

Identification, Characterization and Stakeholder Analysis of Eco-tourism Destinations in Lake Toba Area

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ABSTRACT

This study is aimed at identifying and characterizing the eco-tourism destinations in Lake Toba Area as well as mapping and analyzing the stakeholders involved in its value chain and governance. The study was conducted between January and April 2018 whereby a snowball sampling method was employed in identifying the eco-tourism destinations. A semi-structured questionnaire was used to record the characteristics of each destination point in terms of access, attraction, and amenities. Seventeen eco-tourism destinations located in seven regencies along Lake Toba Area have been identified. While access to these tourist destinations has been good enough, the destinations are lacking of attractions. The attractions are limited to natural panoramic views, such a pine forest and spectacular lake view without adequate activity options that can be done by tourist. In terms of supporting amenities, there are still many rooms that require attention and improvement. After that, the study continued by analyzing the role of stakeholders involved directly or indirectly in the operation, governance, and policy of eco-tourism destinations in the lake Toba region. The stakeholders are mapped and clustered based upon their power and interest into four categories: (i) key players, (ii) subjects, (iii) trend setter, and (iv) the crowd. It appears that owner/ administrator, regional tourism office, and several interrelated government offices, such as the Ministry of Tourism and the Ministry of Forestry and Environment are key players which possess high power and interest. On the other hand, private sector, mass media, and local communities are identified as dormant stakeholders or potential trend setters to some extent who possess high power but have low interest. The results of this study are essential inputs for further investigating the socio-economic impacts of the tourism-based development in the Lake Toba through Social Life Cycle Assessment methodology.

Keywords: Lake Toba Area, eco-tourism, stakeholder analysis, life cycle assessment

1. INTRODUCTION

Tourism is one of the sectors that become the mainstay of the state to increase state revenues in the form of state foreign exchange, Gross Domestic Product (GDP), and increase of manpower. In the annual report of UNWTO (2016), tourism leads the economic sector by contributing 10% of global Gross Domestic Product (GDP) and 6% of total world exports, and has the potential to address urgent world challenges, including socio-economic growth, inclusive development, and environmental sustainability. In an effort to increase tourism, the Government of Indonesia has set 10 Strategic Areas of National Tourism which is the main focus of the Ministry of Tourism to increase tourist arrivals, both foreign and domestic tourists. One of these areas is the Lake Toba region.

Lake Toba area is a region with areas that have direct interaction with Lake Toba. According to Presidential Regulation no. 81 of 2014 on Spatial Planning of Lake Toba and surrounding areas, Lake Toba

Area consists of 7 regencies, namely Simalungun Regency, Toba Samosir (Tobasa) Regency, North Tapanuli Regency, Humbang Hasundutan Regency, Dairi Regency, Karo Regency, and Samosir Regency.

Lake Toba area has a diverse tourism potential spread in every district. One of the salient tourism sector is ecotourism. Lake Toba area offers a variety of ecotourism such as waterfalls, protected forests, natural baths, etc. The development and management of ecotourism destinations in Lake Toba will not work well if there is no active role for each stakeholder. Each of these stakeholders has their own interests and influence on ecotourism objects. This paper intends to identify and characterize ecotourism destinations, as well as to map out its stakeholders in for the purpose of managing tourism of Lake Toba Area. The result of this study are essential inputs for further investigating the social and economic impacts of the tourism-based development of the Lake Toba through Social Life Cycle Assessment methodology (Halog and Manik, 2016) which is the eventual goal of the our research agenda, where this study lies as one of its milestone.

2. METHODOLOGY

The research was conducted in Toba Lake area covering seven regencies, including Simalungun, Toba Samosir, North Tapanuli, Humbang Hasundutan, Dairi, Karo, and Samosir. The study was conducted between January and April 2018 whereby a snowball sampling method was employed in inventorying the eco-tourism destinations. A semi-structured questionnaire was used to record the characteristics of each destination point in terms of access, attraction, and amenities.

Data collection has been done through a series of survey, direct observation, and interview with every stakeholder who plays a role in eco-based tourism industry in Toba Lake Area. Inventory data is used to perform sample determination with characterization representing ecotourism destinations of Lake Toba Area. The study was followed by stakeholder analysis of those directly or indirectly involved in operational activities of each destination. Finally the stakeholders were mapped out with regard to the importance and the level of influence of each stakeholder. Measurement and assessment of the level of stakeholder influence is made using several variables including strength conditions, eligibility conditions, compensatory forces, personality strength, and organizational strength (Galbraith 1983 referred to in Reed et al., 2009). While the measurement and assessment of stakeholder interest level is done by using variable of stakeholder involvement, management benefit, role, relation with main task and function, and level of dependency.

According to Fletcher (2003), stakeholders are parties (individuals or groups) who have an interest in a problem. Stakeholder analysis is an important thing to do to identify each stakeholder involved. According to Bryson (2004), stakeholder analysis is essential to avoid failed decisions; the increasingly related nature of the world involves stakeholders; as an important aspect of problem solving; improve organizational performance; to help the success of public organizations; assess and improve political feasibility; provide satisfaction to the stakeholders involved, especially key stakeholders; and contribute through the impacts of strategic management functions or activities.

Stakeholder analysis is an important issue in sustainable development as it involves a number of stakeholders. According to the World Commission on Environmental Development (1987), sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (in Eriksson & Lidstrom, 2013). The concept of sustainable development refers to the concept of "three pillars" of sustainability - environmental, economic, and social (Eriksson & Lidstrom, 2013). Therefore, stakeholder analysis is important as a process for identifying affected or influenced individuals or groups through a systematic, critical, and sensitive approach to obtaining effective decision-making by prioritizing individuals or groups to engage in decision-making processes (Reed et al., 2009).

3. DATA COLLECTION AND ANALYSIS

The following section describes the results of data collection and analysis of the respective results.

3.1. Identification of Ecotourism Destinations

Through direct survey in seven regencies around Lake Toba Area between January and April 2018, we were able to identify 17 destinations of ecotourism in Lake Toba Area (Fig. 1). For each destination characteristic data and information regarding access, amenities, and attraction were collected.

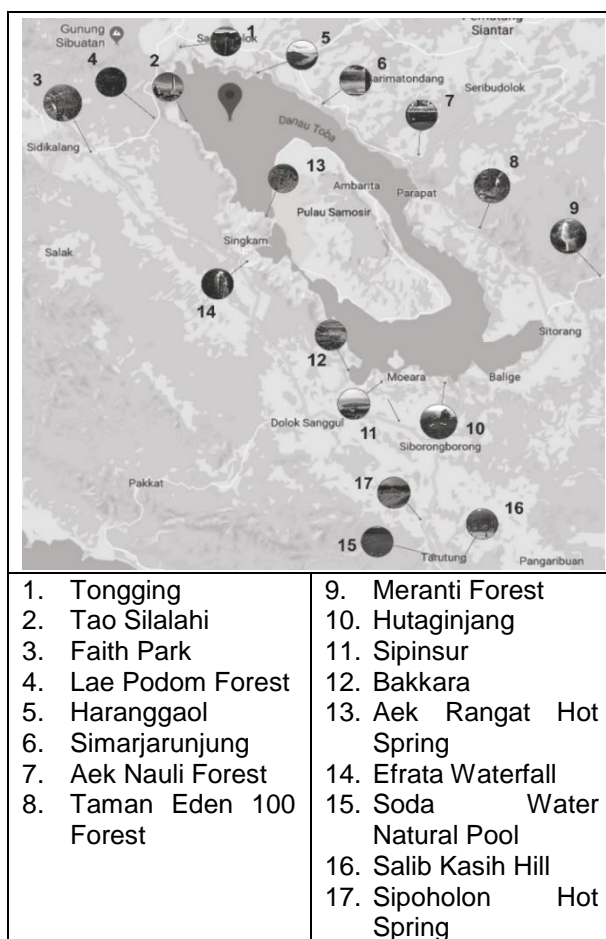


Fig. 1 Map of the identified destinations

3.2. Characterization of Ecotourism Destinations

Characterization of the identified destinations was performed by exploring and tracking the attributes of each destination in term of general characteristics such as ownership, area size, business model, etc. and in term of specific characteristics related to access, amenities, and attraction (Fig. 2).

The result of characterization of ecotourism object in Lake Toba area indicates that most ecotourism objects are viewpoints to Lake Toba spectacular landscape from high altitude (41%), others are natural baths, waterfall, and tropical forest. Most of the destinations (56%) are owned and administered by regency government, others are community and private properties; there is also one destination that belongs to

central government. Most destinations occupy large area (> 100 ha). Most of the ecotourism destinations (53%) are attached to community settlement without any clear boundary.

In terms of business model, the results indicate that most the destinations are not managed in proper business model; for instance, most of the destinations, especially those of government-owned, still rely most of their operational expenses from government budget without any other adequate revenue stream either from visitors' retribution or business partnership. Most destinations (58%) do not charge admission fee and most ecotourism destinations do not even record the numbers of their visitor for further analyses of business development.

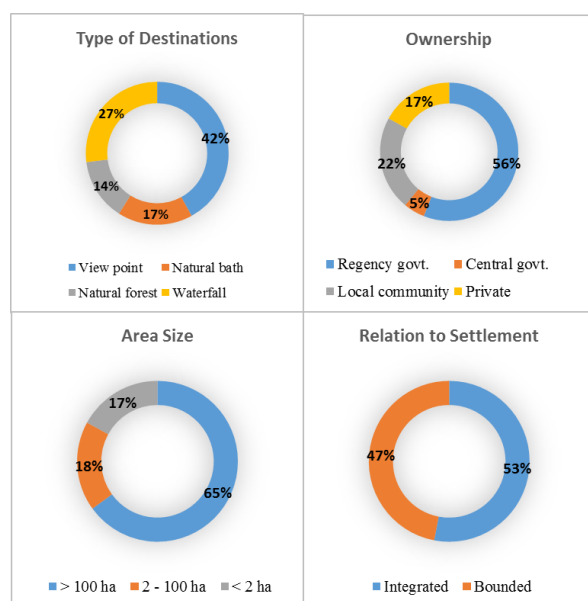


Fig. 2 General characteristics of identified destinations

In terms of access, the closest air portal to Lake Toba Area is Silangit International Airport (DTB). Majority of ecotourism destinations has been connected from Silangit International Airport by road which is quite reliable, although the condition of the road to each of the destinations varies. The travel time from Silangit Airport to each destination varies greatly depending on distance. Destinations to the south of Lake Toba Region (Fig. 1, no. 8-17) can be reached from Silangit Airport in 15 minutes to 1-hour drive. While destinations to the north (Fig. 1, no. 1-7) can be reached within 1 to 2 hours of travel. Beside Silangit Airport, destinations can be accessed from Kuala Namu International Airport that offers more flight connection to the world. In the meantime, toll road between Kuala Namu to Parapat is under construction. This road will enable a 3-hour drive between Kuala Namu and Parapat.

In terms of amenities, lodging, banking, grocery, are available in towns around Lake Toba Area. However, the availability of quality lodging is still very limited. It is also observed that cash dispenser/ ATM is mostly only available in towns, which sometimes located as far as 30 km from the ecotourism destinations. The same thing also applies to groceries. It must be noted that many of the destinations come with very poor quality of sanitary, which must be improved soon in order to keep up with international standard.

In terms of attraction, the most common attraction in the destinations are viewpoint of spectacular Lake Toba from high altitude. Some destinations also provide hiking track, while some other offer camping ground. Most of the destinations are forested area with pine tree as canopy. Not many destinations provide *edutainment* (education in entertaining atmosphere) such as agro- or forest-tourism, except for Taman

Eden 100 that provides nursery for Toba andaliman tree (*Zantoxylum* sp.) and Aek Nauli that provide guided tour to Toba incense (*Styrax* sp.) forest stands. Overall, little-to-no tourist-lake interaction activities are offered by all destinations, which is something of high potential to develop and high demand.

3.3. Stakeholder Analysis

After conducting the identification and characterization steps, the next important step is to understand the existing system in ecotourism tourism management at Lake Toba Area. In order to do so, three sampling that represents all characteristic of the whole destinations are selected. The selected three samples are Sipinsur (Fig. 1 no. 11), Taman Eden 100 (Fig. 1 no. 8), Aek Nauli (Fig. 1 no. 7). The sample is selected according to the characterization of ecotourism objects representing different owner/ administrator (i.e., Local Government, community, and management bodies under the Central Government); different geographical locations (Humbahas Regency, Toba Samosir Regency, and Simalungun Regency); and different land area that is small (<2 Ha), medium (2-100 Ha), and large (>100 Ha). Therefore, the three samples are adequate in representing the whole ecotourism destination.

Table 1. Characteristic of samples for stakeholder analysis

	Sipinsur	Taman Eden 100	Aek Nauli
Ownership	Regency (Humbang Hasundutan)	Community (L. Sirait family)	Central government (Ministry of Forestry and Environment)
Location (Regency)	Humbang Hasundutan	Toba Samosir	Simalungun
Land size	Small (< 2 ha)	Medium (2-100 ha)	Large (> 100 ha)

After the sample is determined, all stakeholders are identified by means of deep interview. Interviewees are obtained by snowballing method. Afterwards, the roles of each stakeholder for each ecotourism object are analyzed in terms of power and interest and, therefore, the stakeholders are then classified. By analyzing the results, we can obtain the level of influence and importance of each stakeholder. Following the analysis of the importance and influence of stakeholders, the stakeholders are then clustered in a diagram (Fig. 3).

Subject (Low Power, High Interest)	Key Players (High Power; High Interest)
<ul style="list-style-type: none"> - Workers - NGOs (i.e., YPDT, AMAN) - Executive Body for Lake Toba Tourism Authority (BPODT) - Religious Institutions (i.e., HKBP, KAM) - Tour operator association (i.e., PHRI) - Local community 	<ul style="list-style-type: none"> - Owners/ Administrators - Coordinating Minister of Maritime Affairs - Ministry of Tourism - Ministry of Environment and Forestry - Regencies Government within Lake Toba Area

	<ul style="list-style-type: none"> - Legislatives of Regencies within Lake Toba Area - Authoritative Body of Lake Toba Tourism (BODT)
<p>Crowd (Low Power, Low Interest)</p> <ul style="list-style-type: none"> - Local community 	<p>Context Setters (High Power, Low Interest)</p> <ul style="list-style-type: none"> - Tourists - Mass media - Prospective investors - Concerned public figures (local/national) - Social media buzzers

Based on stakeholder mapping in the diagram above, the classification of stakeholders in terms of key player (influence and high importance), subject (high importance and low impact), context setter (high leverage and low importance), and the crowd (influence and low importance) can be described as follow:

3.3.1. Key Players

Owners/ administrators of each destination are the noticeable Key Player. In the case of Sipinsur, it is Humbang Hasundutan Bureau for Turism; L. Sirait Family for Taman Eden 100 and the Ministry of Forestry and Environment for Aek Nauli. The Regen of each regency plays a vital role in providing tourism management, promotion, policy and regulations for tourism in their respective regency, and facilitating job creations for the surrounding community.

The specific interest of the L. Sirait Family for Taman Eden 100 is the need for preserving ancestral lands and forests in addition to earning income. They have an influence in changing the function of tourist attractions, making policies in ecotourism objects, organizing tours, making the planning and implementation of tourism activities, and determine the layout of ecotourism object parts.

At a national level, there are three ministerial institutions that are classified as Subject stakeholder for ecotourism in Lake Toba Area. These are the Coordinating Minister for Maritime, the Ministry of Tourism, and the Ministry of Environment and Forestry. The Coordinating Minister for Maritime Affairs has a function to control ministries policies implementation in maritime affairs, including the Ministry of Tourism. The Ministry of Tourism of formulating and establishing policies in the development of tourism destinations and industries, developing international tourism marketing and the archipelago, and developing tourism institutions. The Ministry of Environment and Forestry plays a role in the formulation of environmental policies as well as environmental monitoring.

The respective regency government, i.e., Humbang Hasundutan for Sipinsur, Toba Samosir for Taman Eden 100, and Simalungun for Aek nauli, plays a role in the formulation of regional development planning policy and coordination of regional development planning that can support and stimulate development to each ecotourism destination. The regency government has interest at increasing the regional development

of tourism. The regency government also has power to accelerate the regional development, as well as to formulate long-term regional development policy, medium term, and regional annual development plan. Along with the government regency, the legislatives are simultaneously classified as Key Player stakeholder.

Authoritative Body of Lake Toba/ Badan Otoritas Danau Toba (BODT) is a body in central government under the control of President whose task is to accelerate the management and regional development of tourism area of Lake Toba. The Coordinating Minister of Maritime acts as chairman.

3.3.2. Subjects

Based on our rating on the power and interest, stakeholders included in the category Subject are workers, NGOs, Executive Body for Lake Toba Tourism Authority (BPODT), religious institutions, and local community.

There are only few numbers of workers who are employed in the sample ecotourism destinations. There are only two attendants employed full-time in Sipincur, less than 10 employed employed in Taman Eden 100, and between 10 and 20 employed in Aek Nauli. Most of the workers are hired from local community. None of the destinations has existing workers union.

There are few non-governmental organizations working in the issues of Lake Toba tourism. Lake Toba Heritage Foundation/ Yayasan Pecinta Danau Toba (YPDT) is the leading NGO working on this issue. YPDT concerns on the environment, culture and tourism of Lake Toba. Another important NGO is the Indigenous People Alliance of the Archipelago/ Aliansi Masyarakat Adat Nusantara (AMAN). AMAN is an Indonesian indigenous peoples' human rights and advocacy organization.

Since the vast majority of the people in Lake Toba Area are devout Christian, the role of religious institution becomes significant. The dominant religious institutions in Lake Toba Area are Batak Protestant Synod/ Huria Kristen Batak Protestan (HKBP) and Catholic Diocese of Medan/ Keuskupan Agung Medan (KAM).

Other stakeholders fall under Subject category are tour operator, their business associations. For instance, hotel managements in Lake Toba have a chapter for professional association called Perhimpunan Hotel dan Restoran Indonesia (PHRI). Some local community who have strong interest in tourism development is also classified under Subject category. Today, one million people live in Lake Toba Area.

3.3.3. Context Setters

Context setters are those who actually have strong influence but low interest. Classified into this type of stakeholders are tourists, mass media, prospective investors, concerned public figures, and social media buzzers. Tourists can take a role to encourage the growth of ecotourism support businesses. With increasing tourist demand for ecotourism facilities, the passion of the community and investors will also develop. Mass media (and online media) have the potential to increase insight and disseminate information for both tourists and potential investors to grow ecotourism in Lake Toba. The same thing applies to public figures and social media buzzers.

3.3.4. Crowd

Not all people have equal interest in Lake Toba tourism development. Some people, who even live in Lake Toba area, have little to no interest in this issue. These people belong to Crowd group.

4. CONCLUSIONS

From the results of this study, it can be concluded that in the Lake Toba region, there are 17 destinations of ecotourism. Majority of the ecotourism destinations are viewpoints to Lake Toba spectacular landscape from high altitude in the form pine forest. Most of the destinations are owned and managed by local

government. However, the business model of the destinations are yet not developed properly as indicated that most of the destinations are struggling with operational management. While most of the destinations are integrated within the community settlement, the surrounding community has very minimal involvement with the business.

Stakeholders with high level of influence and importance (key player) is the owner, Tourism Office of the related regency, Ministry of Tourism, and the Regent of the seven regencies in Lake Toba Area. Stakeholders with high importance and low influence (subject) are workers, BPODT, religious institutions, and NGOs. Stakeholders with high levels of influence and low importance (context setter) are the mass media and potential investors. Stakeholders with low levels of influence and interest (crowd) are the local community.

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