



Enhancing Sustainable Management of Sibolangit Nature Tourism Park Through Comprehensive Stakeholder Analysis

Theonesco B Ginting¹, OK Hasnanda Syahputra^{1}, and Edwin Martin²*

¹Faculty of Forestry, Universitas Sumatera Utara, Jalan Kampus 2 USU Bekala, Kecamatan Pancur Batu, Kabupaten Deli Serdang, Sumatera Utara 20353, Indonesia

²National Research and Innovation Agency Republic of Indonesia, Gedung B.J. Habibie, Jl. M.H. Thamrin No. 8, Central Jakarta 10340 Indonesia

Abstract. The Sibolangit Nature Tourism Park (SNTP) holds immense potential as a natural attraction, but effective management faces challenges due to limited resource utilization and community engagement. To address this, a comprehensive stakeholder analysis was conducted. The research was conducted within SNTP, Deli Serdang Regency, between May and June 2021, utilizing questionnaires and in-depth interviews to gather primary data from 25 key informants. Stakeholders represented central and local governments, surrounding communities, and non-governmental organizations (NGOs) such as the Sibolangit Tourism Awareness Group. The collected data underwent thorough analysis to assess stakeholder interest and influence levels. Stakeholders were categorized into key players, context setters, and the crowd. Key players included the North Sumatra Natural Resources Conservation Center, SNTP, and the Deli Serdang Culture and Tourism Office, exerting significant influence in policy formulation and resource allocation. Context setters, represented by local communities, held substantial influence and played crucial roles in decision-making and implementation. The crowd, comprising NGOs, demonstrated high interest but lower influence in management. Collaboration among stakeholders, particularly central and local entities, emerged as pivotal for effective SNTP management. Stakeholders' roles significantly impacted management outcomes. This study highlights the necessity of holistic collaboration and balanced resource utilization for sustainable nature tourism management within SNTP. The findings contribute to a comprehensive understanding of stakeholder dynamics and their roles in achieving the objectives of SNTP management.

Keywords: Collaboration, Management, Nature Tourism, Sibolangit Nature Tourism Park, Stakeholder Analysis

Received 21 December 2021 | Revised 16 September 2022 | Accepted 12 October 2022

*Corresponding author at: Faculty of Forestry, Universitas Sumatera Utara, Jalan Kampus 2 USU Bekala, Kecamatan Pancur Batu, Kabupaten Deli Serdang, Sumatera Utara 20353, Indonesia
E-mail address: okhasnanda@usu.ac.id

1 Introduction

The Sibolangit Nature Tourism Park (SNTP) offers significant potential as a natural haven and a tourist attraction. Nevertheless, effective management encounters obstacles arising from limited resource utilization and complexities in engaging local communities. To address these challenges, a comprehensive stakeholder analysis is crucial for identifying the involved parties, their roles, and interests within the Sibolangit Nature Park [1]. Stakeholder analysis aids in recognizing key actors, policy makers, and intermediaries, thereby shedding light on the dynamics of decision-making [2].

Stakeholders involved in managing the Sibolangit Nature Tourism Park are categorized as key players, context setters, and crowds. A strategy is needed to optimize stakeholder settings in management through increased collaboration and cooperation such as subject and key players that have levels of high interest in the management of The Sibolangit Nature Tourism Park (SNTP). It can be realized by increasing the effectiveness of cooperation and collaboration between the central government and the area under the management of SNTP [3].

Categorizing stakeholders as key players, context setters, and the broader public, strategic collaboration can be nurtured to enhance stakeholder engagement. Enhancing cooperation between the central government and local entities overseeing SNTP is imperative for optimizing management. The multifaceted roles of forests in ecosystems underscore the significance of responsible resource utilization and conservation to achieve a balance between protection, preservation, and sustainable utilization [4].

The stakeholder analysis process reveals pivotal participants in SNTP management, outlining their roles and potential impacts on decision-making. Stakeholder analysis serves as a critical tool for comprehending policy implementation dynamics and the capacity of these groups to influence outcomes [5]. Stakeholder analysis not only illuminates the stakeholder landscape but also contributes to project formulation, policy evaluation, and cooperative management processes crucial for effective policymaking [6]. With the synergy of the stakeholders involved according to their respective roles and functions, a good cooperative relationship will be established. A good working relationship between these stakeholders will support success in carrying out the programs ecotourism development [7].

This study aims to conduct a comprehensive stakeholder analysis to identify the involved parties, roles played, and interests present in the management of the Sibolangit Nature Tourism Park (SNTP). This to provide insights into the dynamics of SNTP management and facilitate effective collaboration among diverse stakeholders to achieve sustainable nature tourism management within the Sibolangit Nature Tourism Park.

2 Research Method

The research was conducted within the Sibolangit Nature Tourism Park, located in the Sibolangit District of Deli Serdang Regency, during the period spanning from May to June 2021. To ensure a comprehensive understanding of stakeholder perspectives and roles in SNTP management, a combination of research tools was employed. These tools included both questionnaires and in-depth interviews, allowing for the collection of primary data from 25 key informants who represented various stakeholder groups involved in the management of SNTP.

The questionnaire and interview methods were deliberately chosen to accommodate the diverse backgrounds and expertise of the informants. This approach facilitated a nuanced exploration of stakeholders' insights and experiences within SNTP management. To ensure a well-rounded representation, purposive sampling was employed for sample selection, deliberately targeting respondents with specific expertise and active involvement in SNTP management.

The collected data underwent a rigorous analysis to determine the levels of stakeholder interest and influence. This analysis was based on a set of carefully designed questions that gauged the respondents' perception of their involvement and its impact. The combined scores from these questions allowed for the categorization of stakeholders into distinct groups: key players, context setters, and the crowd [2],[8]. Stakeholders with both high levels of interest and influence were classified as key players, those with high influence but lower interest were categorized as context setters, and stakeholders with low influence but significant interest fell under the crowd category. This refined categorization illuminated the nuanced dynamics of stakeholder engagement and provided a structured framework to comprehend the varying roles and contributions each stakeholder made to the management of SNTP. These categorizations laid the groundwork for subsequent analyses and discussions, offering a deeper understanding of the multifaceted SNTP management landscape.

3 Result and Discussion

3.1 Stakeholder Identification

Stakeholders are parties who can influence or be affected by the decisions taken or may be defined as a person, group, or institution that has a concern and can affect the outcome of an activity. Thus, it can be concluded that stakeholders are all parties, both individually and in groups that can influence decision-making.

The results of interviews were conducted with 25 key informants divided into the eight stakeholders involved in the management of SNTP. The eight stakeholders consist of the central government (North Sumatra Natural Resources Conservation Center and SNTP), the local government (Deli Serdang Culture and Tourism Office), the surrounding community (Sembaha Village, Batu Mbelin Village, Lau Village, Bengkiewan Village, and Sibolangit Village), and

Non-Governmental Organizations (Sibolangit tourism awareness group community). Stakeholders who were involved in the management of SNTP listed in Table 2.

Table 1 Stakeholders involved in the management of SNTP

Stakeholders	Level of Interest	Influence Level	Role	Role-related activities
North Sumatra Natural Resources Conservation Center	High	High	Implementation and Community Development	Monitoring and evaluating activities at SNTP
The Sibolangit Nature Tourism Park	Low	Low	Implementation and Community Development	Conduct prevention, updated area information, animal inventory, boundary guard maintenance, and community outreach.
Department of Culture and Tourism Deli Serdang	High	High	Implementation and Community Development	There are programs that can be collaborated: promotion and development of tourism objects and tourism products.
Sembahe Village	Low	High	Implementation	Labor providers in the use of SNTP
Batu Mbelin Village	Low	High	Implementation	Labor providers in the use of SNTP
Lau Bengkiewan Village	Low	High	Implementation	Labor providers in the use of SNTP
Sibolangit Village	Low	High	Implementation	Labor providers in the use of SNTP
Community of Sibolangit tourism awareness group (NGO)	Low	Low	Companion Public	Provide training on tourism to improve community welfare; monitoring the management of the SNTP area

The North Sumatra Natural Resources Conservation Center is an extension of the General Directorate of Conservation of Natural Resources and Ecosystems. The North Sumatran Natural Resources Conservation Center is responsible to the management of SNTP in accordance with the Regulation of the Minister of Environment and Forestry Number P.31/Menhut-II/2012 applies in Indonesia. Department of Culture and Tourism of Deli Serdang Regency related to management activities at SNTP such as is an extension of the Regent of Deli Serdang Regency to implement culture and tourism, which is a regional mission in order to achieve the goals set in the Regional Spatial Plan Deli Serdang Regency.

Four community groups live around SNTP, namely the people of Sembahe Village, Batu Mbelin Village, Lau Bengkiewan Village, and Sibolangit Village. Non-governmental organizations (NGOs) have not been participating in management activities at SNTP, such as

The Sibolangit tourism awareness group (a local NGO) that works based on community natural resource management and working together with the community in and around SNTP. The main focus of the Sibolangit Tourism awareness group is on improvement and development activities for community capacity in SNTP.

3.2 Stakeholder Mapping

From the results involving several stakeholders it is known that based on their influence and interests, stakeholders in the management of the Sibolangit Nature Park can be categorized into: three, namely key players, context setters, and crowd. Stakeholders included in the category of key players are the Center for Conservation of Resources North Sumatra, Sibolangit Nature Park and Dinas Culture and Tourism of Deli Serdang Regency. Stakeholders included in the Context setter category are the Sembahe Village community, Batu Mbelin Village, Lau Bengkiewan Village, and Sibolangit Village. Stakeholder Interests included in the Crowd category are group communities Sibolangit Tourism Awareness (NGO). Mapping of stakeholders involved in the management of Sibolangit Nature Park as shown in Figure 3.

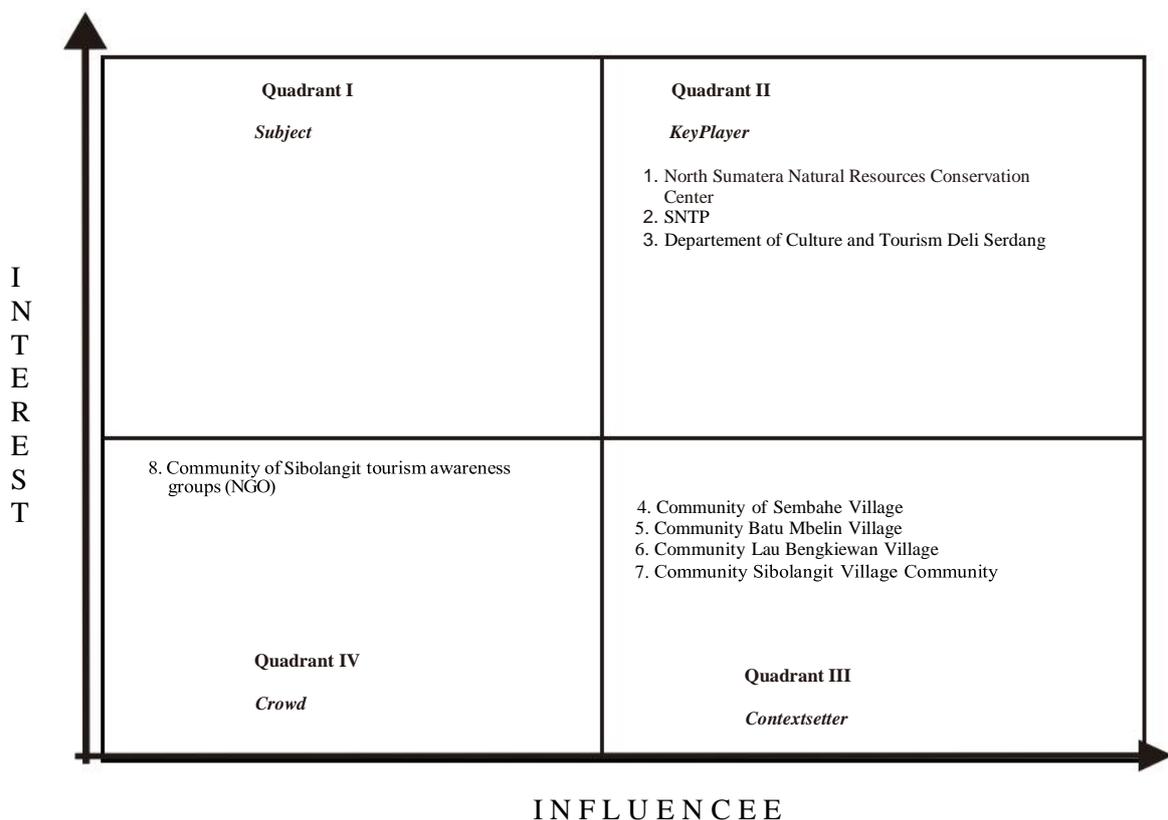


Figure 1 Matrix of stakeholder interests and influence in management SNTP Sibolangit

A. *Quadrant I position (Subject)*

The results of the interest and influence matrix on the subject position do not include stakeholders in the management of SNTP because of the absence of stakeholders in implementing management policies.

B. Quadrant II position (key players)

Key Players is a group the most critical because it has important value and high influence on the success of a management. Based on the results of the interest and influence matrix, the North Sumatra Natural Resources Conservation Center, SNTP, and the Department of Culture and Tourism of Deli Serdang Regency have interests and high influence on the greatest authority and responsibility management of the realization of work programs in the SNTP area. This institutional structure has coercive power, network strength, and cooperation at lower levels. So that institutions that occupy this position (key players) have a very important role and influence high in an institution. This is in line with research conducted by [6], and [9], that this is found in every natural resource management activity, where the manager who gets the power legally always occupies a position as the main stakeholder. Cooperation between related agencies, both representatives from the central government, and the regions can make a major contribution to implementation of ecotourism development programs in SNTP.

C. Quadrant III position (context setter)

The results of the interest and influence matrix showed that the community Sembaha Village, Batu Mbelin Village, Lau Bengkiewan Village, and Sibolangit Village were in the Context setter position. It has a great influence because both can influence choice decisions regarding resource management and then legitimize them and the ability to influence the community in joint action in the management of the Sibolangit Nature Park. This is in accordance with the findings of [10] on ecotourism development in Cenderawasih Bay National Park which explains that stakeholders who play a role in Context Setters can be a significant risk and need to be monitored and managed carefully as it can block ecotourism development.

D. Position in quadrant IV (crowd)

The results of the interest and influence matrix showed that Sibolangit Tourism Aware (NGO) is in a position where the crowd has an interest and low influence. These stakeholders pay attention too in the management of SNTP. Since the activities carried out are only a project and a certain time, it has not provided a significant influence on management activities. This institution generally more emphasis on one particular activity. These stakeholders require little oversight and evaluation but with low priority. Sadar Wisata (NGO) Sibolangit plays a lot of roles in the field of empowerment and economic activity, but has not contributed much to ecotourism management.

3.3 Stakeholder Relationship Level

The level of relationship between stakeholders in management is communication, complementing each other, and cooperation. The identified stakeholders are written in line and table columns that describe the relationship between stakeholders as shown in Table 3.

Table 2 Level of relationship between stakeholders in TWA management

Stakeholder	(Central government)	(Regional government)	(Community)	(NGO)
(Central government)	-	1;2;3	3	2;3
(Regional government)	1;2;3	-	3	2;3
(Community)	2;3	2;3	-	2;3
(NGO)	2;3	2;3	2;3	-

Remarks : 1 = communication potential ; 2 = potential for mutual coordination; 3 = potential for collaboration
Source: primary/processed data (2021)

Interaction with central government agencies as key stakeholder because these agencies legally have the authority to formulate policies, implement policies, provide technical guidance, and evaluate implementation technical guidance. The main role must be synergized as an actor in the management of SNTP. Meanwhile, the central and local governments have the potential for cooperation, communication, and complementarity. The potential cooperation is established in the management of SNTP, between central and local governments, management of forestry fee receipts, and utilization of environmental services. Communication potential is founded when there is disharmony of regulations and their implementation in the central area. From the results of observations in the field, the central government and the government regions tend to be fragmented in managing tourism. Local government is less involved in conservation area management because they feel the area conservation is the responsibility of the central government by the Regulations Minister of Forestry Number P.31/Menhut-II/2012. The relationship between the central government and the community can also take the form of cooperation and communication potential. The community is the target recipient who benefits from the implementation of the central government's policy program. Thus, the potential cooperation is very high. There is some potential communication between the central government and the community.

The relationship between the local government and the community is also involved in conservation area management because they feel that area conservation is the responsibility of the central government through the Regulation's collaborative communication. A cooperative relationship can be established because the community around the forest is the executor of forest utilization activities.

The relationship between the local government and the Sibolangit Tourism Awareness Group is almost similar to the relationship between the central government and the two institutions. This NGO assists the local government in realizing responsibility in regional tourism management because the capacity and resources of the local government are limited. Thus, it creates a cooperative relationship between the two. The role of Sibolangit tourism awareness groups facilitates local governments to prepare communities to create an environment and atmosphere conducive to the growth and development of tourism activities around SNTP. The relationship

between the community and NGO is cooperative because the community is the target group to achieve SNTP management goals. It reaches through capacity building and empowerment programs community.

3.4 The Role of Stakeholders in Sibolangit SNTP Management

According to the analysis of the influence level of each actor described the actor that has the most influence on the implementation is the North Sumatra Natural Resources Conservation Center. It is known from the task of managing conservation areas, in particular, forest reserves, the amount of budget allocated, and the availability of personnel for the program implementation. Whereas for other actors such as local government and non-governmental organizations, there are almost no budget allocations and programs devoted to supporting the implementation of the SNTP [11].

Some of the roles played by stakeholders in the management of the Sibolangit Nature Tourism Park, namely: 1). The North Sumatra Natural Resources Conservation Center is an echelon III (or echelon II for large) technical level implementing unit under the Directorate General of Natural Resources and Ecosystem Conservation of the Ministry of Environment and Forestry of the Republic of Indonesia. This agency is in charge of managing conservation areas, especially nature reserves (wildlife reserves, nature reserves), and natural tourism parks. Also responsible for supervising and monitoring the circulation of protected plants and animals in their territory; including captive monitoring and maintenance of protected plants and animals by individuals, companies, and related conservation organizations. 2). The Department of Youth, Sports, Culture and Tourism of the Deli Serdang Regency is responsible for planning, implementing, monitoring, evaluating, and determining. As well as making an accountability report on the answers to tasks in the fields of Youth, Sports, Culture, and Tourism at the Deli Serdang Regency Government. 3). The communities of Sembaha Village, Batu Mbelin Village, Lau Bengkiewan Village, and Sibolangit Village, play a role in providing energy for rehabilitation activities and tourism activities around SNTP Sibolangit. 4). The Sibolangit tourism-aware community group plays a role in mobilizing community participation to create a conducive environment and atmosphere for the growth and development of tourism activities around SNTP Sibolangit.

Also by establishing a relationship between stakeholders, it is intended to form an agreement and understanding about the concept ecotourism development in the SNTP area. Relations between stakeholders in development ecotourism in SNTP identified in 3 relationships namely the relationship of communication, coordination and collaboration. Communication is an important form of relationship carried out by stakeholders. There is communication provide information to stakeholders involved in conveying the level of importance stakeholders who can support the program ecotourism development at SNTP. Coordination is the most important

inter-stakeholder relationship often found in the field. form of coordination carried out in the ecotourism development program in SNTP is a technical form of implementation program. While the form of collaboration is form of relationship carried out by stakeholders to facilitate, lighten, and accelerate the achievement of objectives carried out by stakeholders needed in the ecotourism development program at SNTP.

4 Conclusions

The analysis of stakeholder interest and influence levels depicted a diverse range of roles in decision-making and implementation within SNTP. Key player stakeholders, such as the North Sumatra Natural Resources Conservation Center, SNTP, and the Deli Serdang Culture and Tourism Office, hold central roles in policy formulation and resource allocation. Context setter stakeholders, like local communities, wield significant influence in decision selection and play vital roles in rehabilitation and tourism activities at SNTP. Meanwhile, the general public group, exemplified by NGOs like the Sibolangit Tourism Awareness Group, exhibit high interest but lower influence in management.

In conclusion, effective collaboration among stakeholders, particularly between central and local entities, emerges as a crucial element for successful SNTP management. The roles played by each stakeholder significantly impact the outcomes of SNTP management, with certain entities exerting substantial influence. This study underscores the importance of holistic collaboration and balanced resource utilization for sustainable nature tourism management within the Sibolangit Nature Tourism Park, aligning with the established research objectives.

REFERENCES

- [1] Ginting, IA, Patana, P., Rahmawaty, "Assessment and Development of Potential Objects and Attractions of Nature Tourism Nature Parks (SNTP) Sibolangit", *Peronema Forestry Science Journal*, vol. 2, no. 1, p. 74-81. 2013.
- [2] Reed, MS, Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., Prell, C., Quinn, CH, and Stringer, LC., "Who's In And Why? A Typology Of Stakeholder Analysis Methods For Natural Resource Management," *Journal of Environmental Management*, vol. 90, pp. 1933–1949. 2009.
- [3] Nurfatriani, F., Darusman, D., Nurrochmat, DR, & Yustika, AE Thompson, R. "Stakeholder Analysis Stakeholder analysis in the transformation of green fiscal policy," Forestry Research, Development and Innovation Agency, 2011.
- [4] Manalu BE, Latifah Siti, Patana Pindi. "Public Perception of Ecotourism Development in Huta Ginjang Village, Sianjur Mula-Mula District, Samosir Regency, North Sumatra Province," 2012.
- [5] Syahputra, OK, Nugroho, B., Kartodihardjo, H., & Santoso, N. "Stakeholder Analysis in Community Based Mangrove Management: Case of Forest Management Unit in Region 3 of Aceh Province," *Journal of Tropical Forest Management*, vol. 24, no. 3. 2018.
- [6] Maguire, B.,J. Potss, S. Fletcher. *The Role Of Stakeholders In Themarine Planning Process-Stakeholder Analysis Within The Solent*, Marine Policy, United Kingdom, 36, pp. 246-257. 2012.

- [7] Widodo, ML, Soekmadi, R., Arifin, AS. "Analysis of Stakeholders in Betung Kerihun National Park's Ecosystem Development, Kapuas Hulu District," *Jurnal Pengelolaan Sumberdaya Alam dan Lingkungan*, vol. 8, no. 1, pp. 55-61. 2018.
- [8] Bryson, J.M. "What to do when stakeholders matter: stakeholder identification and analysis Techniques," *Public Management Review*, vol. 6, pp. 21-53. 2004.
- [9] Sembiring. E., S. Basuni, R. Soekmadi, "Resolusi konflik pengelolaan Taman Nasional Teluk Cenderawasih di Kabupaten Teluk Wondama," *Jurnal Manajemen Hutan Tropika*, vol. 16, no. 2, pp. 84-91. 2010.
- [10] Siregar, M. "Peranan Stakeholders terhadap pengembangan ekowisata di Taman Nasional Teluk Cenderawasih Kabupaten Teluk Wondama Provinsi Papua Barat," Tesis, Sekolah Pascasarjana, Institut Pertanian Bogor, Bogor, 2011.
- [11] Ichsan, AC, Soekmadi, R., Adiwibowo, S., Kusmana, C., & Dramaga, JK "The role of stakeholders in the implementation of the conservation village model in Mount Rinjani National Park," *Journal of Forestry Policy Analysis*, vol. 14, no. 1, pp. 47-59. 2017.