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MONITORING CENTRE FOR SUSTAINABLE TOURISM
OBSERVATORIES INSTO AND WINSTO
UNIVERSITAS SUMATERA UTARA
LAKE TOBA – Indonesia

IMPRESSUM

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Our appreciation also goes to the editorial team and fellow colleagues who have dedicated their time, effort, and expertise to the preparation of this report. We hope that this publication will contribute to the advancement of sustainable tourism development in the Lake Toba region and serve as a foundation for future research and innovative initiatives. We firmly believe that the strong cooperation and synergy established will continue to serve as a solid foundation for achieving Indonesia's sustainable tourism vision.

DISCLAIMER

Although every effort has been made to ensure the accuracy of this document, the inherent uncertainty of economic and tourism data, as well as forecasting and analysis, means that the authors and the Monitoring Centre for Sustainable Tourism, Universitas Sumatera Utara, cannot provide any guarantees regarding the information contained herein. This publication is provided solely for general informational purposes and does not take into account the specific objectives, circumstances, or needs of any individual.

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EXECUTIVE SUMMARY

Since 2017, the Monitoring Centre for Sustainable Tourism Observatories (MCSTO) at Universitas Sumatera Utara (USU) has been part of the International Network of Sustainable Tourism Observatories (INSTO) under the auspices of UNWTO. MCSTO USU initially conducted small-scale monitoring activities in four villages (Lumban Suhi-suhi, Situngkir, Huta Bolon, and Siopat Sosor) in Pangururan District, Samosir Regency, before expanding its coverage to 31 sub-districts across seven regencies surrounding Lake Toba.

In 2022, the monitoring focus encompassed five key issues: wastewater management, solid waste management, water management, water quality, and tourism product diversity. This year, MCSTO has expanded its monitoring scope to include eleven key issues: local community satisfaction with tourism, the economic benefits of the destination, employment, tourism seasonality, energy management, water management, wastewater management, waste management, governance, climate action, and accessibility.

KEY FINDINGS AND KEY ACHIEVEMENTS

- Increase in the number of tourists post-COVID-19 pandemic in the monitored areas
- Opening of new tourist destinations contributing to the diversification of tourism products.
- Revitalization of several tourist destinations to enhance attractiveness post-pandemic

MAIN CHALLENGES

- Attention to environmental and social sustainability still requires improvement
- Challenges in obtaining the necessary data for compiling a comprehensive annual report.
- Limited research funding, which should enable more consistent and sustainable monitoring.

DESTINATION

A. Brief Description of the Destination

Lake Toba, located in North Sumatra Province, Indonesia, is one of the most iconic natural tourism destinations in Southeast Asia. As the largest volcanic lake in the world, Lake Toba spans approximately 100 km in length and up to 30 km in width, with a depth reaching 505 meters. At the center of the lake lies Samosir Island, the heart of Batak culture, offering breathtaking landscapes and a rich cultural heritage. The destination is surrounded by lush hills, waterfalls, hot springs, and traditional villages, making it a major attraction for both domestic and international tourists.

Beyond its natural beauty, Lake Toba is also renowned for its geological, historical, and cultural significance. Formed by a supervolcanic eruption approximately 74,000 years ago, the area has been designated a UNESCO Global Geopark, emphasizing environmental conservation and cultural preservation. The traditions and customs of the Batak Toba people, including traditional houses, Ulos weaving, and the Tor-Tor dance, further enhance the region's uniqueness as a tourism destination.

B. The Role of Tourism in These Destinations

Tourism plays a strategic role in the economic and social development of the Lake Toba region. As one of the five super-priority destinations designated by the Indonesian government, Lake Toba serves as a catalyst for boosting the tourism sector in North Sumatra. The role of tourism in this region includes:

1. Increase Local Revenue

Tourism contributes significantly to the income of local communities through various economic activities such as accommodations, restaurants, handicrafts, and transportation services. Many residents rely on this sector for their livelihoods, both directly and indirectly.

2. Preserving Local Culture and Traditions

Tourism promotes the preservation of Batak culture by supporting the promotion of arts, traditional dances, music, and local products such as Ulos weaving and wood carvings. Cultural events like the Lake Toba Festival also serve as a platform to showcase the region's rich cultural heritage to visitors.

3. Encouraging Infrastructure Development

The growth of tourism in the Lake Toba region has driven infrastructure development, including roads, the international airport in Silangit, and the expansion of supporting tourism facilities. This progress has had a positive impact on accessibility and connectivity within the region.

4. Raising Awareness of Sustainability

As part of the UNESCO Global Geopark, tourism development in Lake Toba also emphasizes environmental conservation. Various conservation programs, such as waste management and reforestation initiatives, have been implemented to preserve the lake's ecosystem and sustainability.

5. Economic Diversification

Tourism creates opportunities for economic diversification among local communities, particularly through the growth of micro, small, and medium enterprises (MSMEs) that support the tourism sector. These include souvenir production, traditional culinary businesses, and tour services, contributing to a more resilient local economy.

However, challenges remain, including the need for improved environmental management, capacity building for human resources, and balancing tourism development with the sustainability of Lake Toba's ecosystem. With the right approach, tourism can continue to serve as a key pillar of sustainable development in the region.

REPORTING

Tourism in the Lake Toba region has experienced significant growth, marked by an increase in both domestic and international visitors. Revitalization programs and improvements in tourism facilities have enhanced the destination's appeal. Several initiatives have been implemented, including upgrading tourism infrastructure, promoting eco-friendly policies, and educational programs for local communities and tourism stakeholders. MCSTO USU has strengthened its collaboration with INSTO-UNWTO, supported destination sustainability certification, and expanded its monitoring coverage to provide more comprehensive data for policy-making and sustainable tourism development.

CHECKLIST ON Issue Areas Monitored during the Reported Period		
ISSUE AREA	DESCRIPTION	STATUS
1. Local satisfaction with tourism	Surveys, questionnaires, interviews done	Available
2. Destination economic benefits	Number of Tourism Services (Bureau/ Travel Agent)	Available
	Number of Tourism Objects managed by Non-Government	Available
	Number of Lodging (Hotel, Cottage, Guesthouse, Villa Motel)	Available
	Total number of rooms for rent (room)	Available
	The number of Food Business Places (restaurants, Café, etc.)	Not available
	Number of certified/licensed Lodging, Dining, and Tourist Attractions	Available
	Local Gross Regional Domestic Product (GDP)	Available
	Gross Regional Domestic Product (GDP) from the Tourism sector	Available
	Total local development budget	Not available
	Development budget in support of the tourism sector	Not available
3. Employment	Total number of workers in the tourism sector	Available
	Number of local people working in the tourism sector	Not available
	Number of female workers in the tourism sector	Not available
	Tourist perceptions of worker services in the tourism sector	Not available
4. Tourism seasonality	domestic tourists visit	Available
	Number of foreign tourist visits	Available
	The average number of rooms occupied by tourists per month	Not available
	Tourist perception of seasonal tourism	Not available
5. Energy management	Energy Consumption in a day	Available
	Number of business units participating in energy conservation programs	Not Available
	Number of business units in the tourism sector that use energy from renewable resources	Available
6. Water management	Daily use of clean water	Available
	Percentage of recycled water use	Not Available
	Number of tourism facilities that have recycled water	Not Available

	Number of tourism facilities that already have access to clean drinking	Available
	Travelers' Perceptions of Water Quality	Not Available
7. Liquid Waste Management	The amount of liquid waste from the tourism sector	Not Available
	The amount of liquid waste from the tourism sector receiving treatment (waterwaste treatment)	Available
	Number of business units in the tourism sector that implement a water treatment system	Available
8. Solid waste management	The volume of waste generated by the destination	Not available
	Number of business units in the tourism sector that implement waste type segregation	Available
	Number of tourism sector business units that recycle waste	Available
	Tourist perceptions of the image of the cleanliness of the destination	Not available
9. Governance	Multi-year destination development plan or strategy	Available
	Number of organizations responsible for coordinating the management of sustainable tourism	Available
	Number of tourism monitoring in one year	Available
	Number of climate change education activities in one year	Available
	Number of assets and tourist attractions inventoried	Available
	Number of tourism promotion activities in one year	Available
10. Climate Action	Damage to tourist destinations due to climate extremes	Not available
	damage every year due to storm/flood events	Not available
	Percentage use of renewable energy system	Not available
	number of accommodations with green management	Not available
11. Accessibility	The existence of policies that are friendly to people with disabilities	Available
	number of associated hospital or medical facilities	Not available
	number of facilities/attractions that offer alternative access for those with disabilities	Not available
	number of people with disabilities who visited the tourist destination	Available
	presence of medical personnel in tourist transportation	Available

ATTACHMENT

A. MAIN ISSUE AREAS

Local Community Satisfaction with Tourism

- Surveys and interviews were conducted with local communities to assess the impact of tourism on their livelihoods.
- Findings indicate that while the majority of residents benefit economically, there are still concerns regarding its environmental impact.

Economic Benefits of Destinations

- Growth in the number of tourism-related businesses, particularly in the accommodation and culinary sectors.
- The tourism sector's contribution to the regional GDP increased by 10% compared to the previous year.

Employment

- Tourism creates employment opportunities for the local community; however, gender disparities in the workforce remain.
- The majority of workers are still in the informal sector, with limited access to training and certification

Tourism Season

- Tourist visits exhibit significant seasonal fluctuations, with peak periods occurring in July-August and December-January.
- A tourism product diversification strategy is needed to reduce dependency on specific seasons.

Water and Energy Management

- Several tourism businesses have begun transitioning to renewable energy sources, but implementation remains limited.
- Access to clean water remains a challenge in some tourist areas, with ongoing efforts to improve infrastructure.

Waste Management

- The implementation of recycling systems remains low, although awareness among business operators is increasing.
- Educational programs and incentives are expected to enhance private sector involvement in waste management.

Governance and Climate Action

- The local government has adopted a strategic plan for sustainable tourism, but implementation still requires improved coordination.
- Climate change mitigation efforts have been initiated, including the use of eco-friendly transportation and reforestation programs.

B. ADDITIONAL MONITORED ISSUE AREAS

In addition to the main issues already mentioned, several additional aspects were also monitored in this reporting period:

- **Tourist Safety and Security**, Crime rates in tourist destinations remain low, but there is a need to improve healthcare and security facilities
- **Innovation and Digitalization in Tourism**, Increased use of digital technology in tourism promotion and service bookings, Growing adoption of digital payment systems among tourism businesses.
- **Community Participation in Tourism Management**, Community engagement programs in tourism management are developing, but capacity-building efforts are still needed.
- **Social Impact of Tourism**, Some indications of gentrification have been observed in major tourist areas, affecting land and property prices.

C. STAKEHOLDER MEETING

Multistakeholder Focus Group Discussion (December 13, 2023)

Number of Participants : 60 people

Topic Discussed : Sustainable Tourism in Lake Toba

Key Outcomes : Agreement on the need for collaboration between local government and the private sector in the implementation of sustainable tourism and Recognition that tourism in Lake Toba has already gained significant attention, but further efforts are required to ensure long-term sustainability and responsible tourism practices.

D. BRIEF INFORMATION ON ADDITIONAL ISSUES

- a) Indications of New Data Sources
 - Online surveys (Google Forms) conducted to gather tourist perceptions regarding services and facilities in the Lake Toba region.
- b) Overview of Networking and Knowledge-Sharing Efforts
 - Participation in the global INSTO-UNWTO forum to share experiences and strategies for sustainable tourism monitoring.
 - Enhancing collaboration with other universities in sustainability research and academic capacity-building.
 - Increasing the implementation of seminars and workshops for local stakeholders on the application of sustainable tourism practices.

- c) Greatest Achievements in the Past Year
 - Community Satisfaction: Increased public support for the sustainable management of tourism destinations.
 - Waste Management: Implementation of waste sorting systems in several key destinations.
 - Governance: Development of a Sustainable Tourism Masterplan by the local government, based on data provided by MCSTO USU
- d) Biggest Challenges in the Past Year
 - Data Collection: Difficulties in obtaining consistent and accurate data from various stakeholders.
 - Funding: Limited resources to support research and the implementation of sustainability programs.
 - Stakeholder Engagement: Lack of coordination among various parties in the implementation of sustainability policies.
- e) Most Needed Data at Present
 - Detailed data on the environmental impact of tourism, particularly in water quality and energy consumption.
 - Information on tourist perceptions of the destination to refine and improve marketing strategies.
 - Data on local workforce participation in the tourism sector, including the involvement of women and vulnerable groups.
- f) Dissemination of Monitoring Results
 - Scientific Journals: Research articles published in national and international academic journals.
 - Annual Reports: Submitted to INSTO-UNWTO and local governments for policy evaluation and decision-making.
 - Conferences and Seminars: Presentation of findings in various national and international forums.
 - Website and Social Media: Summaries of research findings shared to raise public awareness and engagement

With these various efforts, MCSTO USU continues to contribute to supporting the sustainable tourism development of Lake Toba.

CONCLUSION AND FUTURE PLANS

Throughout this year, several objectives have been successfully achieved, including the expansion of monitoring coverage, which now encompasses eleven key sustainability indicators. Stakeholder engagement, involving local governments, the private sector, and local communities, has also continued to strengthen. However, some goals have yet to be fully realized. The development of a technology-based monitoring system has not yet been implemented and requires further investment. Gaps in data availability remain, particularly in aspects related to employment and the environmental impact of tourism. Additionally, the lack of active participation from certain tourism industry sectors in sustainability initiatives remains a challenge. Moreover, the level of tourism business participation in sustainability certification schemes is still relatively low.

Several challenges persist, including budget constraints, which remain a major obstacle to the expansion of monitoring coverage and further research initiatives. Stakeholder coordination is also a challenge, as difficulties persist in aligning the diverse interests of various parties involved in sustainable tourism management. Furthermore, the evolving regulatory landscape necessitates the observatory's ability to quickly adapt to new policies and frameworks.

For the upcoming year and the future, several strategic measures have been planned. One of the key priorities is strengthening the monitoring system through the development of a digital platform, enabling real-time and more efficient data monitoring. Additionally, community engagement will be enhanced through the launch of educational and empowerment programs, encouraging active participation in tourism sustainability. Expanding partnerships is also a priority, with efforts focused on broadening collaborations with research institutions, international organizations, and the private sector to support sustainability programs. Capacity building and training for tourism business operators will continue to be promoted through various educational initiatives related to sustainable business practices and resource efficiency. Finally, advocacy and policy development will be strengthened by working closely with policymakers to reinforce regulations on sustainable tourism practices.

Through these strategic initiatives, MCSTO USU aims to continue playing a key role in supporting the sustainable management of tourism in Lake Toba, while making a meaningful contribution to global sustainability goals.