

Community-Based Ecotourism in Kota Pari Village: Enhancing Forest Management and Conservation Efforts

^{1st} Annisa Ilmi Faried
Faculty of Social Sciences
Universitas Pembangunan Panca Budi
Medan, Indonesia
annisailmi@dosen.pancabudi.ac.id
<https://orcid.org/0000-0002-1252-7470>

^{2nd} Rahmad Sembiring
Faculty of Social Sciences
Universitas Pembangunan Panca Budi
Medan, Indonesia
Rahmatsembiring2@gmail.com

^{3rd} Sri Rahayu
Faculty of Social Sciences
Universitas Pembangunan Panca Budi
Medan, Indonesia
srirahayu@dosen.pancabudi.ac.id

^{4th} Rika Novita Sari Manik
Student Faculty Social Sciences
Universitas Pembangunan Panca
Budi
Medan, Indonesia

Abstract— Community-based ecotourism in Kota Pari Village offers an innovative approach to forest management and conservation efforts. By utilizing abundant natural potential, ecotourism not only creates new economic opportunities for local residents but also increases environmental awareness and nature conservation. This approach emphasizes the active involvement of communities in the management of their natural resources, with the aim of creating sustainable development that protects and promotes biodiversity. Although faced with a number of challenges, such as a lack of tourism infrastructure and understanding of sustainable practices, community-based ecotourism remains promising as an effective model for preserving forests and supporting the well-being of local communities. With support from various parties, Kota Pari Village can become a successful example of environmental conservation and sustainable development efforts in Indonesia.

Keywords— Ecotourism, Mangrove, Community, Opportunities, Management

I. Introduction

The preservation of natural ecosystems is crucial for maintaining ecological balance and biodiversity. Forests, in particular, play a vital role in supporting life on Earth, providing essential ecosystem services such as oxygen production, carbon sequestration, and habitat for a wide range of plant and animal species(1). However, the increasing pressure of human activities, such as deforestation, logging, and urbanization, poses significant threats to the integrity of these ecosystems(2). In response to these challenges, community-based ecotourism has emerged as a promising approach to promote sustainable forest management and conservation(3). This approach involves local communities in the management (4) and conservation of natural resources, fostering a sense of ownership and responsibility for the environment.

Kota Pari Village, located in Langkat Regency, is a prime example of a community that has been actively involved in forest management and conservation efforts(5); (6). The village is surrounded by a lush forest, which not only provides a habitat for various species but also serves as a source of

livelihood for the local residents(7). In recent years, the village has witnessed an influx of tourists drawn to the area's natural beauty, posing a threat to the delicate balance of the ecosystem(8). In response to these changes, the local community has initiated community-based ecotourism initiatives to promote sustainable forest management and conservation(9,10). This study aims to analyze the effectiveness of community-based ecotourism in enhancing forest management and conservation in Kota Pari Village, highlighting the challenges and opportunities that arise from this approach(11). Problematic Issues: 1) Limited infrastructure and facilities can be an obstacle to the development of sustainable ecotourism and effective forest management. 2) Conflicts between local communities and ecotourism managers can arise due to differences of opinion regarding resource use and forest management. 3) Limited government assistance can hamper efforts for sustainable forest management and the development of community-based ecotourism. 4) Economic impacts on the environment can arise if forest management and ecotourism are not carried out in a sustainable and community-based manner. 5) Unsustainable and community-based management of natural forest resources can threaten the sustainability of forests and the environment around villages.

II. Methodology

This study employed a mixed-methods approach, combining both qualitative and quantitative data collection and analysis methods. The research was conducted over a period of six months, from December to June 2024. The study population consisted of 100 local residents of Kota Pari Village, including community leaders, forest rangers, and ecotourism operators.

Data collection involved both primary and secondary sources. Primary data was collected through:

1. Semi-structured interviews: In-depth interviews were conducted with 20 community leaders, 20 forest rangers, and 20 ecotourism operators to gather information on their perceptions and experiences



regarding community-based ecotourism and its impact on forest management and conservation.

2. Focus group discussions: Four focus group discussions were conducted with local residents, involving 20 participants each, to gather information on their attitudes and opinions regarding community-based ecotourism and its impact on the local economy and environment.
3. Surveys: A total of 40 surveys were administered to local residents, including community leaders, forest rangers, and ecotourism operators, to gather information on their knowledge, attitudes, and practices regarding community-based ecotourism and its impact on forest management and conservation.

Secondary data was collected from various sources, including:

1. Government reports: Reports from the local government and forest department were analyzed to gather information on forest management and conservation efforts in the area.
2. Ecotourism data: Data on ecotourism activities, including the number of tourists, revenue generated, and environmental impact, was collected from ecotourism operators and local government agencies.
3. Academic literature: Relevant academic articles and studies on community-based ecotourism, forest management, and conservation were reviewed to provide a theoretical framework for the study.

Data analysis involved both qualitative and quantitative methods. Qualitative data was analyzed using thematic analysis, where codes and themes were identified to categorize and summarize the data. Quantitative data was analyzed using descriptive statistics, including means, standard deviations, and frequencies, to summarize the data.

III.Results

The results of the study indicate that community-based ecotourism has had a positive impact on forest management and conservation efforts in Kota Pari Village. The study found that:

1. Local residents' knowledge and attitudes towards community-based ecotourism were generally positive, with 80% of respondents indicating that they supported the initiative.
2. The initiative had led to an increase in local employment opportunities, with 60% of respondents reporting an increase in job opportunities.
3. The revenue generated from ecotourism activities had increased, with an average annual revenue of IDR 500 million (approximately USD 35,000).
4. The initiative had also led to an increase in environmental awareness and conservation efforts, with 70% of respondents reporting an increase in environmental awareness.

However, the study also identified several challenges and limitations, including:

1. Limited infrastructure and facilities, which pose challenges for ecotourism operators and tourists.

2. Conflicts between local residents and ecotourism operators over resource use and management.
3. Limited government support and funding for community-based ecotourism initiatives.

Table 1Steps That Have Been Taken By The Regional Government To Implement A CBE (Community-Based Ecotourism) Based Conservation Area Forest Management Strategy In Kota Pari Village

Steps	Status	Future Evaluation	Responsibility
Mapping and Identification of Ecotourism Potential	It is already done	Evaluate the potential for ecotourism that can be developed	Research Team, Local Government, NGO
Preparation of Joint Management Plan (RPB)	On going	Involving community participation in preparing the RPB	Regional Government, Consultation Team, Local Community
Community Training and Empowerment	Just started	Measuring the impact of training on capacity building	Training Institutions, Local Government, NGOs
Ecotourism Infrastructure Development	It's finished	Evaluate infrastructure and facility needs	Regional Government, Private, Funding Institutions
Ecotourism Promotion and Marketing	On going	Monitor the effectiveness of promotional and marketing strategies	Promotion Team, Local Government, NGO
Monitoring and Evaluation of Activities	Just started	Establish performance indicators and carry out monitoring	Monitoring Institutions, Regional Government, NGOs
Development of Environmental Education Programs	It is already done	Evaluate the impact of educational programs on awareness	Education Team, Local Government, Schools
Determination of Regulations and Sanctions	On going	Establish regulations and sanctions to maintain sustainability	Legislative Institutions, Regional Government, NGOs

Source: Observation, 2024

With these steps, it is hoped that Kota Pari Village can successfully implement a CBE-based conservation area

forest management strategy by involving active community participation.

Table 2. Projections of steps that may be taken by the regional government to continue the CBE-based conservation area forest management strategy in Kota Pari Village

Steps	Future Continuation Projections	Responsibility
Preparation of Joint Management Plan (RPB)	Refine the RPB based on evaluation of community participation and actual needs	Regional Government, Consultation Team, Local Community
Community Training and Empowerment	Continuing training and monitoring its impact on capacity building	Training Institutions, Local Government, NGOs
Ecotourism Promotion and Marketing	Develop more effective and sustainable promotional strategies	Promotion Team, Local Government, NGO
Monitoring and Evaluation of Activities	Continuously monitor performance indicators and adjust policies based on monitoring results	Monitoring Institutions, Regional Government, NGOs
Determination of Regulations and Sanctions	Implement and enforce regulations and sanctions to maintain sustainability	Legislative Institutions, Regional Government, NGOs
Development of Environmental Education Programs	Expand the reach of educational programs and evaluate their impact periodically	Education Team, Local Government, Schools

Source: Observation, 2024

By following these steps, it is hoped that we can continue to improve the effectiveness of CBE-based conservation area forest management in Kota Pari Village for the future. Here are continuation projections for the other steps in the table:

Table 3. Continuation Projections For Other Steps

Steps	Future Continuation Projections	Responsibility
Mapping and Identification of Ecotourism Potential	Continuously update mapping and identification of ecotourism potential based on changes in environmental conditions and market demand	Research Team, Local Government, NGO
Ecotourism Infrastructure Development	Carry out maintenance and expansion of infrastructure in accordance with visitor	Regional Government, Private,

Steps	Future Continuation Projections	Responsibility
	needs and changing environmental conditions	Funding Institutions
Monitoring and Evaluation of Activities	Increase monitoring accuracy and frequency and update performance indicators based on evaluation of previous monitoring results	Monitoring Institutions, Regional Government, NGOs
Determination of Regulations and Sanctions	Review and update regulations and sanctions periodically in accordance with developments in environmental conditions and national policies	Legislative Institutions, Regional Government, NGOs

Source: Observation, 2024

By following this continuation projection, it is hoped that CBE-based conservation area forest management efforts in Kota Pari Village can continue to run effectively and sustainably. This takes into account changes in environmental conditions, market demand, as well as applicable regulations and policies(12). This projection aims to ensure that mangrove ecotourism management efforts can run effectively and sustainably. It is hoped that efforts to manage forest conservation areas based on Ecotourism (CBE) in Kota Pari Village can continue to run effectively and sustainably, and provide maximum benefits for the environment and local communities.

The implementation of community-based ecotourism in Kota Pari Village has effectively empowered local residents by involving them in decision-making processes and providing them with alternative livelihood opportunities. The ecotourism initiative has contributed significantly to the conservation of the surrounding forests by fostering a sense of stewardship among community members and promoting sustainable practices such as responsible tourism, habitat restoration, and biodiversity preservation(13). The project has generated socio-economic benefits for the community, including increased income, job creation, and infrastructure development, thereby improving the overall quality of life for residents(14). By showcasing local traditions, customs, and indigenous knowledge to tourists, the ecotourism program has played a crucial role in preserving the cultural heritage (15) of Kota Pari Village and fostering intercultural exchange. The presence of ecotourism activities has provided valuable educational opportunities for both locals and visitors, raising awareness about environmental issues, biodiversity conservation, and the importance of sustainable development.

IV. Conclusion

The study concludes that community-based ecotourism has the potential to enhance forest management and conservation efforts in Kota Pari Village. The initiative has led to increased local employment opportunities, revenue generation, and environmental awareness. However, the study also highlights the need for improved infrastructure, conflict resolution mechanisms, and government support to ensure the

long-term sustainability of community-based ecotourism initiatives.

In conclusion, the study highlights the importance of community-based ecotourism in enhancing forest management and conservation efforts in Kota Pari Village. The initiative has shown promising results, including increased local employment opportunities, revenue generation, and environmental awareness (16). However, the study also identifies several challenges and limitations that need to be addressed to ensure the long-term sustainability of community-based ecotourism initiatives (17). To overcome these challenges, it is essential to develop a comprehensive and inclusive approach that involves local communities, government agencies, and private sector stakeholders. This can be achieved through the establishment of a collaborative framework that promotes shared responsibility and decision-making.

Furthermore, the study emphasizes the need for improved infrastructure and facilities to support the growth of ecotourism in the area. This can be achieved through investments in infrastructure development, such as the construction of eco-lodges, trails, and other tourist facilities. In addition, the study suggests that community-based ecotourism initiatives should be designed to benefit local communities and promote sustainable forest management practices. This can be achieved through the establishment of community-led ecotourism cooperatives, which can provide training and capacity-building programs for local residents. Ultimately, the success of community-based ecotourism initiatives in Kota Pari Village depends on the ability of local communities, government agencies, and private sector stakeholders to work together towards a common goal of promoting sustainable forest management and conservation. By doing so, the initiative can contribute to the long-term conservation of the forest ecosystem and the well-being of local communities.

The implementation of community-based ecotourism has led to a significant increase in tourist visits to Kota Pari Village, resulting in higher revenue generation for the community and local businesses. Through the establishment of ecotourism trails, designated viewing areas, and educational programs, the project has facilitated better management of the forest ecosystem, leading to reduced instances of illegal logging, poaching, and deforestation. Local residents have diversified their livelihood options beyond traditional agriculture and logging, with many individuals finding employment opportunities in ecotourism-related activities such as guiding, hospitality, handicraft production, and cultural performances. The ecotourism initiative has had a positive environmental impact by promoting conservation practices such as waste management, energy efficiency, and sustainable resource utilization, thereby mitigating the negative effects of human activities on the ecosystem (18). By building capacity, fostering social cohesion, and creating alternative sources of income, community-based ecotourism has enhanced the resilience of Kota Pari Village against external shocks such as economic downturns or environmental disasters. Overall, the results demonstrate the effectiveness of community-based ecotourism as a holistic approach to forest management and conservation, which not only protects natural resources but also enhances the socio-economic well-being of local communities.

REFERENCES

1. Purba B, Amruddin, Arham I, R. A, Faried AI, Wisnujati NS, et al. *Pengelolaan Sumber Daya Alam dan Lingkungan: Teori dan Pemikiran*. Medan: Yayasan Kita Menulis; 2023.
2. Simarmata MM, Sudarmanto E, Kato I, Nainggolan LE, Purba E, Sutrisno E, et al. *Ekonomi Sumber Daya Alam*. Medan: Yayasan Kita Menulis; 2021. 61 p.
3. Sembiring R, Faried AI, Novalina A. *Kesejahteraan Masyarakat Pesisir Berbasis Budaya Sosial Ekonomi Studi KASus Desa Pahlawan Batu Bara*. 2017. 18 p.
4. Rahayu S, Megasari Gusandra Saragih. *Analysis Of Sustainable Tourism Development In The Lake Toba Geopark Area*. Available from: <https://www.researchgate.net/publication/370060390>
5. Hasanah U, Faried AI, Sembiring R. *Pengelolaan Mangrove Berbasis Pemberdayaan Masyarakat*. Tahta Media Group; 2022. 30 p.
6. Faried AI, Sembiring R, Wardhani NS, ... *Transition to a circular economy-inspired waste management system*. *World Journal of ...* [Internet]. 2023; Available from: <https://wjarr.com/sites/default/files/WJARR-2023-1304.pdf>
7. Faried AI, Sembiring R, Wardhani NS, Hasanah U. *Transition To A Circular Economy-Inspired Waste Management System*. *World Journal of Advanced Research and Reviews*. 2023;19(1):145–53.
8. Surya ED, Felani KF, Felani VT, Andriani A. *Analysis of Tourist Attractions, Amenities and Accessibility to Tourist Visit Decisions Mediated by Digitalization Promotion*. *International Journal of Economics and Management*. 2022 Jul 30;1(02):58–67.
9. Gusandra Saragih M, Mesra M. *PARIWISATA SUPER PRIORITAS DANAU TOBA* [Internet]. 2022. Available from: <https://www.researchgate.net/publication/359228856>
10. Saragih MG, Surya ED, B. M. *The Effect of Functional Value and Epistemic Value on Tourist Satisfaction of Lake Toba*. *ARRUS Journal of Social Sciences and Humanities*. 2022 Feb 7;2(1):26–31.
11. Faried AI, Amruddin, Damanik D, Suleman AR, Manaf S, Rosihana RE, et al. *Pengantar Ekonomi Pembangunan*. Kari A, editor. Medan: Yayasan Kita Menulis; 2023.
12. Suhendi A. *Peranan Tokoh Masyarakat Lokal dalam Pembangunan Kesejahteraan Sosial*. *Informasi*. 2013;18(2):105–16.
13. Febrian RA. *Collaborative Governance Dalam Pembangunan Kawasan Perdesaan (Tinjauan Konsep Dan Regulasi)*. *Wedana Jurnal Pemerintahan, Politik dan Birokrasi*. 2016;11(1):200–8.
14. Faried AI, Sembiring R. *Perekonomian Indonesia: Antara Konsep dan Realita Keberlanjutan Pembangunan*. In Medan: Yayasan Kita Menulis; 2019.
15. Damanik D, Nasrullah, Purba B, SN A, Abdillah D, Raditya, et al. *Ekonomi Pariwisata: Konsep, Pemasaran dan Pembangunan*. Simarmata J, editor. Medan: Yayasan Kita Menulis; 2022. 17 p.
16. Sembiring R, Yusuf M, Irawan, Faried AI. *Structural Equation Modelling: Pembangunan Desa Pesisir dan Pemberdayaan Masyarakat Terhadap Kesejahteraan*

- Masyarakat. Jurnal Akuntansi dan Pajak (JAP). 2023;23(2):1–14.
17. Hasanah U, Faried AI, Sembiring R. Pemberdayaan Masyarakat Pengolahan Mangrove Menjadi Permen Jelly Dan Sirup Mangrove Berbasis Nilai Jual Sebagai Upaya Peningkatan Pendapatan Masyarakat Desa Kota Pari, Kecamatan Pantai Cermin. Community Development Journal. 2022;3(2):890–4.
18. K MGHK. Ekosistem Mangrove: Potensi, Fungsi, dan Pengelolaan. Jakarta: Rineka Cipta; 2012.

We suggest that you use a text box to insert a graphic (which is ideally a 300 dpi TIFF or EPS file, with all fonts embedded) because, in an MSW document, this method is somewhat more stable than directly inserting a picture.

To have non-visible rules on your frame, use the MSWord “Format” pull-down menu, select Text Box > Colors and Lines to choose No Fill and No Line.