

Community-based Sustainable Ecotourism at Tangkahan Tourism Destination, Langkat Regency

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Abstract: - Ecotourism is a sustainable tourism method that uses local ecosystems and community culture to preserve nature and generate benefits. Tangkahan, an ecotourism area in Indonesia, has a history of forest exploitation and illegal logging. The local community is working to make it a sustainable conservation area. This research will explain Community-Based Sustainable Ecotourism in Tangkahan Tourism Destination, Langkat Regency. This descriptive research uses a qualitative approach, in-depth interviews, FGDs, observations, and focus group discussions, and uses data analysis techniques as suggested. The results showed that the management of Tangkahan Ecotourism involved cooperating parties such as the North Sumatra Natural Resources Conservation Centre, Gunung Leuser National Park Centre, Forest Management FMU, Conservation Response Unit, PT Perkebunan Nusantara II, Tourism Office, and two Tangkahan Tourism Area Villages namely Namu Sialang Village and Serdang Village. The Tangkahan Tourism Board manages the area, including marketing, guide services, and rescue efforts. However, land licensing issues, trust, and access difficulties hinder development. The development model should be open and community-based, integrating ecotourism development with other community activities. Critical programs include regulatory regulations, tourist facilities, infrastructure, human resources, cooperation, and collaboration with relevant parties.

Key-Words: - Community-based, Sustainable, Ecotourism, Tourism, Destination, Indonesia.

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1 Introduction

Ecotourism is frequently used to describe alternative tourism to traditional or mass tourism. Ecotourism products and programs should be associated with natural tourism objects and attractions and as a type of tourism that supports conservation efforts, implements sustainable development principles, and provides tourists with satisfaction and experience, [1], [2], [3]. Ecotourism is a new method in tourism development that can preserve nature and increase the potential benefits that tourism activities can generate by utilizing local ecosystems and local community culture, [4]. The findings of several previous studies support the notion that ecotourism has the potential to provide more benefits, such as promoting sustainable development, [5], [6] financial contributions to local communities, [7] and support for conservation, [8].

Indonesia has Tangkahan, an ecotourism area under Gunung Leuser National Park (TNGL) management. Administratively, Tangkahan is in Namu Sialang Village and Sei Serdang Village,

Langkat Regency. Tangkahan ecotourism has a history known as one of the forest exploitation areas or illegal logging as a livelihood for people from Namu Sialang and Sei Serdang villages. Tangkahan There is a phenomenon of changing behavior and mindset around the village community, namely by making Tangkahan a sustainable conservation area, [9].

Tangkahan Ecotourism is in Langkat Regency, North Sumatra Province. Tangkahan is nicknamed The Hidden Paradise in Sumatra because of its location in the middle of the tropical forest of North Sumatra. Tangkahan has many attractions, from the Tangkahan waterfall, river tubing, trekking, Batang River, and Buluh River, and the flagship is the elephant bathing and riding tour originating from the wild elephant conservation center or Elephant Sanctuary in Tangkahan.

Tangkahan ecotourism is a tour with ecological tourism and conservation tourism category because this tour focuses more on natural areas dominated by forests and wildlife, [9]. The Tangkahan

ecotourism area has a management institution called the Tangkahan Tourism Institute (LPT). All administrators in this institution come from the local community, namely the people of Namo Sialang Village and Sei Serdang Village. As an institution, LPT accommodates the elements involved in managing the Ecotourism area. Management activities in the Tangkahan Ecotourism Area include one-door management with LPT as the mouth. As a management institution, LPT accommodates several elements, namely the Community Tour Operator (CTO), which is the marketing part of the ecotourism area, the Ranger who serves as a guide or interpreter, and the Ranger who serves as a rescue team (SAR) or Ranger in charge of conservation efforts in the ecotourism area. Cooperation with other organizations that have been carried out: Indonesian Ecotourism Network (INDECON), Conservation Response Unit (CRU), Veterinary Society for Sumatran Wildlife Conservation (VESSWIC), Yayasan Simpul Indonesia and The Johaniter. Until now, cooperation with the local government has not been established, [10].

For twenty years operating as a tourist attraction, Tangkahan ecotourism is still the most frequented destination by local and foreign tourists. However, the development of the Tangkahan natural tourism area still needs to be more optimistic about the objects and attractions of natural tourism in Tangkahan, considered still less attention by the government related to facilities and infrastructure in Tangkahan natural tourism. Although the popularity of ecotourism is increasing, there are problems related to the lack of ecotourism development related to access to tourism and lack of infrastructure, [11]. Thus, this research aims to explain how community-based sustainable ecotourism in Tangkahan tourist destination, Langkat Regency.

2 Literature Review

Ecotourism differs from pure nature-based tourism in three ways: it is nature-based, educational, and sustainably managed, [12] and is broadly defined as "responsible travel to beautiful areas that conserve the environment, sustains the well-being of local people, and involves interpretation and education", [13]. Given these distinguishing characteristics, much earlier ecotourism research assumed that visitors participate in ecotourism primarily because they want to make environmentally and socially responsible choices when traveling, [1], [14], [15].

The application of ecotourism has been widely done and proven to have a positive impact, such as

in Malaysia's East Coast Economic Region. Through ecotourism, there is an increase in income job creation that can reduce poverty levels, improve the regional economy, and find benefits from environmental conservation through improving the quality of natural conditions and social benefits in the form of positive attitudes of local communities, [16]. Likewise, in Lapa Rios, Costa Rica, and Miankaleh, the results of ecotourism sustainability with its positive impact on the environment, society, and the economy, [17], [18].

The success of ecotourism in the world is generally managed by local communities or communities in such ecotourism as the Puerto El Morro natural protected area, located in Ecuador, South America, [19]. Previous research has reported that the development and conservation of the environment and local resources play an essential role in the involvement of local community participation, [20]. The governance approach with community-based ecotourism emphasizes integrated principles that must be considered to ensure its success, [21].

In general, challenges exist in the administration of ecotourism in many parts of Indonesia, one of which is related to the poor participation of local populations, frequently creating conflict or disruption in ecotourism operations. As a result, achieving the core purpose of ecotourism as a support for conservation efforts and local economic betterment becomes difficult. This is due to a need for knowledge of the concept of ecotourism) as well as poor monitoring and the role of the government in developing tourist regions to improve circumstances, as evidenced by the private sector's high domination in ecotourism management, [20].

3 Methods

This research is descriptive research with qualitative methodology. This research uses qualitative data and is described descriptively to explain and show existing natural and artificial phenomena, focusing on the characteristics, quality, and interdependence of activities. This research was conducted from November 2021 to November 2022 in the Tangkahan Ecotourism Area, Langkat Regency. This research takes at least one year to complete because his research is research conducted for a doctoral degree, so the writing process also involves promoters who oversee guiding researchers. Primary data collection techniques were collected through observation, interviews, and focus group discussions (FGDs). In this study, researchers divided the informants into three important categories based on

the priority of knowledge of the subject under study, which can be observed in Table 1.

Table 1. Researcher Informants

Informant	Informant Category	Role
Head of Langkat Regency Tourism Office & Head of Tangkahan Tourism Institute (LPT)	Key Informant	Provide deep and broad knowledge about the Tangkahan Ecotourism Area.
Head of General Subdivision; Tourism Division, Section Head and Object Information and Marketing; Section Head of Business and Tourism Object Development & Management of Tangkahan Tourism Institute (PLT)	Primary Informant	Provide comprehensive knowledge based on technical expertise about the Tangkahan Ecotourism Area.
Deputy Sub-District Head; Village Head; Academics; Tourists; Community Leaders; Restaurant and Lodging Owners; Tourism Area Communities & Tourism Object Managers	Additional Informants	Provide information to enhance analysis and discussion related to the research subject; related to the Tangkahan Ecotourism Area.

Source: Maintained by researchers

Table 2. Researcher Referral Data

Type of Data Documents	Document Name
Ministerial Regulation	<ol style="list-style-type: none"> 1. Regulation of the Minister of Tourism and Creative Economy of the Republic of Indonesia Number 17 of 2014 concerning Tourism Area Business Standards. 2. Minister of Tourism Regulation Number 3 of 2018 concerning Operational Guidelines for the Management of Physical Special Allocation Funds for Tourism. 3. Regulation of the Minister of Tourism of the Republic of Indonesia Number 14 of 2016 concerning Guidelines for Sustainable Tourism Destinations. 4. Regulation of the Minister of Public Works of the Republic of Indonesia Number 3 of 2013 concerning the Implementation of Waste Infrastructure and Suggestions in Handling Household Waste and household-type waste.
Government Regulation	Government Regulation of the Republic of Indonesia Number 43 of 2008 on Groundwater
Local Regulation	Regional Regulation of Langkat Regency Number 5 of 2020 concerning the 2020-2025 Regional Tourism Development Master Plan
Co-operation Agreement	Cooperation Agreement between the Head of the Gunung Leuser National Park and the Chairperson of the Tangkahan Tourism Institute Number PKS.303/T.3/PKS/8/2021
Government Data	Tangkahan Ecotourism Grand Design

Source: Maintained by researchers

Research informants consisted of the Head of the Langkat Regency Tourism Office, the Head of the Tangkahan Tourism Institute (LPT), Academics, the Deputy Sub-District Head, the Village Head, Tourists, community leaders, Restaurant and lodging owners, tourist area communities and tourist attraction managers, [22]. In addition to the above stages, source triangulation involves cross-referencing data from various sources such as interviews, archives, and other documents so researchers can categorize key informants with triangulation informants. Besides that, triangulation techniques are used to validate data from the same source using several data collection techniques, namely participation observation, in-depth interviews, and documentation for the same data source, namely the Langkat Regency Tourism Office and the Tangkahan Tourism Institute (LPT). Secondary data is gathered from research-related documents, books, journals, and online media.

Techniques for data analysis include data reduction, presentation, and conclusion drafting, [23]. Specific data other than books and journals, which are references in this research, can be seen in Table 2.

4 Results and Discussion

4.1 The Role of Actors in Ecotourism Development at the Tangkahan Tourist Destination

Law No. 10/2009 defines a tourist destination as a geographical area that has a variety of tourism activities, attractions, public facilities, accessibility, and interrelated communities. Emphasizes four components for a tourist site to develop its tourism potential, namely attractions, accessibility, amenities, and support, [24].

Table 3. Roles of Actors in Tangkahan Ecotourism Development

Actor	Role and Contribution	Action	Implementation
Langkat Regency Tourism Office; Langkat Regency Government; Namo Sialang Village Government; Sei Serdang Village Government; and Tangkahan Tourism Management Board	Regulate, coordinate, and grant permits for Tangkahan ecotourism activities. Paying attention to and supervision to the development of Tangkahan ecotourism plays a role in the development of supporting infrastructure, increasing human resources, tourism marketing strategies, and economic growth.	Involve local communities in planning tourism activities and collaborate with relevant parties.	Encourage training programs for Tangkahan local communities to be ready and able to actively participate in ecotourism development and management.
Langkat Regency Arts and Culture Tourism Office	Establish policies to encourage the growth of Tangkahan's nature tourism sector comprehensively, aiming for environmentally friendly tourism and offering nature tourism programs.	Encourage the potential of nature, local arts, and cultural activities as an additional attraction for visitors.	Initiate arts and cultural programs such as traditional performances, and creative workshops to enhance the attractiveness of the destination along with deepening knowledge of the natural tourism potential.
PT Perkebunan Nusantara (PTPN)	Collaborate with the government regarding Tangkahan tourism land, which is partly owned by PTPN, as well as build negotiations and agreements with the government through license management.	Develop corporate social responsibility programs that focus on nature conservation and the development of surrounding communities.	Develop a joint activity plan between PTPN and local communities to encourage a balance between the interests of the company and the sustainability of the surrounding ecosystem.
Tangkahan Management Organisation (LPT)	A forum for local community participation in the development of Tangkahan ecotourism. Collaboration of area management, conservation, natural resource utilization and community involvement.	Encourage active community participation in the development of Tangkahan ecotourism.	Develop education and training programs, as well as direct business partnerships between LPT and local communities to play a greater role in improving economic sustainability and protecting and preserving the environment.
Gunung Leuser National Park Centre (BBTNGL)	Manage the permit to use Gunung Leuser National Park for tourism and provide standardized training for elephant handlers (Mahout) based on the standardization provided by BBTNGL.	Encourage the development of volunteer programs to engage communities in conservation activities and environmental stewardship.	Protect wildlife and sustain the ecosystem of Gunung Leuser National Park.
Conservation Response Unit Tangkahan (CRU Tangkahan)	Focus on animal conservation around Gunung Leuser National Park. Cooperation with LPT for ecotourism activities involving elephants and reduction of elephant-human conflict. Has the authority to determine personnel skilled in elephant handling.	Initiated a conservation education program for visitors, especially on elephants.	Develop a sustainability plan for the CRU, including long-term funding and further development of wildlife and habitat conservation, including elephant and handler funding.
Local community; Tangkahan indigenous people	Provide tourist attractions and ensure the quality standards of Tangkahan tourism products. Maintaining unique traditions and local wisdom that support the preservation of the area. Active in supporting government programs and participating in ecotourism businesses such as accommodation, food distribution, souvenir sales, and guide services.	Encourage the creativity of local communities in the development of Tangkahan tourism products and services.	Establish collaboration between the community and other stakeholders to strengthen cooperation and ensure the community's aspirations can be represented in Tangkahan ecotourism development decisions.

Source: Maintained by researchers

Tangkahan, located in Gunung Leuser National Park, is an extraordinary attraction because of its unspoiled nature and uniqueness. Tangkahan Ecotourism Area has rivers such as Buluh River, Batang Serangan River, Garut River, Umang River, and Gambir River.

The Tangkahan Grand Design aims to develop the Tangkahan Ecotourism Area to increase regional income, provide facilities and infrastructure, overcome environmental problems, increase community participation, and raise the potential of local communities through cultural arts activities.

This development is also driven by the government, various other interested parties, and local communities involved in encouraging the development of Tangkahan Ecotourism. Specific data other than books and journals, which are references in this research, can be seen in Table 3.

Based on Table 3, it can be explained that the effort to develop ecotourism in the Tangkahan area requires collaboration or cooperation with various parties. How these actors contribute and carry out their roles can be explained more deeply as is done between key stakeholders, such as the Tourism Office, Local Government, and PT Perkebunan Nusantara (PTPN), to develop tourism marketing strategies. However, some challenges, such as the Gunung Leuser National Park area being in PTPN's territory, required collaboration, negotiation, and mutual agreement. The Tourism Office and Namo Sialang village government sought land acquisition for Tangkahan tourist attractions, but the land was owned by PTPN, making it difficult to manage without permission. Then, followed by communal actors, including the Langkat Regency government, village government, Namo Sialang village community, Sei Serdang village, Tangkahan Tourism Management Board, and the private sector, must work together to improve road infrastructure accessibility, improve human resources, and increase economic growth in the area. Furthermore, the Langkat Regency Government's Arts and Culture Tourism Office has implemented a policy to comprehensively encourage the growth of Tangkahan's natural tourism sector, focusing on ecosystem dynamics, natural resource potential, space availability, active community involvement, and visitor safety. This policy aims to establish a conceptual framework for an environmentally friendly tourist destination, offer nature tourism programs, establish a collaborative management framework, promote tourism activities, and provide comfort and protection for visitors.

However, there are still challenges in developing Tangkahan ecotourism because this area is still in natural conditions with various natural potentials and unique flora and fauna. The development of the Tangkahan tourist attraction in Gunung Leuser National Park still needs improvement, but improvements continue to be made every year. The village government can only provide guidance and organize the construction of facilities. However, public awareness of this area is relatively high, and they are willing to participate in developing tourist attractions by maintaining sustainability and promoting them through social media.

The development of tourist destinations and attractions in Tangkahan, Gunung Leuser National Park, Langkat Regency, requires careful consideration of socio-economic conditions, cultural aspects, religious beliefs, customs, environmental factors, and the characteristics of the tourist attraction itself. The local community has been actively involved in developing Tangkahan tourism by maintaining cleanliness, safety, and visitor comfort. The tourism office provides an assistance program in training and socialization of tourism awareness, which helps the community become more aware of tourism objects and their interests.

The community also partners with local governments and related institutions to advance tourism in Tangkahan. Facilities and infrastructure provided by the tourism office include road signs, ticket posts, SAR training, and health facilities. The positive impact of the development of tourism objects is the increasing number of tourists visiting to increase community income, especially in terms of lodging accommodation and sales of agricultural products.

Local communities, especially the Tangkahan indigenous people living within the Tangkahan ecotourism area, play an essential role in the development and operation of ecotourism. They act as the leading providers of tourist attractions and have the responsibility to ensure the standard and quality of tourism products offered in Tangkahan. The Tangkahan community has unique traditions and local wisdom that distinguish them from other tourism stakeholders in the effort to preserve and maintain the sustainability of this area.

The Tangkahan Tourism Board (LPT) serves as a platform for local communities to engage in discourse and contribute their insights and perspectives towards the progress and sustainable development of the Tangkahan ecotourism area. The collaboration between the community and LPT aims to develop and manage the area efficiently, maximizing benefits in terms of protection, conservation efforts, natural resource utilization, and local community involvement.

The Tangkahan community actively supports government programs through their initiatives and creativity, fostering a strong sense of community among residents. They participate in ecotourism business activities, such as distributing food and beverages, providing accommodation, offering souvenirs or souvenir shops, and providing guide services. Community business involvement in Tangkahan ecotourism fosters a sense of belonging to the local area and makes it a sustainable livelihood opportunity.

Tangkahan residents show a strong tendency towards communal welfare, which indicates a lack of greed in seeking financial gain. A portion of the revenue earned from the management of the Tangkahan ecotourism area is allocated for the betterment of Tangkahan, starting from small initiatives such as the installation of trash bins and the construction of stairs. The active participation of the Tangkahan community greatly influences the sustainability of the river in Tangkahan.

Community-based tourism (CBT) emphasizes the involvement and participation of local communities in the planning, management, and decision-making processes related to destination development. The Tangkahan community has initiated efforts to introduce Tangkahan to a global audience, promoting the area through internet networks and utilizing forest resources in accommodation.

Tangkahan is a popular tourist attraction in North Sumatra, known for jungle exploration, elephant bathing and feeding, river tubing, and suspension bridges. The Conservation Response Unit Tangkahan (CRU Tangkahan) is an animal conservation center established around Gunung Leuser National Park, focusing on preventing and reducing elephant-human conflict. The CRU works closely with the Tangkahan Tourism Board (LPT) to encourage elephant-related ecotourism activities, such as bathing, feeding, riding, and taking pictures with elephants. Integration of CRU activities with LPT occurred in 2002, and LPT officially managed the Tangkahan Ecotourism Area in 2002. The 17,500-hectare Gunung Leuser National Park utilization permit for nature tourism is based on a Memorandum of Understanding (MOU) between LPT and the Gunung Leuser National Park Center. The CRU has the authority to determine personnel, as handling tame elephants requires skilled and trained personnel. The elephant handlers (mahouts) receive training from the Gunung Leuser National Park Center.

From the economic and socio-cultural aspects, Tangkahan Ecotourism benefits surrounding communities, including Namo Sialang Village and Sei Serdang Village, members of the Tangkahan LPT. The management of the Tangkahan Conservation Response Unit (CRU Tangkahan) and ecotourism services provide social benefits, such as increased employment, development of lodging businesses, food centers, souvenir sales, and rental of goods or tourist support equipment. Communities are also involved in naming and procuring elephant feed, improving skills, knowledge, and awareness of forest conservation. Tangkahan and its Conservation

Response Unit (CRU) also have ex-captive elephants and handlers who patrol Gunung Leuser National Park to protect Sumatran elephants. In the process, Tangkahan Ecotourism has successfully increased its visitor numbers.

Table 4. Number of Tangkahan Tourist Visits

Description	2018	2019	2020
Domestic	88437	89728	104776
Abroad	11 667	11672	4528
Amount	100,104	101,400	109,394

Source: [25]

Table 4 shows the development of tourist visits in Tangkahan in 2018, 2019, and 2020. In that period, domestic visits experienced a significant increase. This can be seen through the number of domestic visitors in 2018, which amounted to 88,437. They experienced a mild increase in 2019 to 89,728 but jumped rapidly in 2020 to 104,776. On the other hand, foreign tourist visits show a quite different trend. There were 11,667 visits in 2018, then a slight increase in 2019 to 11,672, and unfortunately, in 2020, a significant decline to 4,528 was experienced, [25].

Based on the information obtained, the decline in the number of foreign tourists in the Tangkahan area was influenced by lockdown measures due to the COVID-19 pandemic implemented by the government, which directly helped limit foreign tourists' access to travel in the Tangkahan area. In addition, the influence of infrastructure aspects such as road conditions, transportation systems, and the completeness of public facilities, such as inadequate ATMs at that time, also played a role as one of the drivers of the decline in foreign tourists. However, despite this, it can still be concluded that in 2018 and 2019, the accumulated number of visitors did not differ much, but in 2020, it increased rapidly. This is based on serious efforts made to gradually improve the quality of Tangkahan ecotourism, especially in the aspect of infrastructure, which still needs much improvement.

Some observers argue that to achieve sustainable tourism development, it is necessary to harmonize three basic principles in tourism development: environmental, economic, and socio-cultural aspects, [26]. The environmental aspect involves identifying and understanding the potential attractiveness of tourist attractions, assessing the carrying capacity of the natural environment, and addressing ecological processes. The economic aspect involves utilizing and commercializing natural and cultural resources, encouraging job creation, income generation, and economic activities

in surrounding less-developed areas. Incorporating social and cultural elements into tourism involves empowering local communities through educational initiatives, effective communication, tolerance, cultural exchange, collaboration, and peace.

In addition to improving the economic and socio-cultural aspects, the Conservation Response Unit (CRU) in the Tangkahan Ecowisata Area is also helping the local community by offering an elephant safari tour package. Despite this, there has been much counter-criticism, as the attraction reduced elephant donations, thus raising exploitation charges. This has resulted in narrow access for tourists to interact in person, who can now only participate in activities and take photos with elephants. If taken deeper, the cost of food and income of the mahout are still counted as constraints and problems, which should be the main attraction in attracting the local community's interest to work as a mahout. The government is also seeking to pay more attention to the well-being of the parties involved in developing the Tangkahan ecosystem.

The Tangkahan Ecotourism initiative in Gunung Leuser National Park (GLNP) has gained international recognition for its unique appeal. The area is adjacent to GLNP, recognized as Sumatra's Tropical Rainforest Heritage since 2004. This initiative has led to a change in individual behavior, from encroaching on the forest to acting as forest guardians. The Tangkahan Tourism Management Organization (LPT) was established in 2001 to prevent illegal forest exploitation. The area covers approximately 17,500 hectares and offers a variety of attractions, including elephant tracking, white water rafting, river bathing, camping, and cultural performances. The initiative has had a multiplicative impact in raising community awareness and preserving the surrounding forest areas. The national park is designated as a nature conservation area and managed through a zoning system, facilitating various activities such as research, scientific exploration, education, supporting cultivation, tourism, and recreation. The Tangkahan Ecotourism Initiative is one example of a successful collaborative effort involving various stakeholders in maintaining the national park area.

The Tangkahan Tourism Management Board was established to increase community awareness and economic improvement in the Tangkahan forest area amid illegal logging. It aims to involve the local community in the planning, management, and development of the area, as well as maintaining and preserving it as an ecotourism area. The Tangkahan Tourism Board (LTP) manages the area through a Community Tour Operator (CTO) directly managed

by the local community since 2003. The LTP network structure involves local communities in all management aspects, including recruitment of employees and trainers for skills development, expansion of business opportunities, and community involvement in policy making.

Communal actors, including the management of the Gunung Leuser National Park (BBTNGL), Langkat Tourism Office, village government, and village representatives, are involved in planning and activities related to Tangkahan ecotourism development. Collaboration between LPT, local communities, and stakeholders is limited to an agreement without a binding agreement between each actor involved. The level of stakeholder positions is not structured in a joint organization.

The Tangkahan Ecotourism Area is managed by the Tangkahan Tourism Institute (LPT), a local institution focusing on community involvement and participation in ecotourism activities. LPT comprises various components, including Community Tour Operator (CTO), Ranger, and SAR personnel. The LPT has successfully transformed the mindset of ordinary people into tourism-oriented individuals and has established partnerships with various industry players, such as the Gunung Leuser National Park Center, Langkat District Tourism and Culture Office, Conservation Response Unit, and travel agents. The CTO manages tourist trips in the area, collaborating with travel agents in Medan, Jakarta, Padang, Australia, and Germany. The Tangkahan Tourism Institute Congress in 2009 recommended an economic policy for managing the Tangkahan ecotourism area, and the LPT board held a discussion meeting to determine the policy. LPT's efforts have increased community involvement and a focus on community-based ecotourism.

If you look at the participation that has been made by the Government, stakeholders, and local communities in efforts to improve the Tangkahan Ecosystem, the main objective within the efforts to enhance the Ecosystems, specifically at Tangkahan destinations, is Community Tourism, Sustainable Tourism and create Collaborative Governance in line with the Tangkahan ecosystem development model involving collaboration and integration with other community activities. These activities include measures in the development of the Tangkahan ecosystem in cooperation with the Government and companies around the Tangkahan Area, such as in the recruitment aspects of employees, training for skills development, expansion of business opportunities through tourism programs such as food distribution, accommodation, and community

involvement in policy making such as those related to art and culture programs, creative workshops aimed at increasing the attractiveness of destinations and the tourist potential of the area. As for the model chart, you can see in Figure 1.

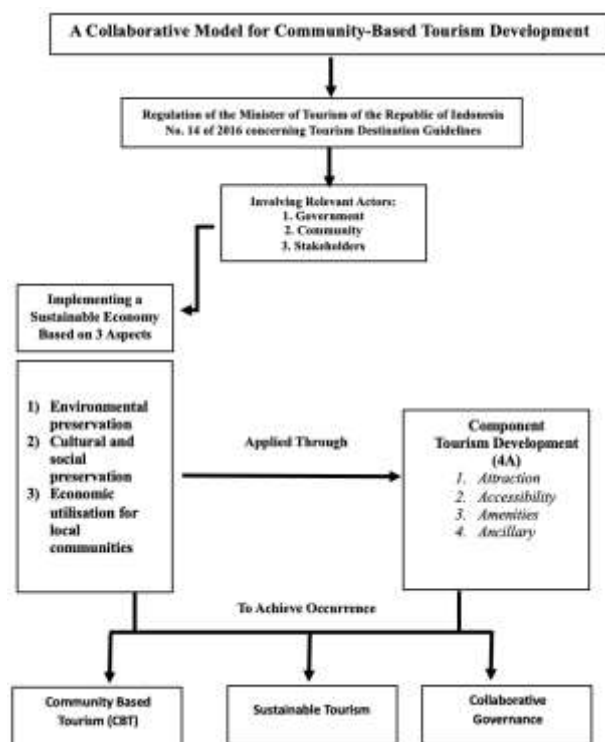


Fig. 1: Collaborative Model of Community-Based Tourism Development

Source: Data processed by the author

This ecosystem development aims to open access to well-being for local communities, especially those who live in potential tourist destinations, [27]. On the other hand, it also improves people's potential and living standards through wise management of the natural potential around them, [28]. So, as the authority, the Government has an opportunity to distribute and manage resources, including natural and human resources owned by the communities around the potential tourism area. The implementation of this goal can be seen through the Government of the district of Langkat, which is trying to exploit its natural potential by developing the Tangkahan area as a tourist potential. However, it is important to know that the Government cannot make this effort alone; therefore, the public's participation is essential in helping the Government optimize the natural potential around them.

This potential is not only limited to the use of natural resources but also involves social and cultural aspects that can be commercialized and become an attraction in advancing the tourism

sector of the Tangkahan Area. Through the collaboration between the Government, other stakeholders, and the public, it is expected to be able to address all the problems in the public sphere, especially those related to the economy and the well-being of the public, which is also the primary objective of the Government, especially of the Tangkahan society. Thus, the development of ecosystems becomes an effective tool for achieving these goals by exploiting and preserving the existing potential of nature and culture, [29].

4.2 Inhibiting Factors in Ecotourism Development at Tangkahan Tourism Destination

Conflicts in Tangkahan, a tourist destination, hinder ecotourism development. Conflicts arise between stakeholders and communities, such as the Tangkahan Tourism Board, local government, village government, and landowners. These conflicts are based on business values and create a need for a sound management system. Tangkahan's tourism concept is ecotourism, not mass tourism, and conflicts arise between tourism actors and the environment. Elephants formerly owned by GLNP have become attractions in Tangkahan, but conflicts arise between the CRU, elephant managers, and the community. The CRU claims that LPT's support for the elephants is insufficient to meet the elephants' needs, including salaries, feed, and vitamins.

Tangkahan ecotourism area needs help obtaining land permits for facilities and infrastructure, including road and bridge infrastructure improvements. The Regional Tourism Development Master Plan (RIPPARDA) of Langkat Regency can be a strength to advance development in the area. The lack of budget funds and the difficulty of obtaining permission from PTPN II plantations have hampered development in the area. The local government has not encouraged PTPN II to grant permission for a more appropriate road. The seriousness of ecotourism development is essential to prevent illegal logging activities and maintain the purity and beauty of nature, flora, and fauna in the area. The results of interviews with the community show that the community is serious about improving the area, with improvements such as a new suspension bridge and an increase in places to eat and drink. The river is clear, and there is no garbage flowing in the area.

Tangkahan ecotourism area is improving facilities and infrastructure, but there are still problems, such as limited communication network coverage, unavailability of ATMs, and poor road and bridge infrastructure. The local government has

not successfully improved road infrastructure, even though accessibility is essential in tourism activities. Complex governance structures between policy-making bodies at the central, provincial, district, and plantation company levels have made it challenging to implement development initiatives.

Responsibility for road development rests with plantation companies that own the Cultivation Rights Title (HGU), making it difficult for local governments to undertake further development. Village governments have also yet to encourage plantation companies to grant permits and share space. Research shows that the seriousness of improving road access to the Tangkahan ecotourism area needs to be seen in addressing road and bridge infrastructure issues. The people of Namo Sialang Village and Sei Serdang Village hope that the problem of road and bridge improvements related to land licensing can be resolved immediately so that adequate infrastructure development can support the smooth accessibility in and out of the Tangkahan ecotourism area.

Community complaints about inadequate road conditions in the Tangkahan ecotourism area originate from the existence of ecotourism sites and demands for unobstructed road connectivity in villages and sub-villages. There is an urgent need to implement strategies to address and coordinate these issues effectively. Trust among stakeholders is essential for collaborative efforts in ecotourism development in the Tangkahan ecotourism area. This trust is crucial as it focuses on shared interests and contributes to the economic, social, and cultural growth of the area. However, collaboration between actors in developing ecotourism in the Tangkahan area still needs to fully trust each other, causing community distrust of the government.

Community distrust often arises because of the need for more approach and socialization about tourism awareness given to the community. Socialization can open the community's mindset and encourage innovation and creativity in planning ideas and contributions for sustainable ecotourism. The villagers of Namo Sialang and Sei Serdang revealed that the tourism office has provided advice and support. However, they also feel they need to be more developed with the condition of ecotourism. The difficulty of building facilities and infrastructure in the Tangkahan ecotourism area is another problem. The local government has not taken concrete action to overcome land licensing issues with PTPN II, and there is no common ground to overcome this problem. To build trust, the community hopes that the local government will take a more serious approach with PTPN II or invite

discussions regarding the development of Tangkahan to collaborate and jointly advance this ecotourism area.

The Tangkahan Ecotourism Institute is working to address land limitations and controversies in the area, aiming to make it more attractive to tourists. This includes improving the suspension bridge, creating better relaxation areas, and preserving the natural beauty of the area. Ngahriken Chairman Kacaribu emphasized the reciprocal benefits of ecotourism activities, especially for the surrounding community. Although far from the city center of Medan, the charm of this area can attract tourists. The role of the government as a facilitator is vital to maintaining enthusiasm and fostering a sense of spirit in the region.

Accessibility is essential in tourism because it allows tourists to move between regions quickly. However, the Tangkahan ecotourism area faces accessibility issues due to the current condition of the existing infrastructure, including gravel, stones, and yellow soil on the path of oil palm plantations. The lack of ATMs, unclear road signs, and limited communication networks further hinder tourists' travel. Government attention to developing Tangkahan tourist attractions is minimal, and road improvements must be more sustainable.

Researchers interviewed tourists to understand the factors that hinder tourists from visiting Tangkahan Tourism Object, Gunung Leuser National Park. Tourists reported difficulties accessing tourist spots, inadequate facilities, advice, and infrastructure, and damaged roads leading to the sites. These factors affect tourists' decision to visit the national park and make it difficult to enjoy their trip. The community highlighted improving road access to tourist attractions and facilities. He stated that damaged roads and infrastructure can cause fatigue and exhaustion for tourists, so it is imperative to address and rectify these issues to ensure a comfortable and safe tourist experience.

5 Conclusion

The results showed that Tangkahan Ecotourism is managed by various parties who work together, including the North Sumatra KSDA Center, Gunung Leuser National Park (TNGL) Center, Forest Management FMU, Conservation Response Unit CRU, PT Perkebunan Nusantara II, Government, and two Tangkahan Tourism Area Villages. The Tangkahan Tourism Organization (LPT) supervises the area by implementing a one-stop management approach. The LPT includes various components, including the Community Tour Operator (CTO),

rangers, and SAR team. So far, the eco-environmental development efforts in the Tangkahan region have yielded significant results; this can be seen in the number of visitors, from 100,104 in 2019 to 101,400 visitors and a rapid increase in 2020 109,394. Of course, this also contributes to Tangkahan's revenue, specifically for the local community. Having Tangkahan as a potential tourist area also benefits the surrounding communities, for example, from the economic and socio-cultural aspects such as the improvement of employment, the development of tourism enterprises that include goods and services, and the preservation of local culture. On the other hand, from an environmental point of view, the Tangkahan area itself is a protected and conservation area. In addition, the community is also involved in all forms of activities undertaken by the government, including the formulation and implementation of policies related to efforts to improve the ecosystem of the Tangkahan Area.

Problems with land licensing, trust, and access difficulties hinder the development of Tangkahan ecotourism. To overcome these challenges, the development model must be community-based, integrating ecotourism with other community activities. The main program includes regulation, tourism facilities, infrastructure, human resources, cooperation, and collaboration with related parties. The community-based approach involves a mutual agreement, which involves the exchange of resources, support, issues, and obligations. The Tangkahan ecotourism development model involves collaboration and integration with other community activities. The focus is on revamping or improving the area based on potential attraction, tourist demand, and carrying capacity. The main programs include regulation, infrastructure addition, human resource improvement, and cooperation with related parties.

References:

- [1] H. Choi, J. Jang, and J. Kandampully, "Application of the extended VBN theory to understand consumers' decisions about green hotels," *Int. J. Hosp. Manag.*, vol. 51, pp. 87–95, 2015, doi: 10.1016/j.ijhm.2015.08.004.
- [2] D. A. Fennell, *Ecotourism*. Routledge, 2014. doi: 10.4324/9780203382110.
- [3] B. B. Boley and G. T. Green, "Ecotourism and natural resource conservation: the 'potential' for a sustainable symbiotic relationship," *J. Ecotourism*, vol. 15, no. 1, pp. 36–50, 2015, doi: 10.1080/14724049.2015.1094080.
- [4] C. A. Hunt, W. H. Durham, L. Driscoll, and M. Honey, "Can ecotourism deliver real economic, social, and environmental benefits? A study of the Osa Peninsula, Costa Rica," *J. Sustain. Tour.*, vol. 23, no. 3, pp. 339–357, 2014, doi: 10.1080/09669582.2014.965176.
- [5] G. La Manna, G. Melis, N. Rako-Gospic, J. Basta, P. Mackelworth, D. Holcer, & K. Leeb, "Sustainable dolphin watching tours as a tool to increase public awareness of marine conservation – a comparative analysis between two Mediterranean destinations and implications for management," *J. Ecotourism*, vol. 19, no. 2, pp. 1–17, 2020, doi: 10.1080/14724049.2020.1742132.
- [6] B. A. B. Morse, J. P. Carman, and M. T. Zint, "Fostering environmental behaviors through observational learning," *J. Sustain. Tour.*, vol. 27, no. 10, pp. 1530–1552, 2019, doi: 10.1080/09669582.2019.1647219.
- [7] A. Mendoza-Ramos and B. Prideaux, "Assessing ecotourism in an Indigenous community: using, testing and proving the wheel of empowerment framework as a measurement tool," *J. Sustain. Tour.*, vol. 26, no. 2, pp. 277–291, 2017, doi: 10.1080/09669582.2017.1347176.
- [8] B. Lopez Gutierrez, A. M. Almeyda Zambrano, G. Mulder, C. Ols, R. Dirzo, S. L. Almeyda Zambrano, & E. N. Broadbent, "Ecotourism: the 'human shield' for wildlife conservation in the Osa Peninsula, Costa Rica," *J. Ecotourism*, vol. 19, no. 3, pp. 197–216, 2019, doi: 10.1080/14724049.2019.1686006.
- [9] W. Wiratno, S. Withaningsih, B. Gunawan, and J. Iskandar, "Ecotourism as a Resource Sharing Strategy: Case Study of Community-Based Ecotourism at the Tangkahan Buffer Zone of Leuser National Park, Langkat District, North Sumatra, Indonesia," *Sustainability*, vol. 14, no. 6, p. 3399, 2022, doi: 10.3390/su14063399.
- [10] T. R. Yusnikusumah and E. Sulistyawati, "Evaluation of Ecotourism Management in Tangkahan Ecotourism Area of Gunung Leuser National Park, North Sumatra," (Evaluasi Pengelolaan Ekowisata di Kawasan Ekowisata Tangkahan Taman Nasional Gunung Leuser Sumatera Utara) *J. Perenc. Wil. dan Kota*, vol. 27, no. 3, p. 173, 2016, doi: 10.5614/jrcp.2016.27.3.1.

- [11] A. Purwoko, D. R. Nurrochmat, M. Ekayani, S. Rijal, and H. L. Garura, "Examining the Economic Value of Tourism and Visitor Preferences: A Portrait of Sustainability Ecotourism in the Tangkahan Protection Area, Gunung Leuser National Park, North Sumatra, Indonesia," *Sustainability*, vol. 14, no. 14, p. 8272, 2022, doi: 10.3390/su14148272.
- [12] D. B. Weaver and L. J. Lawton, "Twenty years on The state of contemporary ecotourism research," *Tour. Manag.*, vol. 28, no. 5, pp. 1168–1179, 2007, doi: 10.1016/j.tourman.2007.03.004.
- [13] T. I. E. Society, "What Is Ecotourism - The International Ecotourism Society," *ecotourism.org*. 2015. Available: <https://ecotourism.org/what-is-ecotourism/>
- [14] J. Deng and J. Li, "Self-identification of ecotourists," *J. Sustain. Tour.*, vol. 23, no. 2, pp. 255–279, 2014, doi: 10.1080/09669582.2014.934374.
- [15] K. Hwang and J. Lee, "Antecedents and Consequences of Ecotourism Behavior: Independent and Interdependent Self-Constructs, Ecological Belief, Willingness to Pay for Ecotourism Services and Satisfaction with Life," *Sustainability*, vol. 10, no. 3, p. 789, 2018, doi: 10.3390/su10030789.
- [16] M. Bhuiyan, C. Siwar, S. Ismail, and R. P. P.-R. Islam NY, "The Role of Ecotourism for Sustainable Development in East Coast Economic Region (ECER), Malaysia," *papers.ssrn.com*. 2012, [Online]. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2035588 (Accessed Date: November 29, 2023).
- [17] A. M. A. Zambrano, E. N. Broadbent, and W. H. Durham, "Social and environmental effects of ecotourism in the Osa Peninsula of Costa Rica: the Lapa Rios case," *J. Ecotourism*, vol. 9, no. 1, pp. 62–83, 2010, doi: 10.1080/14724040902953076.
- [18] F. Seifi and G. R. J. Ghobadi, "The Role of Ecotourism Potentials in Ecological and Environmental Sustainable Development of Miankaleh Protected Region," *Open J. Geol.*, vol. 07, no. 04, pp. 478–487, 2017, doi: 10.4236/ojg.2017.74033.
- [19] S. Diaz-Christiansen, "Economic Contribution of Ecotourism, Motivations and Satisfaction: The Case of Puerto El Morro (Ecuador)," *Eur. J. Soc. Sci.*, vol. 2, no. 2, pp. 92–103, 2019, [Online]. https://revistia.org/files/articles/ejss_v2_i2_1_9/Christiansen.pdf (Accessed Date: November 29, 2023).
- [20] Z. Kia, "Ecotourism in Indonesia: Local Community Involvement and The Affecting Factors," *J. Gov. Public Policy*, vol. 8, no. 2, p. LAYOUTING, 2021, doi: 10.18196/jgpp.v8i2.10789.
- [21] R. Rahmawati, "Ecotourism Governance Based on Community Participation," *Iapa Proc. Conf.*, p. 44, 2020, doi: 10.30589/proceedings.2020.396.
- [22] L. J. Moleong, *Qualitative Research Methodology (Metodologi Penelitian Kualitatif)*, 27th ed. Bandung: Remaja Rosdakarya, 2017.
- [23] M. B. Miles, A. M. Huberman, and J. Saldana, *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications, 2013.
- [24] C. P. Cooper and R. Shepherd, *Tourism : principles and practice*. Longman PP - Harlow, England, 1998.
- [25] langkatkab.bps.go.id. (2021). (Central Bureau of Statistics of Langkat Regency) Badan Pusat Statistik Kabupaten Langkat. *Langkatkab.bps.go.id*, [Online]. <https://langkatkab.bps.go.id/publication/2021/02/26/2271d90a1a1612724ee8e506/kabupat-en-langkat-dalam-angka-2021.html> (Accessed Date: November 29, 2023).
- [26] Y. Sulistyadi, F. Eddyono, and D. Entas, *Sustainable Tourism in the Perspective of Cultural Tourism in Banten Botanical Forest Park (Pariwisata Berkelanjutan Dalam Perspektif Pariwisata Budaya di Taman Hutan Raya Banten)*. Uwais Inspirasi Indonesia, 2019.
- [27] M. H. Thamrin, H. Ridho, and F. A. Nasution, "Strengthening Community Participation in Spatial Planning of Riverflow Regions in Medan City," *International Journal of Sustainable Development and Planning*, vol. 17, no. 6, pp. 1849–1854, 2022, doi: <https://doi.org/10.18280/ijssdp.170619>.
- [28] F. A. Nasution, A. Anshari, H. Thamrin, M. H. Thamrin, Y. I. Indainanto, and Y. Aqmarina, "How agroecology practices in lobu rappa village can improve peasant community welfare," in *IOP Conference Series: Earth and Environmental Science*, Dec. 2022, p. 012099. doi: <https://doi.org/10.1088/1755-1315/1115/1/012099>.
- [29] H. Thamrin, H. Ridho, R. P. K. Sinaga, F. U.

Ritonga, F. A. Nasution, and C. P. Purwanto, "Local wisdom in natural resources management of freshwater fish In Lau Teba," in *IOP Conference Series: Earth and Environmental Science*, Dec. 2022, p. 012104. doi: <https://doi.org/10.1088/1755-1315/1115/1/012104>.

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

- Yarhamdhani Yarhamdhani has made contributions in the form of concepts, frameworks, research ideas, and findings that can be broadly used.
- R Hamdani Harahap, Humaizi, and Heri Kusmanto have gathered several policy papers and study books to describe social and literary facts.

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