



Community- Based Ecotourism Management Model Supporting Sustainable Tourism in Desa Batu Jongjong, Kecamatan Bahorok, Kabupaten Langkat

Muhammad Khadry^{1*}, Christina Indriani Sianipar²

¹Politeknik Pariwisata Medan, Jl. Rumah Sakit H. No.12, Kenangan Baru, Kec. Percut Sei Tuan, Kabupaten Deli Serdang, Sumatera Utara 20371, Indonesia

²Politeknik Pariwisata Medan, Jl. Rumah Sakit H. No.12, Kenangan Baru, Kec. Percut Sei Tuan, Kabupaten Deli Serdang, Sumatera Utara 20371, Indonesia

*Corresponding author's email : chodry91@gmail.com

Abstract

The existence of ecotourism in Desa Batu Jongjong, Kecamatan Bahorok, can be an opportunity for the village community. However, the management of ecotourism, especially in Desa Batu Jongjong, Kabupaten Langkat, has not fully provided benefits in terms of economy, ecology, and socio-culture. The issues prompting this research include the lack of human resources in the tourism sector, unclear regulations, and management models for tourist attractions. This is evident from the limited active involvement of the community in tourism activities. The main goal of this study is to develop a community-based ecotourism management model. This research uses a qualitative method with descriptive analysis, SWOT matrix, and the formulation of IFAS, EFAS, and internal and external matrices. Data collection was carried out through interviews, surveys, and field observations, involving selected stakeholders as informants. The SWOT analysis shows that ecotourism management in Desa Batu Jongjong has a total internal factor score of 3.34 and an external factor score of 3.31, placing Desa Batu Jongjong in cell 1, which means it is very strong. In this position, strategies such as market penetration, market development, management, and product development can be applied. Therefore, the model to be implemented includes enhancing promotional content, establishing and strengthening ecotourism institutions, actively involving visitors in management, increasing community involvement, developing integrated tourism packages, improving facilities and infrastructure, creating new tourist attractions, and enhancing community empowerment. By implementing these strategic measures, community-based ecotourism management in Desa Batu Jongjong can be further optimized, supporting sustainable tourism, and providing significant economic, social, and environmental benefits for the local community.

Keywords: Ecotourism management, community-based tourism, sustainable tourism

1. INTRODUCTION

Ecotourism, as a form of tourism focused on environmental conservation, local community empowerment, and conservation education, is gaining increasing global attention. This concept is designed to minimize the negative impacts of tourism on the environment and local culture while providing economic benefits to local communities (Cater, 1994; Tieszen, 2002). In Indonesia, which is rich in biodiversity and culture, community-based ecotourism development has become a key strategy for achieving sustainable tourism. Desa Batu Jongjong, located in Kecamatan Bahorok, Kabupaten Langkat, is a potential location for ecotourism development. Situated in the westernmost part of Kabupaten Langkat, this village boasts abundant natural beauty, including tropical forests, clear rivers, and diverse flora and fauna, including endemic species such as the Sumatran orangutan and Rafflesia flower (Kurniawan & Hasan, 2016).

Despite its great potential, the management of ecotourism in this village has not yet fully maximized its economic, ecological, and socio-cultural benefits. One of the main challenges in managing ecotourism in Desa Batu Jongjong is the lack of skilled human resources in tourism and the absence of clear regulations and management models for tourist attractions. This has resulted in limited community involvement in ecotourism management (Putra & Setiawan, 2018). Therefore, it



is crucial to develop a community-based ecotourism management model that can optimize the natural and cultural potential of the area and enhance community involvement in ecotourism management.

The development of Community-Based Tourism (CBT) has emerged as an alternative solution to address these issues. CBT aims to harness the potential of local communities to support tourism in an area, focusing on social and economic development and stabilizing the area from conflict (Iman Pribadi et al., 2021; Yunikawati et al., 2021). CBT is a tourism model where ownership and management are controlled by the community, taking into account environmental, social, and cultural preservation (Suantri, 2003). CBT is a tool to realize sustainable tourism that considers current and future economic value, social and environmental impact, and meets the needs of visitors, the industry, the environment, and local communities (UNEP & WTO, 2015; Kurniawati & MM, 2013).

Based on these phenomena, this research focuses on analyzing the factors influencing community based otourism management to support sustainable tourism in Desa Batu Jongjong. The aim of this study is to formulate a community-based ecotourism management model that can support sustainable tourism in the village. Through a qualitative approach with SWOT analysis, this study will evaluate the internal and external conditions of the village and formulate appropriate strategies for sustainable ecotourism development.

2. RESEARCH METHODOLOGY

This research will be conducted in desa batu jongjong, kecamatan bahorok, kabupaten langkat. The data collection techniques used in this study include observation, interviews, documentation, and literature review. The selection of informants is done intentionally (purposive sampling), in accordance with sugiyono's definition (2016:85) in komala (2017), which states that purposive sampling is a technique for determining samples with specific considerations, usually based on the knowledge or involvement of informants in the topic being studied.

The secondary data used in this research comes from written sources, such as previous research findings, books, and other relevant literature. This secondary data will complement the information obtained from observations and field interviews. To analyze the research results, a qualitative descriptive analysis method is used. This method aims to systematically describe the phenomena occurring based on the data collected. Furthermore, to formulate ecotourism management strategies, a swot (strengths, weaknesses, opportunities, threats) analysis is employed. The swot analysis functions to examine the internal and external factors influencing the development of ecotourism in desa batu jongjong. Additionally, this study also applies the ifas (internal factor analysis summary) and efas (external factor analysis summary) matrices to identify internal strengths and weaknesses, as well as external opportunities and threats faced in ecotourism management.using these methods, this research is expected to formulate appropriate strategies for developing community -based ecotourism that supports sustainable tourism in desa batu jongjong.

3. FINDINGS AND DISCUSSION

Internal factors affecting the management of ecotourism in Desa Batu Jongjong, Kecamatan Bahorok, consist of strengths and weaknesses. The strengths include captivating natural beauty, local community support, a strategic location, unique tourist attractions, and high tourism awareness. However, there are also weaknesses, such as limited human resources, inadequate infrastructure, weak promotion, lack of clear regulations, and limited capital. On the other hand, external factors that present opportunities include the trend towards sustainable tourism, support from the government and conservation organizations, collaboration with other destinations, increased tourist awareness of nature and conservation, and potential for research and education. However, there are also threats, such as environmental damage, competition with other destinations, reliance on external aid, climate change, and global and national economic conditions.

Before data processing, observations and interviews with village officials were conducted to assess each factor. This step was taken to determine the measures to be implemented in the management of ecotourism in Desa Batu Jongjong. Therefore, an identification of the two main

factors, internal and external, was carried out. The following are the results of the data processing obtained after the assessment by the informants.

Table 1. Internal Factors (Strengths-Weaknesses)

INTERNAL AND EXTERNAL FACTOR ANALYSIS				
	Internal Strategic Factors	Weight	Rating	Score
	1	2	3	4
STRENGTH	1. The Alluring Beauty of Nature	0,14	4	0,55
	2. Local Community Support	0,14	4	0,55
	3. Strategic Location	0,14	4	0,55
	4. Unique Tourist Attractions	0,14	4	0,55
	5. High Tourism Awareness	0,14	4	0,55
				2,73
WEAKNESS	6. Human resource limitations	0,05	2	0,09
	7. Inadequate Infrastructure	0,05	2,5	0,11
	8. Weak Promotion and Marketing	0,09	2,5	0,23
	9. There are no clear regulations yet	0,05	2	0,09
	10. Limited Capital	0,09	1	0,09
				0,61
	Sub-Total	1,00		3,34

Source: Data processed

The data above shows that the total score obtained for internal factors is 3.34. This result is determined by summing the weights and ratings of the strengths and weaknesses factors. This was done to assess the internal conditions of community-based ecotourism management in supporting sustainable tourism in Desa Batu Jongjong, Kecamatan Bahorok.

Table 2. External Factors (Opportunities and Threats)

	External Strategic Factors	Weight	Rating	Score
	1	3	3	4
OPPORTUNITY	1. Sustainable Tourism Trends	0,12	4	0,46
	2. Support from the Government and Conservation Institutions	0,12	4	0,46
	3. Collaboration with Other Destinations	0,08	4	0,31
	4. Increasing Tourist Awareness of Nature and Conservation	0,12	4	0,46
	5. Research and Education Potential	0,12	4	0,46
				2,15
THREATS	6. Environmental Damage	0,12	3	0,35
	7. Competition with Other Destinations	0,12	3	0,35
	8. Dependence on External Assistance	0,08	2	0,15
	9. Climate Change	0,08	2	0,15
	10. Global and National Economic Conditions	0,08	2	0,15
				1,15
	Sub-Total			3,31

Source: Data processed

From the data above, it shows that the total score obtained for external factors is 3.31. This result is determined by summing the weights and ratings of the opportunities and threats factors. This was done to assess the external conditions of the community-based ecotourism management model in supporting sustainable tourism in Desa Batu Jongjong. After summing the scores for both internal and external factors, the next step is to input the scores into the IFAS and EFAS matrices (Internal-External) to determine the position of Desa Batu Jongjong in community-based ecotourism management. The results indicate that Desa Batu Jongjong is positioned in cell 1, which means it is very strong. If Desa Batu Jongjong is in this strong position (cell 1), the steps to leverage this strength include Market Penetration, Market Development, and Product Development.

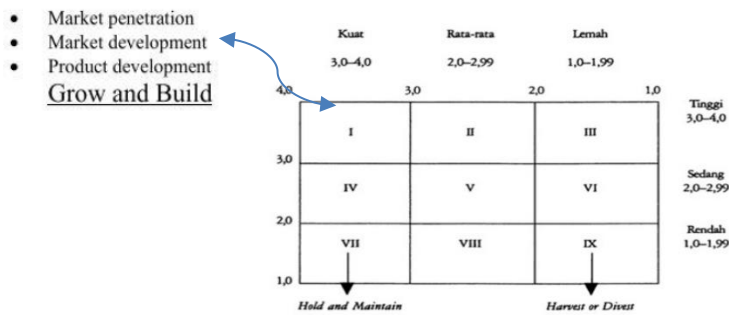


Figure 1. Nine Cells in the IE Matrix
Source: (Rangkuti, 2015)

Furthermore is to describe SWOT analysis as following

INTERNAL EXTERNAL	<u>Strength (S)</u> 1. The Alluring Beauty of Nature 2. Local Community Support 3. Strategic Location 4. Unique Tourist Attractions 5. Unique Tourism Awareness	<u>Weakness (W)</u> 1. Human resource limitations 2. Inadequate Infrastructure 3. Weak Promotion and Marketing 4. There are no clear regulations
	STRATEGY FORMULATION OF DEVELOPMENT	

<p>Opportunity (O)</p> <ol style="list-style-type: none"> 1. Sustainable Tourism Trends 2. Support from Government and Conservation Institutions 3. Collaboration with other Destinations 4. Increasing Tourist Awareness of Nature and Conservation 5. Research and Education Potential 	<p>SO Strategy A strategy that uses strengths to take advantage of opportunities</p> <ol style="list-style-type: none"> 1. Take advantage beauty nature and trends tourist sustainable For develop package tour friendly environment such as trekking and observation animals . 2. Do Local Community Training : Use support government and institutions conservation For practice public local in management tourism and conservation 3. Take advantage location strategic For collaborate with destination others , offering package tour multidestination . 4. Promote attractions unique and educational traveler about importance conservation nature . 	<p>WO Strategy A strategy that minimizes weaknesses to take advantage of opportunities</p> <ol style="list-style-type: none"> 1. Submit help For increase human resources capacity through supported training government and institutions conservation . 2. Carrying out Cooperation with another destination for development infrastructure that can increase accessibility . 3. Increase promotion based on trend tourist sustainable through digital media 4. Interweaving cooperation with government For make regulation management clear tour
<p>Threat (T)</p> <ol style="list-style-type: none"> 1. Environmental damage 2. Competition with other destinations 3. Dependence on External Aid 4. Climate Change 5. Global and National Economic Conditions 	<p>ST Strategy A strategy that uses strengths to deal with threats</p> <ol style="list-style-type: none"> 1. Submit help For increase human resources capacity through supported training government and conservation institutions . 2. Carrying out Cooperation with another destination for development infrastructure that can increase accessibility . 3. Increase promotion based on trend tourist sustainable through digital media. 4. Interweaving cooperation with government For make regulation management clear tour . 	<p>WT Strategy A strategy that minimizes weakness For face threaten</p> <ol style="list-style-type: none"> 1. Empowering community local with training conservation For reduce impact environment . 2. Submit development infrastructure For increase Power competition village . 3. Increase digital marketing carried out by the community local For reduce dependence on aid promotion . 4. Arrange Arrange internal regulations for management tourism that pays attention change climate .

Based on the SWOT analysis, the following strategic steps are essential for managing ecotourism in Desa Batu Jongjong. First, it is crucial to develop eco-friendly tourism packages that take advantage of the village's natural beauty. These packages could include activities such as trekking and wildlife observation that adhere to sustainable tourism principles. This approach will help attract tourists while preserving and utilizing the village's natural resources. Second, enhancing human resource capacity through training is important. Local communities need training in tourism management, conservation, and digital marketing, with support from the government and conservation organizations. This training will improve the community's ability to manage ecotourism effectively. Third, collaboration with other tourist destinations and improvement of local infrastructure are necessary. Collaborating with other destinations can create more attractive multi-destination tourism packages, while improving infrastructure like roads and public facilities will enhance accessibility and comfort for visitors. Fourth, promoting and educating tourists about conservation is vital. The village should develop marketing strategies that highlight its unique attractions and conduct educational campaigns to raise awareness about the importance of nature conservation. This will help increase tourist awareness and support environmental protection. Finally, managing community-based ecotourism in Desa Batu Jongjong requires a comprehensive approach that includes active community participation, synergy among stakeholders, and the application of community-based tourism theories from Indonesia. Currently, the management of ecotourism is initiated by the local tourism awareness group (Pokdarwis) and involves local residents. However, the impacts on the economy, social culture, and ecology are not yet significant. According to community-based tourism theory by Suansri (2003), community-based tourism (CBT) is a participatory model that can offer real and sustainable benefits. CBT utilizes the community's potential to support tourism in the area (Yunikawati et al., 2021). This model involves active community participation in all aspects of management, from preparation and planning to implementation and evaluation. Participation in ecotourism management is crucial and includes involvement in development, utilization, and enjoyment of development outcomes. Thus, it is important for the community in Desa Batu Jongjong to be actively involved not only as implementers but also as decision-makers.

Additionally, achieving sustainable tourism requires building synergy among the pentahelix—government, academia, business, community, and media. This collaboration is essential to maintain tourism sustainability in Desa Batu Jongjong. The government provides regulations and infrastructure, academia offers research and education, businesses contribute investment and marketing, the community manages and implements, and the media handles promotion and education. Economically, ecotourism should provide benefits such as job creation and increased income for the community. This aligns with Pustaka's (2021) findings, which show that community-based tourism significantly improves welfare and empowers communities while providing visitor satisfaction. Therefore, tourism managers in Desa Batu Jongjong must enhance synergy and community participation to achieve sustainable tourism.

4. CONCLUSION

The current model of ecotourism management in Desa Batu Jongjong lacks a formal institution and is still managed in a fragmented manner by various groups and individuals. Community participation is evident through the specific roles of groups managing tourism attractions, such as the observation of flora and fauna not found in other tourist villages. Tourists visit the village for various attractions, including trekking to see *Amorphophallus titanum* and *Rafflesia arnoldi* flowers, camping in the forest, rafting on the river, and exploring caves. The village's unique attractions are a key reason why tourists come. The local tourism awareness group (Pokdarwis) has been given an important role in managing ecotourism, working in collaboration with the local community. However, overall, the community's role in tourism remains at an intermediate level.

The SWOT analysis indicates that the ecotourism management in Desa Batu Jongjong has an internal factor score of 3.34 and an external factor score of 3.31, placing the village in cell 1, which signifies a very strong position. In this position, the applicable strategies include market penetration,

market development, management, and product development. Therefore, the model to be implemented should include enhancing promotional content, establishing and strengthening ecotourism institutions, actively involving visitors in management, increasing community involvement, developing integrated tourism packages, improving facilities and infrastructure, creating new tourist attractions, and enhancing community empowerment.

REFERENCES

- Arida, I. N. S., & Paturusi, S. (2018). *Pengembangan Ekowisata Berbasis Masyarakat di Bali Yogyakarta*. Deepublish.
- Buckley, R. (2009). Evaluating the net effects of ecotourism on the environment: A framework, first assessment and future research. *Journal of Sustainable Tourism*, 17(6), 643-672.
- Cater, E. (1994). Ecotourism as a Western Construct. In W. F. Theobald (Ed.), *Global Tourism* (pp. 54-59). Butterworth-Heinemann.
- Fandeli, C. (2000). *Pengertian Dasar Ekowisata*. Yogyakarta: Fakultas Kehutanan UGM.
- Kurniawan, T., & Hasan, R. (2016). Potensi Ekowisata di Desa Batu Jongjong: Kajian Keaneekaragaman Hayati dan Budaya. *Jurnal Penelitian Pariwisata*, 7(2), 101-115.
- Kurniawati, S., & MM, S. (2013). Strategi Pengembangan Ekowisata untuk Mewujudkan Pariwisata Berkelanjutan. *Jurnal Ilmu Lingkungan*, 9(1), 65-78.
- Komala, N. (2017). Teknik Pengambilan Sampel dalam Penelitian Kualitatif. *Jurnal Metode Penelitian*, 6(2), 44-59.
- Nuryanti, W. (1993). *Konsep Dasar Ekowisata*. Yogyakarta: Gadjah Mada University Press.
- Putra, I. M., & Setiawan, H. (2018). Tantangan Pengelolaan Ekowisata di Desa Batu Jongjong. *Jurnal Pariwisata Berkelanjutan*, 10(1), 45-59.
- Rangkuti, F. (2015). *Analisis SWOT Teknik Membedah Kasus Bisnis*. Jakarta: Gramedia Pustaka Utama.
- Sukmawati, E., & Anggraeni, W. (2015). Strategi pengembangan ekowisata berbasis masyarakat untuk meningkatkan daya saing desa wisata. *Jurnal Pengembangan Pariwisata*, 5(2), 103-112.
- Suansri, P. (2003). *Community-Based Tourism Handbook*. Bangkok: REST Project.
- Tieszen, L. (2002). Sustainable Ecotourism: An Overview. In D. B. Weaver (Ed.), *The Encyclopedia of Ecotourism* (pp. 162-175). CABI Publishing.
- UNEP & WTO. (2015). *Global Report on Ecotourism*. United Nations Environment Programme (UNEP) & World Tourism Organization (WTO).
- Yulianda, F. (2007). Pengelolaan sumberdaya ekowisata berbasis masyarakat. *Jurnal Ilmu Kelautan dan Perikanan*, 18(3), 185-192.
- Yunikawati, E., Pribadi, A. I., & Setiawan, D. (2021). Penerapan Model Community-Based Tourism untuk Pemberdayaan Ekonomi Lokal. *Jurnal Ekonomi dan Pariwisata*, 8(4), 134-149.
- Iman Pribadi, A., Yunikawati, E., & Sutrisno, D. (2021). Community-Based Tourism (CBT) sebagai Solusi Pengembangan Pariwisata Berkelanjutan. *Jurnal Pembangunan Ekonomi*, 12(3), 23-37.
- Sugiyono, S. (2016). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabet