



Sustainable Tourism: Evidence from Lake Toba in North Sumatra, Indonesia

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Keywords:

Coastal Tourism,
Indonesia,
Lake Toba,
Sustainability,
North Sumatra.

Abstract.

Tourism has become an important sector in some national economic development, especially in Indonesia. In Indonesia, the tourism sector is one of the biggest non-oil foreign exchange-earners. Consequently, the Indonesian government has introduced laws, policies, and regulations to bolster the sector. Specifically, Lake Toba in North Sumatra is a famous coastal tourist destination in Indonesia, which attracts both local and foreign tourists. The objectives of this research are to examine coastal tourism in Indonesia and address possible measures to achieve sustainable coastal tourism in Lake Toba. The methodology adopted in this research includes a qualitative approach with descriptive and dialectical analysis. Moreover, the data used are adopted from literature, tables, pictures, and documentary reviews. In the course of the research, it was discovered that many factors threaten sustainable tourism development in Lake Toba, particularly lack of and access to infrastructure, inadequate funds, among others. The result of the research reveals that government laws and policies and recommendations by scholars significantly strengthen sustainable tourism in Lake Toba. In concluding the research, it was argued that due to the economic and social-cultural importance of tourism to the development of Indonesia, it is imperative to effectively implement the laws, policies, and recommendations outlined in the paper.

Kata Kunci:

Model aktivasi
norma,
Program daur ulang,
Acara Olabraga,
Teori perilaku
terencana.

Abstrak.

Parwisata telah menjadi sektor penting dalam beberapa pembangunan ekonomi nasional, khususnya di Indonesia. Di Indonesia, sektor pariwisata merupakan salah satu penyumbang devisa nonmigas terbesar. Konsekuensinya, pemerintah Indonesia telah memperkenalkan undang-undang, kebijakan, dan peraturan untuk memperkuat sektor tersebut. Secara spesifik, Danau Toba di Sumatera Utara merupakan salah satu destinasi wisata pantai terkenal di Indonesia yang banyak diminati oleh wisatawan lokal maupun mancanegara. Tujuan dari penelitian ini adalah untuk mengkaji pariwisata pesisir di Indonesia dan membahas langkah-langkah yang mungkin dilakukan untuk mencapai pariwisata pesisir berkelanjutan di Danau Toba. Metodologi yang digunakan dalam penelitian ini meliputi pendekatan kualitatif dengan analisis deskriptif dan dialektis. Selain itu, data yang digunakan diadopsi dari tinjauan pustaka, tabel, gambar, dan dokumenter. Dalam perjalanan penelitian ditemukan bahwa banyak faktor yang mengancam pembangunan pariwisata berkelanjutan di Danau Toba, terutama kurangnya dan akses infrastruktur, dana yang tidak memadai, antara lain. Hasil penelitian menunjukkan bahwa undang-undang dan kebijakan pemerintah serta rekomendasi para sarjana secara signifikan memperkuat pariwisata berkelanjutan di Danau Toba. Dalam menyimpulkan penelitian, dikemukakan bahwa karena pentingnya pariwisata secara ekonomi dan sosial budaya bagi pembangunan Indonesia, maka undang-undang, kebijakan, dan rekomendasi yang diuraikan dalam makalah ini harus diterapkan secara efektif.

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Article history: Received 27 August 2020; Accepted 7 April 2021; Available 30 April 2021.

1. Introduction

Tourism is one of the world's largest industries accounting for over one-third of total global service trade (Endo 2006) and growing consistently prior to the outbreak of COVID-19 (UNWTO, 2019 Ed.). Tourism is considered an economic growth factor and a multiplier benefit for many countries. Recently, it has been established that tourism has become one of the most significant export sectors in many developing countries and it not only increases foreign exchange income but also creates employment opportunities, stimulates the growth of the tourism industry, and triggers overall economic growth (Samimi, Sadeghi and Sadeghi, 2013). Indonesia is the world's largest archipelagic country with 17,504 islands and a total coastline length of about 81,000 km (Briandana, Doktoralina, and Sukmajati, 2018 and Anele, 2020) and ranks 40 at the Travel & Tourism Competitive Index 2019 overall rankings (Calderwood and Soshkin, 2019).

Coastal tourism is important and part of the largest and most rapidly growing activity in the world. According to Any and Said, tourism is one of the major factors shaping development patterns in the coastal zones of Indonesia (Any and Said, 2012). The term coastal tourism embraces the full range of tourism activities that take place in the coastal zone and the offshore coastal waters, like Lake Toba. For example, the existence of Lake Toba has led to coastal tourism development projects such as hotels, resorts, restaurants, the food industry, and the infrastructure supporting coastal development like retail businesses, stores, fishing piers, beaches, and other facilities. Also included are coastal activities such as boating, cruising, swimming, fishing, snorkeling, and diving (Charlier and Charlier, 1995). This means that tourism development attracts commercial and specialized real property investment in form of lodging accommodations such as hotels, inns, and so on. Indonesia has the potential to develop in ways beneficial to its people. One such way is through marine tourism (Briandana et al, 2018). Tourism is one of Indonesia's foreign exchange sources apart from the oil and gas sector.

Lake Toba or Danau Toba in Indonesia is the biggest volcanic lake in the world. It is 100km in length and 30km in width, and its depth is 505m. It is situated in the middle of the northern part of Sumatra Island, Indonesia. As quoted by Azila, Dian, Hanani, and Ahmed (2018), Lake Toba is located 176km to the West of the provincial capital. Lake Toba, according to Moedjodo, et al (2017), has blue water, a gracious community, and fascinating Batak culture that draw tourists from all over the world. Also, Lake Toba has natural and cultural resources, spectacular scenery, great activities. Hence, Lake Toba in North Sumatra is a popular destination for local and foreign tourists. According to Tables 1 and 2 below, it has been projected that the number of both local and foreign visitors to Lake Toba to increase from 1,743,500 to 2,210,500 and 58,709 to 87,300 respectively. Therefore, its sustainability is of paramount importance to the economic development of Indonesia.

Tourism has become a major cause of environmental damage rather than a force for enhancement and protection (Mason 2003). The growth of tourism activities in the coastal zone has led to progressive degradation of environments. Sustainable tourism development is that properly planned, developed, and managed tourism that can be done to minimize the impact on the environment and at the same time can deliver benefit to the environment (Any and Said, 2012). The development of tourism requires careful coordination and cooperation of all parties to make decisions for the development of the sustainable tourism industry (Marpauny, et al, 2016). Uncontrolled growth of the tourism industry can result in a serious environmental problem so that these negative impacts from tourism activities need to be controlled and reduced as the need of tourism industry to be more sustainable. Tourism development must be supported by cooperation between stakeholders, synergy, balance, social and cultural responsibility (Cortez, 2010).

As observed by several authors such as Briandana et al, (2018), Rekarti and Doktoralina, (2017), and Suryanto and Grima (2018), marine tourism must be managed in a professional, synergistic manner and must be developed through investments in hospitality, transportation, communication, and information. If coastal tourism is thus, properly managed can help achieve sustainability. Towner

(2016) opined that marine tourism leaves a meaningful impression and is not merely entertainment. Rather, it allows tourists to participate directly in the development of environmental conservation. The purpose of developing environmental conservation is to generate a deep understanding of the workings of coastal ecosystems, leading to awareness of how to behave to preserve coastal areas in the present and into the future (Kurniawan, et al, 2016). Thus, developing environmental conservation can support sustainability in coastal tourism with particular reference to Lake Toba in North Sumatra.

Lake Toba is in North Sumatra which is a province on the Indonesia island of Sumatra is located between the Malacca Strait and the Indian Ocean. According to Marpaung, North Sumatra has marine tourism potentials which have not been run optimally (Marpaung, 2016). This means that tourism in North Sumatra is not yet sustainable with particular reference to Lake Toba. From the foregoing, this paper seeks to identify how sustainable tourism can be achieved in North Sumatra with particular reference to Lake Toba, Indonesia.

2. Literature Review

2.1. Theoretical Framework

Carney observes that sustainable rural livelihood is holistic and dynamic and acknowledges the complex interaction in rural livelihoods (Carney, 1998). Scoones opined that Sustainable Rural Livelihood (SRL) approach can help to structure ones' thoughts but will not give a description of reality (Scoones, 2015). The most important concept of SRL is a sustainable livelihood. In view of this paper, the concept of SRL is instrumental in strengthening the economic potentials of Lake Toba.

2.2. Concept of Tourism

Tourism has traditionally been considered an effective instrument for social and economic development. Countries all over the world have included tourism among their instruments and sectorial policies towards development and many cooperate agencies have funded and carried out projects in this area (Fayos, et al, 2015). The tourism industry agglomerates many separate activities that come together in the production and consumption of tourism, which include hotel and hospitality management, restaurants, resorts, retail industry among others (UNCTAD, 2008). The economic impacts of tourism can be measured in many terms, such as output, income, employment, value-added taxes, and so on. The magnitude of the relative impacts depends upon the relative magnitude of the direct and the derived effects.

The magnitude of direct effects can be divided into four factors: tourist intensity, the level of daily consumption for the type of overnight stay, the composition of tourist activity by the type of overnight stay, and employment content of tourist-related activity/the opportunity of jobs seekers (Zhang, et al, 2007). Considering these four magnitude direct effects, sustainability becomes a concept of importance if coastal tourism must continue to support the economy with particular reference to Lake Toba in North Sumatra in Indonesia.

2.3. Concept of Sustainability

Tourism is perceived as a clean and renewable industry, inexpensive to develop because of its use of existing natural, cultural, and historical resources (Weaver, 1998). Though, this assertion is arguable as the cost of maintenance and sustainability of tourist locations considering the necessary infrastructure is not cheap in the contemporary world. Tourism can create tension within a specific community, either because the land is taken for a new form of income, or because tourism attracts

people from other areas and those people start to benefit from tourism instead of the local community (Hitchcock and Darma Putra, 2015). According to WTO, sustainable development is that development that meets the need of the present generation without compromising the ability of future generations to meet their needs (WTO, 2001). Hence sustainable tourism development in the same vein can be implied to mean that tourism development today will give an utmost positive and progressive contribution to its environment today and has the ability to also contribute same in the future without any compromise.

Sustainable tourism development is based on the concept of ecologically sustainable development. This means using, conserving, and enhancing the community resources by maintaining ecological processes on which life depends and increases the quality of life for both present and future generations (Environment Australia). Managing coastal areas needs integrated inter-disciplinary and multi-sectoral approaches for sustainable utilization of resources that in practice can enhance nature's contribution to human welfare and preventing undesirable effects.

Integrated Coastal Zone Management (ICZM) is defined as a continuous and dynamic process that unites government and communities, science and management, sectoral and public interests for developing and implementing an integrated plan. The ultimate goal of ICZM is to improve the human communities' quality of life (Ramesh and Vel, 2011). Kay (2007) outlines the goals of ICZM as follows: economic development and use of the coastal region, protection and preservation of the coastal areas, minimization of losses of human life and property, and public access at the coastal zones. The question remains to identify how sustainable tourism can be achieved in Lake Toba in Indonesia.

2.4. *Tourism in Indonesia*

According to Stone, Indonesia ranks thus in the following: tropical forest: second largest tropical forest after Brazil; biodiversity: 3rd largest mega biodiversity after Brazil and Zaire; land Mass: About 59% of land in Indonesia is a tropical forest which represents 10% of the total forest in the world; forest: about 110 million hectares of Indonesia forests are recorded as potential forests while 118.7million hectares is conservation area; butterfly: Indonesia ranks first with about 121 species and 44% are endemic; reptile: Indonesia ranks 3rd with more than 600 species or 16% of the world's reptile species; birds: Indonesia ranks 4th with about 1,603 species and 26% endemic, representing 17% of the world; and primate: 35 species with 25% of which are endemic (Stone, 1994).

The government of Indonesia has decided to transform Indonesia's economy using tourism as one of the main growth drivers. To achieve this goal set by the government of Indonesia, the issue of tourism sustainability must be brought to the front burner, using Lake Toba as a case study.

2.5. *Benefits of Tourism*

Tourism can help residents to be more aware of their environmental quality and support its maintenance and improvement where necessary (WTO, 2001). The benefit of tourism includes sustainability of economic development, correlation among tourist expenses is revealed in the long period and unidirectional causation from tourism earnings help the sustainability of economic growth (Mustafa and Santhirasegaram, 2014). According to Indonesia's Law of Tourism No 10 of 2009 (Republic of Indonesia, 2009), the objectives of tourism development are to promote economic growth, the prosperity of the people, eradicate poverty, overcome unemployment, conserve nature, environment, and resources, promote culture, elevate the image of the nation, nurture the love of the country, strengthen the identity and unity of the nation, and strengthen friendship among nations. According to Gustanto (2019), tourism can also benefit and contribute among others to cultural preservation and customs, increasing people's intelligence, improved health and freshness,

safeguarding sustainable natural and environmental resources, and maintained ancient relics and heritage of the past.

Therefore, one can observe that the benefits of tourism point to sustainability, hence adequate attention must be employed in sustainable coastal tourism with particular reference to Lake Toba in Indonesia. The beauty of the lake and its surroundings, activities like having a cruise or boat ride in the lake, and the lovely hotels are some of the benefits and attractions of Lake Toba (Pictures 1 and 2 below).

3. Methodology

This study's research design used a qualitative approach with a case study method. The method used in this study is a descriptive method with a qualitative approach. The research focus was the sustainability of Lake Toba. Hence Lake Toba was used as a case study of which its results and findings from this study could be adopted in the coastal tourist locations in Indonesia.

The qualitative survey as adopted in this study is data that in form of words which are not represented as series of numbers as in quantitative study. The data was collected through emails, documentary and literature reviews. Method of collecting data in this study included: forecast of domestic and foreign visitors to Lake Toba.

Table 1. Forecast of Domestic Visitors to Lake Toba, 2015-2041

Domestic Visitors	Number of Visitors (<i>Prediction</i>)				CARG (%)		
	2015	2021	2026	2041	2016-21	2022-26	2027-41
Day visitors	483,000	514,100	524,600	541,200	1.0%	0.4%	0.2%
Staying at friends and relatives	598,000	625,500	651,400	700,600	0.8%	0.8%	0.5%
In commercial accommodation	662,500	815,100	900,600	968,700	3.5%	2.0%	0.5%
From North Sumatra	596,250	737,800	819,200	881,100	3.6%	2.1%	0.5%
From other provinces	66,250	77,300	81,400	87,600	2.6%	1.0%	0.5%
Total domestic visitor	1,743,500	1,954,700	2,076,600	2,210,500	1.9%	1.2%	0.4%

Source: Horwath HTL, Lake Toba, 48

Table 2. Forecast of Foreign Visitors to Lake Toba, 2015-2041

Foreign Visitors	Number of Visitors (<i>Prediction</i>)				CARG (%)		
	2015	2021	2026	2041	2016-21	2022-26	2027-41
Overnight Visitors:	58,709	78,800	87,300	87,300	5.0%	2.1%	0.0%
- Malaysia	29,340	40,200	46,500	46,500	5.4%	3.0%	0.0%
- Singapore	6,057	7,400	8,000	8,000	3.5%	1.5%	0.0%
- Other Countries	23,312	31,200	32,800	32,800	5.0%	1.0%	0.0%
Total foreign visitors	58,709	78,800	87,300	87,300	5.0%	2.1%	0.0%

Source: Horwath HTL, Lake Toba, 48

In addition to data from tables and pictures, the researchers dialectically analysed documented materials related to the study, particularly from articles of earlier scholars as they relate to tourism. The articles of earlier scholars helped the research to identify the gap in literature as well as to extract matters that relate to coastal tourism sustainability to make this study to achieve its objective.



Figure 1. Lake Toba

Source: <https://www.canstockphoto.com/tuk-tuk-samosir-lake-toba-sumatra-69969084.html>

4. Research Findings, Results, and Analysis

The research results include: sustainable coastal tourism development at Lake Toba can be achieved through careful consideration of cultural and environmental sensitivities. Also, sustainable coastal tourism development at Lake Toba can be achieved through the inclusive approach of the community potential, and sustainable coastal tourism development at Lake Toba is achievable by proper analysis of the potentials of regional tourism. Besides, there should be a proper examination of the internal and external factors that may affect the development of tourism in Lake Toba. In addition, there should be adequate and accessible infrastructure development at Lake Toba if tourism must be sustained, and efforts should be geared towards conservation and maintenance of natural resources at Lake Toba because that is the main bane of tourism attraction to the location. Also, business development and foreign investment should be welcomed at Lake Toba if tourism must be sustained in the location, Lake Toba region should be equipped with skilled human resources who will serve as tourist guides and other relevant services as may be required at coastal tourist centers, and sustainable tourism in Lake Toba should be able to boost the revenue generation of the regional government in terms of direct taxes as income tax levied on tourism workers and tourism businesses, as well as indirect taxes in the form of customs duty on imported goods and taxes imposed on visiting tourists.

Marpaung et al (2016) through a SWOT analysis on Lake Toba highlights the weaknesses as lack of accessibility, therefore adequate accessibility to Lake Toba can help to achieve coastal tourism sustainability in the study area (Marpaung et al, 2016). The SWOT analysis also presented a lack of education and awareness in the community, hence this study believes that improved education and awareness creation in the community can help achieve coastal tourism sustainability in the study area (Marpaung et al, 2016). The SWOT analysis identified poor accommodation capacity to be a weakness in Lake Toba, invariable adequate accommodation capacity will help achieve environmental sustainability in the study area (Marpaung et al, 2016). The analysis also observed a lack of lake protection awareness which means that awareness needs to be created on Lake Toba protection to achieve sustainability (Marpaung et al, 2016). Lastly, the analysis reveals that inadequate coordination exists among local authorities (Marpaung et al, 2016). In essence, local authorities are encouraged to coordinate themselves properly if sustainability must be achieved at Lake Toba in North Sumatra in Indonesia.

Some relevant policies as outlined by Gustanto (2019) which have been affirmed by this study to have the capacity to achieve sustainable coastal tourism at Lake Toba include the importance of regular coordination between the central government and district governments around Lake Toba to cooperate in empowering the Lake Toba region.

Table 3. SWOT Analysis of Lake Toba Sustainable Tourism Development

Strength	Weakness
1. Existence of natural tourism potential	1. Inadequate infrastructure
2. Existence of natural tourism festivals	2. Inadequate tourism facilities
3. Availability of tourism facilities	3. Lack of funding
4. Availability of infrastructure	4. Absence of regional tourism masterplan
5. Government support	5. Incompetent management
6. Existence of creative artisans	6. Absence private sector participation
7. Existence of other tourism areas, example Toba Coldera Geopark	7. Inadequate education and training of artisans, tourism officials and the local communities
8. A plethora of cultural heritage	
Opportunity	Threat
1. Increasing number of both local and foreign tourists	1. Influence of western education on culture etc.
2. Benefit for the local communities	2. Natural disaster
3. Increased government revenue	3. Pollution
4. Availability of art-craft items	4. Overcrowding
5. Potential for investment	5. Absence of strategy to protect the lake
6. Enhanced education	
7. Cooperation among the government, local communities and private sector to protect and preserve the lake	

This means that collaboration between the central government and district government will help achieve sustainable coastal tourism at Lake Toba (Gustanto, 2019). More so, the need for commitment, coordination, collaboration, and synergy of the Local Government in the area of Lake Toba as facilitators who can move the professionals to manage the tourism of Lake Toba which became the icon of Tourism in North Sumatra (Gustanto, 2019). Lending credence to that, it is imperative for the communities to involve in sustainable tourism development in Lake Toba (Revida and Purba, 2018).

As a corollary to the above, the consistency of factors that influence the empowerment of the tourism sector in the Lake Toba area should be implemented properly (Gustanto, 2019). There is a need for structuring and procurement of facilities and infrastructure that support the development of Lake Toba's coastal area (Gustanto, 2019). There is a need for the government to make a policy to re-green all the edges of Lake Toba by realizing the movement of a million trees (Gustanto, 2019). Also, entrepreneurs who are benefactors of Lake Toba are to be levied for purposes of road maintenance and reforestation (Gustanto, 2019). Lastly, tourism training, especially tour guides, through the Ministry of Cooperatives and Small and Medium Enterprises is a veritable way to enhance sustainable tourism in Lake Toba (Horwath HTL, Lake Toba, 152).

Gustanto (2019) stated that the objectives of tourism development as stipulated by Law No. 10 2009 are as follows: eradicate poverty, increase economic growth, improve people's welfare, overcome unemployment, preserve the environment, promote culture, strengthen identity, strengthen unity among nations (Gustanto, 2019). Based on the foregoing, any tourism that does not meet the aforementioned requirements cannot be termed sustainable with particular reference to coastal tourism in Lake Toba in Indonesia. Therefore, sustainable coastal tourism in Lake Toba is achievable if the stated objectives are met.

As reported by Gustanto (2019), North Sumatra Regional Regulations No. 1/1990 on the Regulation of Lake Toba region has not been implemented for a long time, which has affected the acquisition of permits for hotels among others. Though in the last five years, some institutions have been established in the framework of handling and preservation. Therefore, this study is of the opinion

that these institutions saddled with this assignment should consider coastal tourism sustainability strategies as a tool for maximal results in the study area.

Through literature, it was found out that the SWOT analysis as carried out by Anang, Riziki, Caturida, Endi, and Nindyta revealed that natural resources, culture, and Cuisine are the strength of marine tourism in North Sumatra of which Lake Toba is among; while the identified the weaknesses as poor facilities in terms of infrastructure, no standard prices, lack of promotion of marine tourism (Anang, et al, 2018). This study, therefore, is of the opinion that if the identified weaknesses are tackled can achieve sustainable coastal tourism in the study area with particular reference to Lake Toba. Azila et al (2018) suggested that management, local community, and government agency must play vital roles in sustaining Lake Toba as a tourist destination. This submission is a call for collaboration between stakeholders in achieving sustainability in coastal tourism with Lake Toba in focus.

From the study so far, it can be concluded that the government of Indonesia with particular reference to Lake Toba has a lot to put in place if coastal tourism in Lake Toba must be achieved in terms of funding for infrastructural development and maintenance (Azila, et al, 2018). Moreover, the general populace in the study area should be willing to embrace the measures put in place by the government and cooperate with the government to achieve sustainability in coastal tourism in their area (Anele, 2019). Also, appropriate communication mechanisms should be put in place between the populace and the government for maximal results to be achieved in the sustainability of coastal tourism in the study area (Azila, et al, 2018). There should be cooperation between the local business owners in the coastal area of Lake Toba and revenue collecting authorities in terms of prompt payment taxes and levies geared towards maintenance and sustenance of the tourist zones (Azila, et al, 2018).

Additionally, there should be proper awareness of the importance of tourism to the growth of the economy of the indigenous people in Lake Toba through several mediums of communication as this could go a long way in strengthening their attitude towards tourism in the location (Azila, et al, 2018). The royalties obtained through tourism particularly through foreign exchange should be enjoyed by all so that its impact can be felt and its importance understood by all stakeholders because the sustainability of Lake Toba tourist destination can be achieved through these efforts (Azila, et al, 2018).

Notably, there is a tsunami of initiatives in the past targeted towards addressing the water quality issues of Lake Toba, which is critical to the development of sustainable tourism in Indonesia (The World Bank Group, 2018). For illustrative purposes, the governor of North Sumatra has issued, in 1999, a Regional Plan that prioritized the protection and management of Lake Toba (The World Bank Group, 2018). Also, in 2003, a provincial spatial plan was developed which culminated in the development of the 2004 Lake Toba Ecosystem Management Plan (The World Bank Group, 2018). Subsequently, in 2008, the Lake Toba area was then designated a National Strategic Region, which directly implicates the sustainable management and protection of its water resources (The World Bank Group, 2018). It is significant to aver that the 2004 Lake Toba Ecosystem Management Plan was instrumental in the first National Conference of Lakes in Indonesia in 2009 and the recommendations from the conference include “the restoration of lake functions through balanced ecosystem principles and environmental carrying capacity” (The World Bank Group, 2018). It is submitted that these initiatives potentially contribute to the sustainable tourism development of lake Toba.

Above all, aside from prioritising the development of lake Toba (The World Bank Group, 2018), the government of Indonesia uses legislation to strengthen policies and programs to enhance tourism in Indonesia significantly contributes to the development of sustainable tourism in Lake Toba. For instance, the Minister of Tourism Regulation on sustainable tourism development plays a key role in sustainable tourism development in Lake Toba (Regulation of the Minister of Tourism, No. 14, 2016). This has been done by providing guidelines for tourism development through the preservation of culture, sustainability, environmental conservation, and economic development (Regulation of the

Minister of Tourism, No. 14, art. 3). In addition, article 1 to 10 of the Law of the Republic of Indonesia not only extensively define tourism and other related terms but also adumbrated the beneficial aspect of tourism, economic growth and poverty eradication, cultural conservation, tourism development, and investment in tourism (Law of the Republic of Indonesia, No. 10, 2009). It can be argued that the existence of these legal instruments would bolster sustainable tourism development in Lake Toba, especially by creating an enabling environment where the policies of the government, investment by the private sector, and the ideas of scholars are robustly implemented.

5. Conclusion

The aim of this study is to examine possible measures to sustain coastal tourism in Lake Toba in North Sumatra. On the basis of its findings, this study makes the following conclusions. Strict adherence to government legislation and policies put in place towards coastal tourism use to achieve sustainability in coastal tourism locations, particularly at Lake Toba. This is because such policies are formulated through well-thought-out debates bearing sustainability in mind since tourism is a major source of revenue to the government. The study also concludes that all stakeholders should be carried along if sustainable coastal tourism is to be achieved in Indonesia with particular reference to Lake Toba. Lastly, it is necessary to increase the intensity of coastal tourism sustainability measures that will become norms to the people if sustainability must be achieved optimally.

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