
Travel Patterns for Nature Tourism at Lake Aek Natonang Samosir Regency

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Abstract: This study identifies the attraction of Lake Aek Natonang tourist attractions and creates a Travel Pattern to make it easier for tourists to go to Lake Aek Natonang. The data collection techniques in this study were through observation, interviews, and documentation studies, then analyzed using a descriptive qualitative method to understand the characteristics and patterns of Lake Aek Natonang tourist trips. The results of the study show that the tourist attraction of Lake Aek Natonang is in the form of natural beauty that is still preserved, supporting facilities, and tourist activities such as fishing, hiking, and camping. In addition, the recommended travel pattern is the Destination Region Loop, where the movement of tourists begins with a route around other destinations. After completing the tour in a circular (circular pattern), tourists return to their place of origin via the shortest route between the main destination and the place of departure origin. This pattern makes it easier for tourists to enjoy various interesting destinations around the lake while optimizing the tourist experience through efficient and attractive routes. These findings provide valuable insights for local governments and tourism managers to develop strategic, well-integrated tour packages that boost regional tourism competitiveness.

Keywords: Travel Patterns, Tourist Attractions, Tourist Attractions

Article info:

Submitted: November 25, 2025 | Revised: June 19, 2026 | Accepted: June 26, 2026

Recommended citation:

Situmeang, L., Tamba, R. N., & Nainggolan, Y. A. (2026). Travel Patterns for Nature Tourism at Lake Aek Natonang Samosir Regency. *Jurnal Sains Terapan Pariwisata*, 11(2), 296-306. <https://doi.org/10.56743/jstp.v11i2.731>

INTRODUCTION

Indonesia is one of the tourist destinations. Indonesia is an archipelago with around 17,380 islands, consisting of small and large islands. Each island in Indonesia has its own characteristics. The characteristics of each island in Indonesia are differ in terms of culture, language, religion, and others. These differences are an advantage to attracting both local and international tourists to visit Indonesia.

The large number of tourists visiting Indonesia means that the tourism sector has the potential to be developed. Tourism has become an integral part of modern life. When we hear the word "travel," our minds often think of vacations and various interesting tourist destinations to visit. Tourism is an important economic sector, with natural beauty, culture, and heritage as the main attractions. This sector holds a strategic position in increasing the country's foreign exchange.

One of the tourist destinations in Simanindo District has 20 villages and 1 sub-district. One of the villages is Tanjungan Village. Tanjungan Village has a natural tourist destination, namely Lake Aek Natonang. This lake is a volcanic lake located in the middle of Samosir Island and is part of the Toba Caldera. The uniqueness of this lake lies in the existence of another lake in it, called "lake above the lake." Beautiful and natural scenery, as well as cool air, make Lake Aek Natonang an attractive tourist destination for local and foreign tourists. In addition to its natural beauty, Lake Aek Natonang also has cultural and historical values related to the local community.

Samosir Island, located in the center of Lake Toba, is a critical focal point for North Sumatra's tourism development. While the majority of tourist traffic traditionally clusters around established spots like Tuktuk Siadong, Lake Aek Natonang often referred to as "the lake above the lake" offers a unique, pristine ecological and scenic attraction. Despite its significant potential, including unique natural landscapes and opportunities for low-impact recreation like hiking and camping, Lake Aek Natonang remains underutilized and frequently bypassed by mainstream tourist flows due to sub-optimal route connectivity and a lack of structured itineraries.

In tourism geography and planning, understanding travel patterns is vital for sustainable destination development. Travel patterns illustrate how tourists move through a geographic space, linking multiple attractions into cohesive routes. By analyzing these movements, destination management organizations (DMOs) and local governments can prevent overtourism in high-density areas by distributing foot traffic to secondary attractions, Optimize infrastructure investments, such as signage, roads, and transport facilities. Increase tourist length of stay and spending by creating integrated, efficient, and diverse itineraries.

While existing literature provides robust frameworks for travel patterns in highly developed or easily accessible island destinations, there is a distinct lack of empirical research focusing on nested geographic attractions specifically, small internal lakes situated within larger, globally recognized volcanic lake islands (such as Lake Aek Natonang on Samosir Island). Current models do not adequately address how to integrate a secondary, secluded destination into the dominant, pre-existing tourism transit routes of a wider region. Consequently, without empirical data on potential spatial configurations like the Destination Region Loop for this specific geography, local authorities lack the strategic blueprint required to effectively channel tourists toward Samosir's interior.

The development of tourism in Lake Aek Natonang requires careful planning, including the arrangement of efficient and attractive travel routes for tourists. Information about tourist attractions, accessibility, and supporting facilities is very important to create an optimal tourist experience. To introduce Lake Aek Natonang as a tourist attraction, travel routes to nearby tourist attractions are needed, which can be accessed via alternative roads. An important element in the travel patterns is knowing the attractions at these tourist destinations and the travel patterns to the intended tourist attractions.

METHODS

This study employs a descriptive qualitative research design to systematically investigate the tourist attractions of Lake Aek Natonang and formulate an optimized travel pattern on Samosir Island. This design allows for an in-depth, contextual understanding of spatial tourist movements and localized destination characteristics. The qualitative method allows for direct interaction between researcher and research subjects, enabling the researchers to gain a better understanding of the complexities and variations in a particular situation. The qualitative methods collect data using methods such as interviews, observation, and content analysis, as well as other methods that allow for more flexible interpretation (Adolph, 2018)

The data and information obtained by the author in conducting this research were sourced from interviews, observations, documentation and literature studies. For the informants in this study, the author obtained them from the Samosir Regency Tourism Office, the manager of the Aek Natonang Lake natural tourist attraction, the local community, and domestic tourist.

Data collection was executed conducted using a flexible interview guide. This format allowed researchers to deeply probe tourism managers regarding administrative challenges and ask tourists about their transit motivations, preferred nodes, and route bottlenecks. Fieldwork focused on mapping physical infrastructure, documenting available activities (fishing, hiking, camping), and tracking the entry/exit flows of vehicles to analyze spatial behavior.

The data specification is focused on the issues in the study. The data presented is accompanied by an analysis that explains the suitability of valid categories and arguments based on the theory that has been described earlier. By displaying data, the process of understanding what is happening will be easier, as well as planning the next work steps based on the data that has been analyzed.

Efforts to draw conclusions are carried out by researchers relentlessly while in the field. From the first step in data collection, the qualitative researcher begins to search for the meaning of the existing objects, document the patterns that emerge (in the theoretical notes), provide explanations, consider possible configurations, formulate cause-and-effect flows, and formulate propositions. These conclusions are addressed in a flexible manner, remaining open and critical, even if the conclusions have already been drafted. At first it doesn't seem obvious, but over time, it becomes more detailed and tenacious. (Adhi, 2019)

Effort to draw conclusions is an ongoing process conducted by the researcher throughout the fieldwork. From the very first step of data collection, a qualitative researcher begins to seek meaning from the observed objects, documenting emerging patterns (in theoretical notes), providing explanations, considering potential configurations, establishing causal relationships, and formulating propositions (Adhi, 2019). These initial conclusions are handled flexibly remaining open and critical even after they are drafted. While vague at first, they grow increasingly detailed and robust over time. In this phase, the researcher interprets the presented data with a specific focus on the research problem. At this stage, the researcher describes the results of the analysis, which includes interpretations of the characters' personalities. This involves assessing whether the characters decision-making and responses to conflicts are predominantly influenced by the Id, Ego, or Superego.

These conclusions are also continuously verified throughout the study through several methods, rethinking and reflecting during the writing process, reviewing field notes. reviewing and brainstorming among peers to develop intersubjective agreement, extensive efforts to replicate or cross-reference a finding within alternative datasets.

RESULT AND DISCUSSION

Geographically, Samosir Regency is located between 2030' - 2045' North Latitude and 98030' - 98045' East Longitude. Simanindo District is one of the areas in Samosir Regency, North Sumatra Province with an area of 198.2 km² and an altitude of 1,539-1,630 meters above sea level. Simanindo

District has twenty villages and one sub-district, namely Ambarita, Cinta Dame, Dosroha, Garoga, Huta Ginjang, Maduma, Marlumba, Martoba, Parbalohan, Pardomuan, Parmonangan, Siallagan Pindaraya, Sihusapi, Simanindo, Simanindo Sangkal, Simarmata, Tanjungan, Tomok, Tomok Parsaoran, Unjur, and Tuktuk Siadong.

In the village tourism sector in Simanindo District, one of them is Tanjungan Village. Tanjungan Village is a village that holds many unique and interesting tourist attractions. One of them is Lake Aek Natonang. Why is it said Lake Aek Natonang, why is it said Lake Aek Natonang, because this lake has a uniqueness, namely a lake in the lake. The concept of the lake in this lake makes Aek Natonang a tourist destination that is different from others around the Lake Toba area. The existence of this small lake adds to the beauty of the surrounding nature, as well as presents an interesting new experience for visitors who want to enjoy the beauty of nature while creating peace and tranquility.

In addition to having stunning natural beauty, Lake Aek Natonang also holds cultural value for the local community. Many folklores and legends developed about this lake, which has been believed for generations to be a place that is sacred and has positive energy. According to several local sources and cultural researchers, the existence of this lake is also closely related to the customs and beliefs of the Samosir people, who believe that the existence of this lake is a gift from nature to maintain environmental balance and strengthen their cultural identity. With its natural and cultural wealth, Lake Aek Natonang has great potential to be developed into a sustainable tourist destination that is able to attract tourists from within and outside the country.

The results obtained by the author in conducting this research were by conducting interviews with the Village Head, the Tourism Office and to visiting tourists. From the results of the interview, complete data was collected and provided an overview that would answer the problem formulation and assist the author in presenting data for each answer to the problem formulation that was researched clearly based on concrete data.

Observation Results

The results of observations that the researcher can make in conducting this research are made into the checklist table as follows:

Table 1 Accessibility & Amenity

No	Aspects	Yes	Not
Location and Accessibility			
1.	The location of Lake Aek Natonang is easy to reach	✓	
2.	Public transportation to Lake Aek Natonang is available	✓	
3.	The condition of the road to Lake Aek Natonang is paved/smooth	✓	
Facilities and Infrastructure			
1.	Accommodation facilities available in the vicinity of Lake Aek Natonang	✓	
2.	Entrance ticket purchase counter available at Lake Aek Natonang	✓	
3.	There is a bathroom at the tourist site of Lake Aek Natonang	✓	
4.	There are places to eat at the tourist site of Lake Aek Natonang		✓
5.	There is a parking lot at the tourist site of Lake Aek Natonang	✓	
6.	There is Gajebo in the tourist location of Lake Aek Natonang	✓	
7.	Condition of available facilities is good/not	✓	

Source: Processed Author Data, 2025

Based on the table above, the tourist location of Lake Aek Natonang is very accessible to tourists, so it is a very suitable choice for those who want to enjoy the beauty of nature without having to bother facing travel obstacles. This ease of access is supported by the availability of various modes of public transportation that can take visitors directly to the location, so tourists do not need to worry about the difficulty of reaching this destination. In addition, the road condition to Lake Aek Natonang

is also quite good and maintained, ensuring a smooth and safe journey. With supportive infrastructure such as smooth roads and clear signage, visitors can enjoy a comfortable and stress-free journey. This will certainly add comfort and a positive experience for tourists when visiting, as well as encourage the number of visits to this tourist destination to increase.

The results of this observation show that it is true that the location of Lake Aek Natonang is easy to reach, then the road to the location is good and paved and the availability of public transportation routes to the tourist location. In terms of facilities and infrastructure, Lake Aek Natonang tourism has met various needs of visitors well. Various supporting facilities have been provided to ensure comfort during the visit, such as adequate accommodation facilities, neatly arranged entrance ticket purchase counters, and clean toilets that can be used by tourists.

The spacious and well-organized parking area also makes it easier for visitors to park their vehicles safely. In addition, there are comfortable gajebo-gajebo as a place to rest and relax while enjoying the beauty of the surrounding nature. However, one aspect that is still not available is the dining facilities at tourist sites. Nevertheless, the condition in general is still very good and maintained, so visitors can still enjoy a pleasant and comfortable experience when visiting Lake Aek Natonang.

The availability of amenities and well paved access roads do more than just meet physical needs, they act as key determinants shaping tourist route preferences and spatial behavior. According to tourism spatial theory, the synergy between accessibility and facility completeness directly affects tourists' psychological decision-making regarding their length of stay and spatial reach. Well-integrated infrastructure facilitates an optimal circular travel pattern, connecting Lake Aek Natonang as the primary destination with surrounding secondary attractions via efficient, non-repetitive routes. Tourists can begin their linear journey from primary entry points like Tomok Port, passing through pre-destination geo-tourism and cultural landmarks—including Batu Marhosa, Sipira Hill, Batu Hoda Beach, Hutaraja Ulos Village, and Lake Sidihoni—before reaching Lake Aek Natonang as the trip's climax. This finding supports Liyushiana (2019), who noted that clustering regional attractions through adaptive transport connectivity creates travel circuits that prolong tourist stays. Additionally, Saputra Siregar et al. (2022) found that zoning-based looping patterns effectively mitigate travel fatigue and boost the economic value of interconnected tourist villages. Interestingly, the scarcity of dining options within Lake Aek Natonang drives spatial redistribution, compelling tourists to separate recreation inside the destination from dining at local eateries along the outer ring road. Thus, structurally integrating core attractions with surrounding buffer networks improves mobility coherence and drives sustainable regional economic development

Table 2 Attraction & Ancilliary

No	Aspects	Yes	Not
Tourist Activities			
1.	Sightseeing activities available in Lake Aek Natonang (swimming, fishing, hiking, etc.)	✓	
2.	Supporting facilities are available for tourist activities	✓	
3.	The condition and cleanliness of the existing facilities are adequate	✓	
Tourism Management			
1	Tourism management in Lake Aek Natonang is in accordance with the 4A concept	✓	
2.	A strategy was developed to manage tourism in Lake Aek Natonang	✓	
3.	Environmental management in Lake Aek Natonang is beautiful	✓	

Source: Processed Author Data, 2025

From the table above, it can be seen that the results of observations regarding the tourist activities available at Lake Aek Natonang are adequate, supporting facilities and cleanliness and

condition of facilities are all available. All facilities are adequate and able to meet the various interests and needs of visitors. Visitors can enjoy various activities such as boating around the lake, fishing, or just relaxing while enjoying the beauty of the surrounding nature. In addition, this area also supports photography activities, so nature lovers and photo enthusiasts can capture beautiful moments during their visit. Supporting facilities such as seating, gazebos, and recreation areas have been provided to increase the comfort of tourists in carrying out various activities.

The cleanliness and condition of facilities in this area are very well maintained overall, in good condition and clean, creating a comfortable and safe atmosphere for visitors. This is certainly an added value that makes the travel experience at Lake Aek Natonang more fun and memorable.

There are 4 (four) components that must be possessed by a tourist attraction, namely: attraction, accessibility, amenities and ancillary service. Attraction: It is something that is the main reason tourists visit a place. Attractions can be natural resources (such as beaches, mountains, waterfalls), cultural (such as historical sites, festivals, arts), or man-made (such as amusement parks, museums). Accessibility: Relating to the ease of reaching tourist locations. This includes infrastructure such as roads, public transportation, and directions to the place. Amenities: It is a supporting facility that tourists need while at the destination. Examples are accommodation (hotels, lodgings), dining places, toilets, information centers, and other public facilities. Ancillary (Additional Facilities): It is a supporting facility that is more specific in nature and provides added value for tourists. Examples are parking lots, ATMs, health services, souvenir centers, and tour guides.

This 4A concept serves as the foundational framework for the development and management of tourist destinations, directly influencing tourist satisfaction and experience quality. Observations indicate that Lake Aek Natonang natural tourism has successfully integrated these components: offering nature-based attractions (fishing, hiking, nature observation, and camping areas), essential amenities (gazebos and pendopo), reliable accessibility (paved roads), and crucial ancillary services (toilets, prayer rooms, parking lots, and public information offices).

The synergy of these 4A elements directly shapes nature-based tourist behavior, where environmental pull-factors (the attraction) must be balanced by psychological comfort-factors (amenities and accessibility). Adequate infrastructure and facilities do not diminish the wilderness experience; instead, they act as risk-mitigators that reduce travel anxiety, thereby extending the tourists' *length of stay* and increasing *revisit intentions*. Consequently, future development strategies for Lake Aek Natonang must implement a sustainable management approach. This ensures that infrastructure advancement does not compromise the ecological integrity of the site, maintaining the destination's authentic natural beauty as its primary competitive advantage.

Natural Tourism Attractions of Lake Aek Natonang, Simanindo District, Samosir Regency

The main attraction of Lake Aek Natonang natural tourism is the beautiful scenery, the beauty of the lake that is still preserved, such as the view of Lake Aek Natonang itself, interesting photo spots, fishing activities, nature observation, hiking and camping for families.

Lake Aek Natonang also allows visitors to do sports such as jogging. There, visitors can jog in the afternoon because trucks for jogging are available. In addition, what visitors are most awaited is the view of sunrise and sunset falling as if into a lake with a cool breeze pampering the eyes of visitors there. Lake Aek Natonang also provides a camping area for visitors, and there are gajebo-gajebo that support visitors to sit and enjoy the natural beauty of the lake. In addition to visitors can fish there and the fishing results can also be taken home by visitors without levies or other levies.

Overall, the 4A concept is found in Lake Aek Natonang tourism where attractions such as natural scenery, lake beauty, fishing, hiking, camping, and afternoon walks and just taking pictures at Lake Aek Natonang. Amenities such as toilet facilities, bathrooms, gajebo, kiosks and pendopo there are as supporting facilities for visitor activities. The accessibility there also supports both the road to the

tourist attraction, and access to other destinations is also good. Ancillary there also supports in the form of parking lots, public toilets and prayer rooms.

The results of the research need to add facilities to the natural tourism of Lake Aek Natonang for the comfort of tourists while traveling. The facilities that need to be added are in the form of 10 gazebos and 2 toilets, it is directly justified by daily visitor capacity pressures, field observations, and public tourism amenity standards. During peak weekend observation windows, the destination recorded an average of 150–200 concurrent visitors. Currently, gazebos exist, forcing large visitor groups to crowd under fragile natural shading or open spaces, which diminishes the quality of the tourist experience. According to public infrastructure guidelines for nature-based tourism destinations such as those outlined by the Indonesian Ministry of Tourism, a basic tourist site should ideally provide a minimum of 1 toilet cubicle per 50–75 concurrent daily visitors, adding 2 distinct toilet facilities (with multiple cubicles divided by gender) will safely accommodate a baseline capacity of up to 150 visitors simultaneously.

Travel Patterns to Natural Tourism of Lake Aek Natonang

Based on the results of interviews and observations that have been carried out by the author, it can be seen that tourist attractions are easily accessible because of the good road conditions. With a time taken of about 3 hours and 12 minutes where the travel pattern is from Tomok Port - Batu Marhosa - Bukit Sipira- Batu Hoda Beach- Kampung Ulos Huraraja - Lake Sidihoni - Lake Aek Natonang. The following is the itinerary of the Aek Natonang Lake Tourism Itinerary.

Table 3 Itinerary of Lake Aek Natonang Tour Patterns

Time	Description
09.00-09.22	Travel from Tomok Port to Batu Marhosa
09.22-09.35	After from Batu Marhosa to Bukit Sipira
09.35-10.23	Then continue the journey from Sipira Hill to Batu Hoda Beach
10.23-10.40	After leaving Batu Beach, Hoda continued the journey to Ulos Huraraja Village
10.40-11.10	Then from Ulos Huraraja Village continue the journey to Lake Sidihoni
11.10-12.02	Furthermore, from Lake Sidihoni continue the journey to Lake Aek Natonang
12.02-12.33	Then from Lake Aek Natonang back to Tomok Port

Source: Author's Data Processing

This travel pattern is expected to help tourists to see other destinations before heading to Lake Aek Natonang. This travel pattern is also designed to provide a meaningful travel experience, combining natural beauty, local culture, and educational activities before finally reaching the main destination, which is Lake Aek Natonang. Tourists will be invited to explore several interesting destinations around it, so that the trip feels more memorable and meaningful. The following is an overview of the natural tourism travel pattern of Lake Aek Natonang.



Figure 1. Lake Aek Natonang Natural Tourism Travel Patterns
Source: Google Maps

From the results of the observations, as for the form of travel patterns that the author has done directly, the author suggests visiting several tourist attractions where the main tourist attraction is Lake Aek Natonang, and several secondary destination destinations in developing the tourist travel pattern of Lake Aek Natonang. So, the author reveals an efficient travel pattern in the form of a Destination Region Loop. Thus, this Destination Region Loop pattern not only makes it easier to set the time and distance, but also increases tourist attraction because tourists can enjoy the scenery and other tourist attractions scattered along the travel route. When traveling from one destination to another, tourists will stop at several interesting places, interact with the local community, try typical culinary, and do activities that suit the characteristics of the destination. In this model, the journey begins at a primary gateway hub (such as the ferry ports of Tomok or Ambarita), flows sequentially through a chain of peripheral or secondary destinations without backtracking, and eventually routes the tourist to the core destination Lake Aek Natonang. After completing this circular circuit, the tourist returns to their place of origin or next major transit node via the most direct, efficient route available.

Based on the empirical observation of travel patterns, tourists typically commence their journey from Tomok Port to Batu Marhosa, covering a distance of approximately 10 km with an estimated travel time of 22 minutes. Synthesizing these findings with Pearce's framework on tourist travel behavior, it is evident that this specific spatial movement is fundamentally shaped by accessibility, spatial proximity, and the strategic distribution of attractions along the designated route. Within this structural flow, tourists engage in various activities, such as sightseeing the panoramic hillsides along the road, photography at the harbor, culinary experiences with local snacks, and exploring the unique phenomenon of Batu Marhosa—locally known as the 'breathing stone' due to its distinct wind currents. Academically, these activities—encompassing photography, sightseeing, community interaction, and culinary experiences—serve as core experiential dimensions that directly align with the underlying motivations of nature-based and cultural tourists. Incorporating these theoretical attributes highlights how environmental aesthetics and localized cultural assets function as primary pull factors that stimulate tourist mobility and behavior within the region.

Then it continued from Batu Marhosa to Bukit Sipira with an estimated time of 13 minutes with a distance of about 8.3km. As for the activities that tourists can do, visit the gazetation tour of Sipira Hill, enjoy the natural beauty of Lake Toba. Take photos around Sipira Hill and the

surrounding area. Eat and copy leisurely, enjoy the beauty of sunrise and sunset as well as camping and interact with the surrounding community.

Furthermore, the trip from Bukit Sipira to Batu Hoda Beach with an estimated time of 1 hour 8 minutes with a distance of 41 km. The activities that tourists can do are sunbathing and relaxing on a clean beach. Play in the water and swim on the beach, enjoying the calm and natural beach atmosphere. Doing beach sports activities such as sand volleyball, sailing, and fishing around the waters. The right moment for lunch at a local stall that provides fresh Batak fish (natinombur) food. And the main thing is to see a black horse statue, where the local people say that the statue symbolizes loyalty and uniqueness of the statue made from used tires painted black.

Then the trip from Batu Hoda Beach to Ulos Huraraja Village with an estimated time of 17 minutes and a distance of about 12km. As for the activities that tourists can do, visit the typical Ulos textile craft center, learn about the process of making ulos from the local community. Buying typical souvenirs such as ulos with various motifs and colors. Interact directly with ulos weavers and take part in demonstrations of traditional fabric making. Capturing the moment of the process of making ulos and the atmosphere of the traditional village. As well as copying with ulos weavers and being able to visit Batak traditional house tours.

Continuing the journey from Ulos Huraraja Village to Lake Sidihoni with an estimated time of about 31 minutes with a distance of about 15 km. As for the activities carried out by tourists. Take a small boat while enjoying the natural scenery in the form of hills around the lake. Take pictures at beautiful spots and enjoy the fresh air. Interact with the village community, get to know the local life and culture.

The last trip from Lake Sidihoni to Lake Aek Natonang with an estimated 52 minutes with a distance of 27 km. There are activities that tourists can do. Enjoy the sunset by sitting relaxed in the gazebo which offers a beautiful panorama of the entire surrounding area. Doing leisurely walks, jogging, cycling, fishing and camping as well as nature observations. Capture the moment with photos from the best spots in all corners of Lake Aek Natonang. Enjoy the fresh air and eat lunch at the pavilion in the tourist attraction of Lake Aek Natonang before returning to Tomok Port.

Therefore, the Aek Natonang Lake tourist trip pattern in the form of a Destination Region Loop pattern provides a complete, varied, and memorable tourist experience. By paying attention to the estimated time and activities carried out at each destination, this travel pattern is not only efficient but also fun and educational. Good time management will ensure that tourists are able to enjoy the natural beauty, culture, and local activities as a whole without feeling rushed.

CONCLUSION

Based on the results of research on the pattern of natural tourism trips in Lake Aek Natonge:

1. That the natural tourist attraction of Lake Aek Natonang has the main attraction in the form of natural beauty that is still preserved, including lake views, interesting photo spots, and various activities such as fishing, picnics, hiking, and camping that are able to attract tourists both from within and outside the country. This natural beauty is able to attract tourists from within and outside the country, making Lake Aek Natonang a suitable tourist destination to add to the adventure experience in the outdoors.
2. This study recommends the implementation of the Destination Region Loop travel pattern, a circular trajectory where tourists journey through surrounding secondary destinations before returning to their point of origin via the shortest route from the main destination. Tourism research demonstrates that the emergence and viability of this specific travel pattern are heavily influenced by accessibility, spatial proximity, and the strategic distribution of attractions along the route. By leveraging these spatial factors, the loop pattern ensures that tourists do not merely experience the lake as an isolated stop; instead, it transforms the entire transit corridor into an active experiential zone where visitors can seamlessly stop at

intermediate points of interest, interact with local communities, sample traditional cuisine, and enjoy diverse leisure spots along the way.

3. The local government should to upgrade the road networks connecting the coastal transit hubs (e.g., Tomok, Ambarita) to Samosir's interior highlands where Lake Aek Natonang is situated. Establish clear zoning and environmental regulations around Lake Aek Natonang to protect its pristine nature-based assets (hiking, camping, and fishing areas) from unregulated commercial overdevelopment, ensuring long-term sustainable growth. For Site Managers, safely structure and monetize the localized recreational activities identified in this study (such as renting out standardized gear for camping, fishing, and hiking), creating organized community-based tourism (CBT) revenue streams.
4. While this study establishes a foundational qualitative framework for a Destination Region Loop on Samosir Island, several avenues remain open for future academic inquiry Future research should employ quantitative spatial methodologies such as Geographic Information Systems (GIS) tracking or GPS-based visitor tracking to empirically measure actual tourist dwell times, travel velocities, and bottleneck locations along the proposed loop.

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