAS) matrix, whereas the assessment of external factors is analyzed using the External Factor Analysis Summary (EFAS) matrix. Technically, the construction of both evaluation matrices is executed through a series of systematic stages as follows:

- 1. Strategic Factor Identification:** Mapping and formulating all indicators of strengths, weaknesses, opportunities, and threats relevant to the object of study.
- 2. Weighting Allocation:** Assigning a specific weight value to each indicator, ranging from 0.0 (indicating no importance) to 1.0 (indicating the highest level of importance).
- 3. Rating Assignment:** Assigning scores using a 1–5 Likert scale. For positive indicators (strengths and opportunities), the highest score (5) is assigned to the most optimal condition. Conversely, a reverse scoring system is applied to negative indicators (weaknesses and threats), where the most significant adverse impact receives the lowest score (1) and the minimal impact receives the highest score (5).
- 4. Score Calculation (Scoring):** Multiplying the weight value by the rating score for each indicator to generate an individual score.

- 5. Total Score Calculation:** Summing all individual scores from each factor to obtain a final representative value for the matrix.

Table 1. EFAS (External Factor Analysis Summary) Matrix

External Factors	Weight	Rating	Score
Opportunities			
1.			
2.			
3.			
4.			
Treaths			
1.			
2.			
3.			
4.			
Total			

Source: (Rangkuti, 2008)

Table 2. IFAS (Internal Factor Analysis Summary) Matrix

Internal Factors	Weight	Rating	Score
Strenght			
1.			
2.			
3.			
4.			
Weaknesses			
1.			
2.			
3.			
4.			
Total			

Source: (Rangkuti, 2008)

Table 3. SWOT Matrix

IFAS EFAS	STRENGHS (S)	WEAKNESSES (W)
	Identify between 5 and 10 internal strength factors.	Identify between 5 and 10 internal weaknesses factors.
OPPORTUNIES (O)	STRATEGI (SO)	STRATEGI (WO)
Identify between 5 and 10 external opportunies	SO (Strengths-Opportunities) strategies were developed by leveraging	WO (Weaknesses-Opportunities) strategies were formulated to minimize internal weaknesses in

factors.	internal strengths to exploit and maximize external opportunities.	order to exploit external opportunities.
TREATHS (T)	STRATEGI (ST)	STRATEGI (WT)
Identify between 5 and 10 external treaths factors.	ST (Strengths-Threats) strategies were developed to leverage internal strengths in order to mitigate and counteract external threats.	WT (Weaknesses-Threats) strategies were formulated to minimize internal weaknesses and avoid external threats.

The combination of strategies that interconnects internal and external environmental factors generates four strategic typologies as follows::

- SO Strategy (Aggressive/Expansive):** Optimally leveraging internal advantages to capture and dominate available market or environmental opportunities.
- ST Strategy (Diversification):** Utilizing internal capacity and strengths as a shield and solution to counteract external barriers and threats.
- WO Strategy (Turn-Around/Reformation):** Eliminating or rectifying internal weaknesses by seizing prospects and opportunities offered by the external environment.
- WT Strategy (Defensive):** Minimizing internal weaknesses while simultaneously anticipating external threats to prevent further severe impacts or losses within the area.

Qualitative Strategic Planning Matriks (QSPM)

The Quantitative Strategic Planning Matrix (QSPM) is an analytical tool utilized to objectively evaluate alternative strategies based on previously identified internal and external factors. This method aids in determining strategic priorities by assessing the Attractiveness Score (AS) of each alternative strategy, thereby serving as the final stage in the strategy formulation process (Gultom et al., 2025).

Menurut David (2016:184), terdapat enam langkah penyusunan strategi QSPM, langkah penyusunan strategi terpilih melalui QSPM adalah sebagai berikut :

- Integrating Opportunities, Threats, Strengths, and Weaknesses:** Inputting data derived from the previously constructed Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices.
- Assigning Weights to Each Internal and External Critical Success Factor:** These weights are identical to those utilized in the IFE and EFE matrices. The calculation of these weights is formulated as follows:

$$\text{Weight } i = \frac{\text{Rating } i}{\text{Total Rating}}$$

Table 4. Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) Matrix

No.	Strengths	Rating	Weight	B x S
1	The area exhibits highly significant natural attraction potential, characterized by rich biodiversity of flora and fauna alongside	5	0.131148	0.655738

- Identifying Feasible Alternative Strategies:** Discerning alternative strategies derived from the SWOT matrix that are viable for implementation.
- Assigning Attractiveness Scores (AS):** Determining the relative Attractiveness Scores (AS) for each of the selected alternative strategies..

1= Not attractive 2= Somewhat attractive

3= Reasonably attractive 4= Highly attractive

The Attractiveness Score (AS) denotes the relative appeal of an alternative strategy in addressing and mitigating external and internal factors.

- Calculating the Total Attractiveness Score (TAS):** The TAS is determined by multiplying the assigned weight by the Attractiveness Score (AS) within each respective row. The TAS values indicate the relative attractiveness of each alternative strategy..

$$\text{TAS (Total Attractiveness Score)} = \sum_{i=1}^n (\text{Weight } i \times \text{AS}_{ij})$$

i: i-th strategic factor

j: j-th strategic

n: The sum of all strategic factors

Summing all Total Attractiveness Scores (TAS) across each respective QSPM column. The highest STAS value indicates that the corresponding strategy is the most optimal and highly prioritized alternative for implementation.

RESULTS AND DISCUSSION

Community-Based Ecotourism (CBE) Development Strategy for the Pombo Island Nature Recreation Park

The community-based ecotourism (CBE) development strategy is directed toward enhancing the competitiveness and sustainability of tourism destinations through the integrated utilization of natural, social, and cultural resource potentials. The implementation of this strategy is grounded in the principles of participatory planning, environmental protection, local community empowerment, and the optimization of economic benefits for the community. Consequently, the implemented development policies are expected to foster a balance among ecological, social, and economic dimensions in the sustainable management of tourism areas (Kesaulya et al., 2025; Pattipawaej et al., 2026).

To determine the ecotourism development strategy, a SWOT analysis was conducted by identifying the key factors involved in strategy formulation. These key factors, comprising both internal and external dimensions, were comprehensively examined based on the outputs of the SWOT analysis.

	unique ecosystem features that serve as the primary tourism draw.			
2	Strong local community support, characterized by positive perceptions and active participation	4.4	0.127869	0.562623
3	The establishment and active operation of a local Tourism Awareness Group	4.2	0.131148	0.55082
4	Preservation of local wisdom, specifically the <i>Meti Kei</i> traditional practice of communal coastal harvesting	4.2	0.121311	0.509508
Total				2.27
No.	Weaknesses	Rating	Weight	B x S
1	Limited accessibility, characterized by inadequate transport options and underdeveloped infrastructure	3.6	0.095082	0.342295
2	Inadequate tourism amenities, specifically the shortage of accommodation, public restrooms, and other basic utilities	3.2	0.091803	0.29377
3	Inadequate tourism promotion and marketing strategies for the destination	3.6	0.098361	0.354098
4	Limited human resource capacity in professional tourism management	3.4	0.098361	0.334426
5	Suboptimal waste management and environmental sanitation practices within the area	3.4	0.104918	0.356721
Total				1.68
No.	Opportunities	Rating	Weight	B x S
1	The growing trend in tourist preference for nature-based tourism, creating development opportunities for the destination	3.6	0.089619	0.322629
2	Government policy support for the tourism sector, creating strategic opportunities for destination development	3.8	0.095594	0.363256
3	Institutional support from NGOs through assistance and training programs to enhance management capacity	4.2	0.107543	0.45168
4	Development of cross-village tour packages to enhance destination attractiveness and extend tourist length of stay	4	0.098581	0.394324
5	Robust stakeholder engagement and institutional support	3.6	0.09186	0.330695
6	Establishment of a cross-village cooperative forum to strengthen institutional tourism governance	3.6	0.098581	0.354892
7	The availability of local entrepreneurs providing transportation services, tour guiding, and local culinary offerings	3.8	0.081777	0.310752
Total				2.56
No.	Treaths	Rating	Bobot	B x S
1	Environmental Degradation	3.4	0.080657	0.274235
2	Competition with other destinations may reduce the competitiveness of the area.	3.6	0.071695	0.258103
3	Climate change	3.6	0.086632	0.311875
4	Potential conflicts among business stakeholders may disrupt the management of the area.	3.8	0.086632	0.329201
Total				1.73

The quantitative scores derived from the Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices serve as the empirical foundation for the subsequent quadrant analysis.

Internal Factor Evaluation (IFE) matrix score

Total Strengths – Total Weaknesses

$2.27 - 1.68 = 0.59$

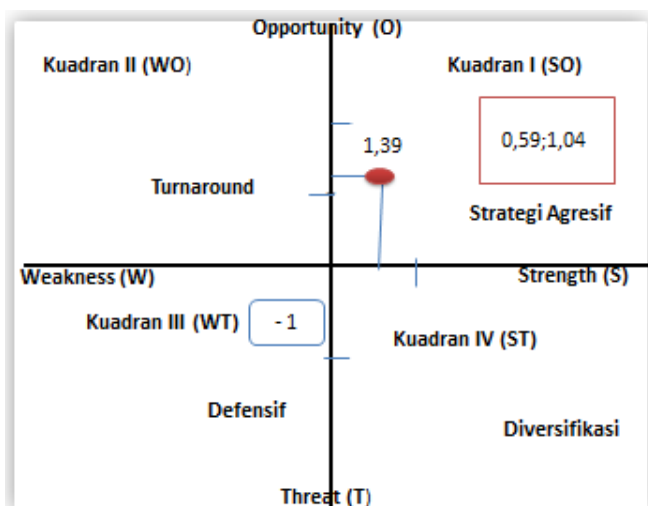
External Factor Evaluation (EFE) matrix scoreT

$$2,56 - 1,39 = 1,39$$

Table 5. SWOT Matrix for the Ecotourism Development Strategy in Pombo Island Nature Tourism Park

Internal	Strengths (S) 1) The area exhibits highly significant natural attraction potential, characterized by rich biodiversity of flora and fauna alongside unique ecosystem features that serve as the primary tourism draw. 2) Strong local community support, characterized by positive perceptions and active participation 3) The establishment and active operation of a local Tourism Awareness Group 4) Preservation of local wisdom, specifically the <i>Meti Kei</i> traditional practice of communal coastal harvesting	Weaknesses (W) 1) Limited accessibility, characterized by inadequate transport options and underdeveloped infrastructure 2) Inadequate tourism amenities, specifically the shortage of accommodation, public restrooms, and other basic utilities 3) Inadequate tourism promotion and marketing strategies for the destination 4) Limited human resource capacity in professional tourism management 5) Suboptimal waste management and environmental sanitation practices within the area
External		
Opportunities (O) 1) The growing trend in tourist preference for nature-based tourism, creating development opportunities for the destination 2) Government policy support for the tourism sector, creating strategic opportunities for destination development 3) Institutional support from NGOs through assistance and training programs to enhance management capacity 4) Development of cross-village tour packages to enhance destination attractiveness and extend tourist length of stay 5) Robust stakeholder engagement and institutional support 6) Establishment of a cross-village cooperative forum to strengthen institutional tourism governance 7) The availability of local entrepreneurs providing transportation services, tour guiding, and local culinary offerings	Strategy (SO) 1) Developing the potential of coastal and marine flora and fauna as educational- and conservation-based tourism attractions to support the growing trend of tourist interest in nature-based tourism. 2) Strengthening the role of local communities and tourism awareness groups (Pokdarwis) through the development of culture- and local wisdom-based tourism, such as the <i>meti kei</i> tradition, supported by government institutions and NGOs through training programs and assistance in sustainable tourism management. 3) Developing integrated tourism packages connecting Kailolo, Liang, Waai, Tulehu, and Pulau Pombo by integrating natural attractions, cultural tourism, and traditional community activities to enhance the attractiveness of the area and increase tourists' length of stay. 4) Strengthening cross-village and stakeholder collaboration forums to support collaborative and sustainable institutional management of tourism areas. 5) Promoting community-based creative economies through local culinary products, transportation services, tourism services, handicrafts, and cultural attractions rooted in local wisdom in order to improve the welfare of communities surrounding the tourism area.	Strategy (WO) 1) Utilizing support from government institutions and NGOs to enhance the capacity of local human resources and tourism awareness groups (Pokdarwis) through training in tourism services, tour guiding, environmental management, digital tourism promotion, and conservation-based tourism management. 2) Gradually developing tourism facilities and services through the provision of toilets, waste disposal facilities, information boards, and community-based regular transportation services from buffer villages to Pulau Pombo in order to improve accessibility, visitor comfort, and the overall quality of tourism services. 3) Optimizing destination promotion through digital media and the development of integrated tourism packages linking Kailolo, Liang, Waai, Tulehu, and Pulau Pombo to enhance the attractiveness of the area and increase tourists' length of stay. 4) Leveraging cross-village cooperation forums and stakeholder support to strengthen integrated and sustainable community-based tourism management institutions.
Treatments (T) 1) Environmental Degradation. 2) Competition with other destinations may reduce the competitiveness of the area.	Strategy (ST) 1) Utilizing the potential of coastal flora, fauna, and ecosystems as the foundation for conservation-based tourism development in order to minimize the risk of environmental degradation caused	Strategy (WT) 1) Formulating tourism activity regulations based on environmental carrying capacity, including the management of visitor numbers, tourism activities, and waste management, in order to prevent the

3) Climate change	by uncontrolled tourism activities.	degradation of coastal and marine ecosystems in the Pulau Pombo area.
4) Potential conflicts among business stakeholders may disrupt the management of the area.	2) Strengthening the role of local communities, tourism awareness groups (Pokdarwis), and the <i>meti kei</i> tradition in monitoring and sustainably utilizing natural resources to preserve the sustainability of the tourism area. 3) Developing a destination identity based on nature tourism, local culture, and traditional community activities as a strategy to enhance the competitiveness of the area against other tourist destinations in Maluku. 4) Strengthening coordination among buffer villages, stakeholders, and area managers to reduce the potential for conflicts among tourism business actors and to support the stability of tourism area management. 5) Enhancing the capacity of local communities and tourism managers to address policy changes, transportation limitations, and the challenges of sustainably managing conservation-based tourism.	2) Strengthening area monitoring through collaboration among local communities, tourism awareness groups (Pokdarwis), village governments, and area managers to reduce the potential for environmental degradation and conflicts among tourism business stakeholders. 3) Gradually improving the quality of tourism facilities and services to address competition with other tourist destinations and to enhance visitor comfort and satisfaction. 4) Conducting periodic monitoring and evaluation of environmental conditions, tourism activities, and area management as an effort to maintain the sustainability of conservation- and community-based tourism.



Gambar 3. Quadrant Analysis

Development Strategies and Alternative Programs

Based on the quantitative analysis, the SWOT quadrant positioning indicates that the community-based ecotourism (CBE) development strategy for the Pombo Island Nature Tourism Park falls into Quadrant I (SO), which dictates an Aggressive Strategy..

The SO (Strengths-Opportunities) strategy leverages internal strengths to maximize available external opportunities. This strategy can be operationalized through several alternative programs, including the following :

- Developing the potential of coastal and marine flora and fauna as educational- and conservation-based tourism attractions to support the growing trend of tourist interest in nature-based tourism.
- Strengthening the role of local communities and tourism awareness groups (Pokdarwis) through the development of culture- and local wisdom-based tourism, such as the

meti kei tradition, supported by government institutions and NGOs through training programs and assistance in sustainable tourism management.

- Developing integrated tourism packages connecting Kailolo, Liang, Waai, Tulehu, and Pulau Pombo by integrating natural attractions, cultural tourism, and traditional community activities to enhance the attractiveness of the area and increase tourists' length of stay.
- Strengthening cross-village and stakeholder collaboration forums to support collaborative and sustainable institutional management of tourism areas.
- Promoting community-based creative economies through local culinary products, transportation services, tourism services, handicrafts, and cultural attractions rooted in local wisdom in order to improve the welfare of communities surrounding the tourism area..

The SWOT analysis indicates that the factors driving the tourism development within the Pombo Island Nature Tourism Park can be classified as internal strengths, which include the following:

- 1) High potential of natural tourism attractions
- 2) Highly positive stakeholder perception toward regional development
- 3) Active community participation in the planning phase
- 4) Strong support from local business operators for tourism activities
- 5) Robust stakeholder commitment to regional development
- 6) Preserved local wisdom practices that reinforce natural resource management
- 7) High potential of traditional cuisine and cultural heritage to be developed as key attractions.

QSPM (Quantitative Strategic Planning Matrix) Analysis

An Attractiveness Score (AS) was assigned to each internal and external strategic factor derived from the IFE and EFE analyses.

The AS indicates the relative attractiveness of each strategic option in addressing the critical factors that influence ecotourism development within the Pombo Island Nature Tourism Park. Subsequently, the AS was multiplied by the respective factor weight to determine the Total Attractiveness Score (TAS), thereby identifying the highest-priority strategy for sustainable, community-based ecotourism implementation.

Table 6. Attractiveness Strategy

Attractiveness Strategy	Total Attractiveness Strategy (TAS)
1. Developing the potential of coastal and marine flora and fauna as educational- and conservation-based tourism attractions to support the growing trend of tourist interest in nature-based tourism	7,84
2. Empowering local communities and the Tourism Awareness Group (<i>Pokdarwis</i>) through culture-based tourism and local wisdom—such as the <i>Meti Kei</i> traditional tidal-fishing practice—to support community-based management and conservation efforts.	7,75
3. Strengthening community participation and institutional frameworks through inter-village cooperation forums and multi-stakeholder partnerships— involving local communities, government agencies, NGOs, and park management—to foster collaborative and sustainable tourism governance	7,39
4. Developing integrated, inter-village tour packages encompassing Kailolo, Liang, Waai, Tulehu, and Pombo Island by synthesizing natural attractions, cultural heritage, traditional cuisine, and community-based activities to enhance destination connectivity, diversify tourism products, and extend tourists' length of stay.	7,20
5. Upgrading infrastructure, facilities, digital marketing, and community-based regular transportation services to enhance accessibility, visitor comfort, and the overall quality of tourism services en route to the Pombo Island area.	6,78

Based on the QSPM analysis, the strategy that yielded the highest Total Attractiveness Score (TAS) is the development of conservation-based tourism by leveraging flora, fauna, and coastal ecosystems as educational and sustainable attractions, achieving a score of 7.844. This score demonstrates that the strategy holds the highest priority, as it is deemed the most effective in capitalizing on local strengths and capturing opportunities for conservation-based tourism development on Pombo Island. The area possesses substantial natural resource potential, including coastal ecosystems, biodiversity, and wildlife habitats that can be developed into environmental education tourism. According to Fennell (2021),

ecotourism development must place environmental conservation at the core of all tourism activities, ensuring that paratourism supports ecosystem protection while simultaneously enhancing local economic benefits. Consequently, this strategy is considered the most relevant framework for supporting sustainable tourism development within the Pombo Island area.

The second strategy, which achieved a TAS value of 7.751, focuses on empowering local communities and *Pokdarwis* through the development of culture-based tourism and local wisdom, such as the *Meti Kei* practice. This result demonstrates that community engagement is a critical factor in conservation-based tourism management. As a form of coastal community local wisdom, the *Meti Kei* practice holds both cultural and conservation values, as it encompasses traditional regulations for sustainable natural resource utilization. According to Goodwin (2016), community-based tourism development positions local people as the primary actors in tourism activities, ensuring that economic, social, and cultural benefits are directly funneled to the local community. Furthermore, strengthening *Pokdarwis* is essential to enhance community capacity in destination management, visitor services, and the preservation of local culture as a distinctive destination identity.

Furthermore, the strategy for strengthening community participation and institutional frameworks through inter-village cooperation forums and multi-stakeholder partnerships achieved a TAS value of 7.392. This strategy indicates that the management of protected areas requires cross-sectoral collaboration among various parties, ranging from local communities, government bodies, and NGOs to park management. According to Ansell and Gash (2018), collaborative governance is a management approach that engages diverse stakeholders in collective decision-making processes to achieve sustainable goals. In the context of tourism development on Pombo Island, an inter-village cooperation forum can reinforce regional management coordination, enhance public participation, and mitigate conflicts of interest among stakeholders. With solid collaboration in place, tourism development can proceed more effectively and sustainably.

Securing a TAS of 7.20067826, the subsequent strategy focuses on designing comprehensive, cross-village tourism packages across Kailolo, Liang, Waai, Tulehu, and Pombo Island. This strategic approach aims to foster destination integration by combining nature, local culture, culinary traditions, and community practices. As argued by Damanik and Weber (2018), developing integrated itineraries can optimize destination competitiveness by providing visitors with a more holistic and multifaceted tourism experience. Additionally, creating networks among tourism villages broadens the baseline distribution of economic dividends to local residents living adjacent to the conservation zone. With the implementation of cross-village itineraries, tourists do not merely visit Pombo Island; they also engage with the cultural heritage, traditional cuisine, and daily activities within the region's buffer zones.

Meanwhile, the strategy for upgrading infrastructure, facilities, digital marketing, and community-based regular transportation services achieved a TAS value of 6.782, placing it as the lowest priority within the QSPM matrix. Despite yielding the lowest score among the alternatives, this strategy remains critical as it directly underpins visitor accessibility and comfort en route to the tourism area. According to Minghetti and Buhalis (2020), digital promotion and tourism infrastructure development are crucial determinants in enhancing destination competitiveness in the modern era. The availability of transportation modes, tourism facilities, and digital

media-based marketing can effectively stimulate tourist interest and expand the destination's market reach. Therefore, infrastructure upgrading and digital promotion are highly required as supporting frameworks to ensure the sustainable ecotourism development of Pombo Island.

In conclusion, the QSPM results demonstrate that the ecotourism development strategy for the Pombo Island Nature Tourism Park prioritizes a conservation-oriented approach, community empowerment, institutional strengthening, and the sustainable utilization of local endowments. The highest Total Attractiveness Score (TAS) underscores that conservation-based management coupled with active public involvement serves as the primary trajectory to ensure the long-term sustainability of the Pombo Island Nature Tourism Park.

CONCLUSION

The alternative strategic frameworks developed for the implementation of Community-Based Ecotourism (CBE) within the Pombo Island Nature Tourism Park encompass developing conservation-based tourism by leveraging the potential of flora, fauna, and coastal ecosystems as educational, conservation-oriented, and sustainable nature tourism attractions; empowering local communities and *Pokdarwis* (Tourism Awareness Groups) through the advancement of culture-based tourism and indigenous knowledge, such as the *Meti Kei* traditional practice, to reinforce community-based management and ecological conservation; and formulating integrated, inter-village tour packages encompassing Kailolo, Liang, Waai, Tulehu, and Pombo Island by synthesizing natural attractions, cultural heritage, traditional cuisine, and community activities to enhance destination connectivity, diversify tourism products, and extend tourists' length of stay. Furthermore, this comprehensive approach requires upgrading infrastructure, facilities, digital marketing, and community-based regular transportation services to optimize accessibility, visitor comfort, and the overall quality of tourism services en route to the area, while simultaneously strengthening community participation and institutional frameworks through inter-village cooperation forums and multi-stakeholder partnerships involving local residents, government agencies, NGOs, and park management to foster collaborative and sustainable tourism governance.

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