

## Sustainable Tourism Development through the Implementation of Web-Based Information Systems Blog

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### Abstract

This study aims to produce a tourism object information system in Tomohon City based on Web Blog Data on tourism objects based on official data from the Tomohon City Tourism Office and several research results that have been carried out. This study focuses on the application of the system and testing the quality of the Web, and this study is expected to make it easier for tourists to plan their travel in Tomohon City. Data collection methods through observation, interviews and the application of the Web Blog application. The aim is to assist the government through the Tomohon City Tourism and Culture Office in promoting tourist objects that continue to grow and develop in Tomohon City. The next goal is to implement the Web Blog application system to make it easier for prospective tourists to know the location, availability of facilities and infrastructure, distance and travel time. The benefits are as an acceleration of information to the public and/or prospective tourists and as a promotional medium for the city of Tomohon as a tourist destination in the Minahasa area. The results of this study are expected to be accessed using an internet connection and help users to plan their travel in Tomohon City. Producing a web blog with data visualization containing information on the location of tourist objects that are presented clearly to the public. As a promotional media for tourist destinations with the quality of the Tomohon City tourism object Web.

**Keywords:** Tomohon, Information System, Tourism, Web Log

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### Introduction

Tomohon City is one of the areas in North Sulawesi, the location of Tomohon City is surrounded by the Minahasa Regency area, namely the North is bordered by Pineleng and Tombulu Districts (Minahasa Regency). The south is bordered by Sonder and Remboken Districts (Minahasa Regency) to the West by Tombariri District. (Minahasa Regency) and to the east it borders Tondano District (Minahasa Regency) and Airmadidi District (North Minahasa Regency). Meanwhile, the regencies/cities adjacent to Tomohon City are South Minahasa Regency (West), Manado City (North), Minahasa Regency (East), and Southeast Minahasa Regency (South). Tomohon City is located in a mountainous area located at 0o 18' 51" North Latitude and 124o 49' 40" East Longitude, has an area of 147.21 km<sup>2</sup> and is at an altitude of 400-1500 cm above sea level with a temperature range of 180C – 300C.

Tomohon is famous for its cool place and its city filled with flowers until it is often nicknamed the flower city, besides that Tomohon also has various tourism objects namely Nature Tourism, Cultural Tourism, and Artificial Tourism. Tomohon City is located in a mountainous area located at 0o 18' 51" North Latitude and 124o 49' 40" East Longitude, has an area of 147.21 Km<sup>2</sup> and is at an altitude of 400-1500 cm above sea level with a temperature range of 180C – 300C . Apart from that, there are three mountains, namely Mount Lokon (1,579.6 m above sea

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level), Mount Tampusu 1,474 m above sea level) and Mahawu (1,331 m above sea level). Several rivers such as the Ranowangko River, Sapa River, Sinambey River and 32 springs are spread out. Apart from that, there are two lakes, namely Lake Linow and Lake Pangolombian.

Difficulty in determining planning and developing several tourist attractions that are not yet up to date for tourist trips because the description of the tourist area is not available, such as visualization of the place, distance between tourist areas and the roads that must be taken. Therefore, through the design and creation of a Tourism Information System, it is hoped that it can display a picture of tourism in Tomohon City so that it is more attractive and can be enjoyed by the wider community. Presenting information in the form of a web blog makes it easier for people to access it.

Nadakavukaren & Caravanos (2020) explains that the definition of tourism is a phenomenon of the need for health and a change of atmosphere, conscious assessment and growing (love) for natural beauty and especially increasing social interaction between various nations and classes of human society as a result of the development of commerce, industry, trade and the improvement of means of transportation. In addition, experts also provide many explanations and understandings of tourism, including the following: In essence, tourism is a process of temporary departure from a person or to another place outside his residence. The motivation for departure is due to various interests, both economic, social, cultural, political, religious, health or other interests such as simply wanting to know, adding experience or to learn (Suwantoro in Kurniawan, 2015).

According to Cooper & Hall (2022), tourism is a journey from one place to another, temporary, carried out by individuals or groups, as an effort to find balance or harmony and happiness with the environment in social, cultural, natural and scientific dimensions. In the World Tourism Organization (WTO) (Inkson & Minnaert, 2022), tourism is the activity of a person traveling or staying in a place outside his usual environment for a period of not more than one year continuously, for pleasure, business or other purposes. According to Pung et al. (2020), tourism is a human activity that is carried out consciously which receives services alternately between people in a country itself or abroad, including the temporary residence of people from other areas seeking various satisfactions that are different from what they experience, where they get permanent jobs.

## **Methods**

This research was conducted in Tomohon City, with data collection through field observation and direct interviews at the Tomohon City Tourism Office. This research is also equipped with a literature study that includes journals, books, theses, documents, and other reference sources relevant to tourism. Data collection techniques are carried out through three main methods. First, direct observation involves observation in the field and recording phenomena related to the research object directly. Second, guided free interviews, where researchers use a list of questions that have been prepared in advance to dig deeper into information. Third, documentary studies, namely collecting data from written documents, such as books, newspapers, magazines, and documents related to research. The data collected is divided into two types: primary data and secondary data. Primary data is obtained directly from primary sources, such as interviews. Secondary data is obtained from written sources, including literature, books, and documents. For data analysis, this study uses a qualitative descriptive

analysis method, where researchers process and analyze data obtained from the field and compare it with existing literature. This analysis aims to combine empirical data and theory to provide solutions to research problems.

### Results and Discussion

This study aims to analyze the development of the tourism sector in Tomohon City, especially related to the number of tourist's visits, types of tourist attractions, and the impact of tourism on the regional economy. The data used in this study were obtained from the Tomohon City Tourism Office and covered. This study also identified various types of tourist attractions in Tomohon, including cultural tourism, nature tourism, and artificial tourism, as well as changes in the number of domestic and foreign tourist visits over the past five years.

Table 1. Territorial Boundaries of Tomohon City

Limit	Information
North	Pineleng and Tombulu Districts (Minahasa Regency)
South	Sonder and Remboken Districts (Minahasa Regency)
East	Tondano District (Minahasa Regency) & Airmadidi
West	Tombariri District (Minahasa Regency)

Tomohon City borders directly with Minahasa Regency in all directions, both north, south, east, and west. The city is strategically located on the main route connecting Manado, the provincial capital, with other cities in North Sulawesi, so accessibility to the city is quite good.

Table 2. Number of Tourist Attractions in Tomohon City

Location	Featured Tours	Tourism Potential	Total
North Tomohon	14	19	33
West Tomohon	8	3	11
East Tomohon	5	7	11
South Tomohon	17	7	24
Central Tomohon	8	8	16
<b>Total</b>	<b>96</b>		<b>96</b>

There are 96 tourist attractions in Tomohon City spread across five regions, namely North, West, East, South, and Central Tomohon. The North Tomohon region has the largest number of tourist attractions with a total of 33 places, while West Tomohon has the smallest number of tourist attractions, namely 11 places.

Table 3. Classification of Tourist Objects in Tomohon City

Cultural Tourism	Natural tourism	Artificial Tourism	Total
27	63	8	96

Tourist attractions in Tomohon City are divided into three main categories: cultural tourism, natural tourism, and artificial tourism. Natural tourism dominates with 63 objects, followed by cultural tourism with 27 objects, and artificial tourism with 8 objects.

Table 4. Tourist Visit Data in Tomohon City

Year	Foreign Tourists	Domestic Tourists	Total
2017	89,736	455,679	545,415
2018	90,907	546,824	637,731

2019	99,997	601,506	701,503
2020	630	304,924	305,554
2021	4	378,793	378,797

The number of tourist visits to Tomohon City increased from 2017 to 2019, with a peak in 2019 of 701,503 tourists. However, the COVID-19 pandemic caused a drastic decline in 2020 and 2021, with very few foreign tourists. In 2020, the number of tourists reached 305,554, while in 2021, only 378,797 visitors came to Tomohon City.

Table 5. Data on Tourist Attractions in Tomohon City

Year	Number of Tourist Attractions
2017	96
2018	96
2019	96
2020	96
2021	96

During the period 2017 to 2021, the number of tourist attractions in Tomohon City remained consistent with a total of 96 tourist attractions consisting of cultural, natural and artificial tourism.

Figure 1. Number of Cultural, Natural & Artificial Tourist Objects

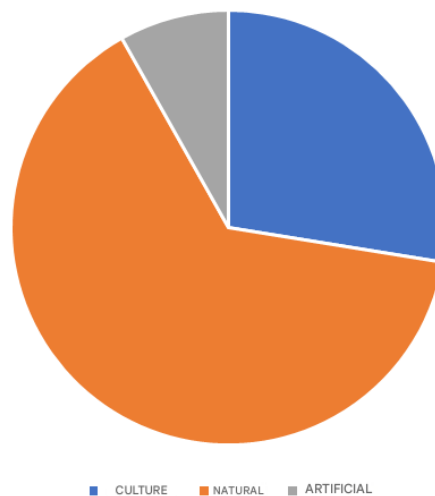
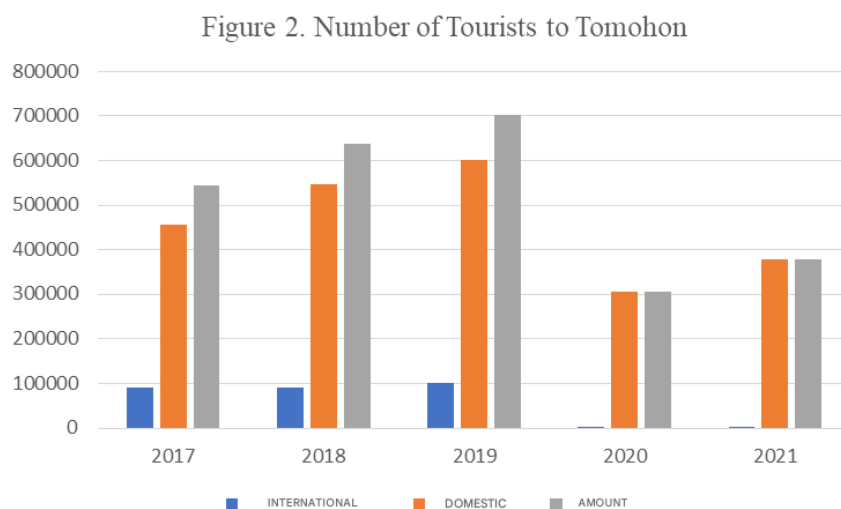


Figure 1. Number of Cultural, Natural & Artificial Tourist Objects

Figure 1 shows the distribution of the number of tourist attractions in Tomohon, with natural tourism dominating with 63 objects (orange), followed by cultural tourism with 27 objects (blue), and artificial tourism with 8 objects (grey). This confirms that Tomohon is better known for its natural tourist attractions, while cultural and artificial tourism complement the diversity of tourist experiences in the area.



*Figure 2. Number of Tourists to Tomohon*

Figure 2 shows the number of tourist visits to Tomohon from 2017 to 2021, consisting of foreign tourists (blue), domestic tourists (orange), and the total number of tourists (grey). Domestic tourists dominate the number of visits each year. From 2017 to 2019, there was an increase in the number of tourists, with a peak in 2019 of 701,503 visitors. However, in 2020 and 2021, the number of tourists experienced a drastic decline, especially from abroad, which was almost zero, possibly due to the COVID-19 pandemic which restricted international travel. Based on 52 leading tourist attractions provided by the Tomohon tourism office, I processed the tourist attraction data with the aim of creating a web blog using the A3 analysis method (Attractions, Accessibility and Amenities) the author succeeded in creating the following data.

Lake Linow is a volcanic lake that has a very stunning natural beauty besides being able to see the beauty of the lake there we can also see the stunning view of Mount Lokon. Access to the road is quite smooth and safe with all roads already covered with asphalt, the Lake Linow tourist attraction with a travel distance from the center of Tomohon city is approximately 22 minutes and an entrance fee of 35,000 per person. In addition to the scenery and fairly easy and safe access, Lake Linow also has many amenities including a fairly large restaurant with quite a lot of seating, various culinary delights, a large parking area and 2 toilets that are open to the public besides that when entering the object ticket obtained when entering can be exchanged for a cup of tea or hot coffee.



*Figure 3. Leilem Village Hot Springs*

Leilem hot springs are a natural tourist attraction located in Lahendong Village, South Tomohon, which has many advantages, in addition to the hot springs, it also has several open and very interesting photo spots. The road access is quite smooth and safe with a travel distance from the center of Tomohon, approximately 12 minutes from the center of Tomohon. This object has several natural hot springs, in addition to having several open and very interesting photo spots with a fairly large parking area and public toilets.



*Figure 4. Tu'ur Ma'asering*

Tu'ur ma'asering is a natural tourist attraction that follows a path and is slightly uphill, with a view of large sugar palm trees neatly arranged on the left and right of the road. The road access is quite smooth and safe with a distance of approximately 20 minutes from the center of Tomohon City. Arriving at the main yard, there are many huts and wooden chairs where tourists can rest and relax. The huts and all facilities are made of wood and bamboo in various shapes. In addition, the object has a restaurant and toilet, with an entrance ticket of 15,000 which can later be exchanged for local Minahasa drinks, namely Saguer and cap tikus liquor.



*Figure 5. Mahawu Prayer Hill*

Mahawu prayer hill is a natural tourist attraction which is also a famous religious tourist spot in North Sulawesi. This hill is indeed located right under the foot of Mount Mahawu and looks so beautiful with a typical mountain atmosphere with various attractions such as an amphitheater, the way of the cross and the cave of the Virgin Mary. The road access is quite smooth and safe with a distance of approximately 13 minutes from the center of Tomohon city. This object has various amenities such as a small restaurant, a chapel that can be rented for various activities and public toilets with an entrance ticket of 25,000 tickets that can be exchanged for a cup of tea or hot coffee.



*Figure 6. Narwastu hills*

Narwastu Hill is one of the best spots to enjoy the city of Tomohon from a height. Here we can see the city of Tomohon with the background of Mount Lokon standing behind it. The road access is quite smooth and safe with a distance of approximately 9 minutes from the center of Tomohon city. With quite complete amenities. Starting from various photo spots, outdoor cafes, lodging, meeting rooms, to wedding venues. You can relax in the cafe while ordering a variety of food and drink menus. The outdoor cafe has a green grass floor and overlooks the enchanting Mount Lokon. The hanging light bulb decoration will give a romantic impression when the night comes. With an entrance ticket price of 30,000 you will get a voucher that can be exchanged for a cup of coffee or hot tea and mineral water



*Figure 7. Kaisanti Garden*

In Kaisanti Garden you can enjoy the view with a gentle breeze. As far as your eyes can see, you will be presented with a charming green view. You can sit back and relax while enjoying the view. With the facilities provided are also fairly adequate. Road access is quite smooth and safe with a travel distance from the center of Tomohon approximately 18 minutes from the center of Tomohon. Important facilities such as toilets and parking lots can be said to be adequate. You can also find a cafe to fill your stomach after doing fun relaxing activities. With an entrance fee of 35,000 you can receive a ticket that can be exchanged for a drink such as coffee, lemon tea or tea.



*Figure 8. Rurukan Tourism Village*

Sunrise in Rurukan Village is truly a winner you can wake up in the morning greeted by blooming flowers and expanses of terraced vegetable plantations. As far as the eye can see, only flowers and vegetables are visible like a colorful carpet that soothes the eyes. As is known, the city of Tomohon is the main producer of flowers in North Sulawesi. The road access is quite smooth and safe with a distance of approximately 12 minutes from the center of Tomohon city. Important facilities such as toilets and parking lots can be said to be adequate. You can also find a cafe with an entrance fee of 15,000.



*Figure 9. Gardenia Country Inn*

Gardenia Country Inn is a nature-themed inn with a very stunning and strategic mountain view. This inn has been running since 2011 and has survived and developed. The road access is quite smooth and safe with a distance of approximately 10 minutes from the center of Tomohon. This inn has satisfactory facilities such as a bath tub, Indonesian and European cuisine and also has a hiking trail. With a price of 1-2 million per night, this inn can be a place to rest after you have traveled to Tomohon.



*Figure 10. Alfa Omega Tower*

Alfa omega tower is a religious-based tourist attraction (GMIM) which has a beautiful flower garden and is located in the center of Tomohon city. In addition to being able to see the object, we can also explore the beauty of Tomohon city. This object is located in the center of Tomohon city and the estimated distance from Manado city is approximately 1 hour. The tourist motorcycle taxi itself has a small parking lot and has many small shops selling various cold drinks and snacks.



*Figure 11. Nature Tourism Park*

This nature tourism park is relatively new and was only opened in 2020. Various rides are presented in this beautiful city forest park. This place is suitable to be visited with family, friends or loved ones. Having a sustainable tourism development concept makes this tourist attraction fresh and different from the others. The road access is quite smooth and safe with a distance from the center of Tomohon city of approximately 6 minutes from the center of Tomohon city. Amenities include a small restaurant, a fairly large parking lot and public toilets. There are also some small nature-themed rides at the object. Open every day from 10 am to 10 pm with an entrance fee of 5,000 and the exciting rides will be opened at 12 pm to 5 pm and each ride has a price of only 15,000

With the existence of a web blog created in blogger.com containing 10 tourist attractions in Tomohon, it is expected to make it easier for the public to determine the trip with the aim of

traveling in the Tomohon area which has more than 90 natural, cultural and artificial tourist attractions. The blog content created includes 10 superior tourist attractions that are still operating well and are relatively close to the center of Tomohon city and a Google Maps link to make it easier for readers to find the location point to be able to reach the listed tourist attractions. This blog can be accessed with electronic devices such as (mobile phones and laptops) that have an internet network.

This study aims to analyze and highlight the leading tourist attractions in Tomohon based on data provided by the Tourism Office, using the A3 analysis method (Attractions, Accessibility, and Amenities). In creating a web blog featuring these featured destinations, this study addresses a significant gap in the literature by providing an easily accessible and user-friendly platform that integrates up-to-date information about the attractions along with accessibility features such as Google Maps. Previous studies have emphasized the importance of web-based tools in promoting tourism, but few have focused on local content specifically for Tomohon. This study not only fills the gap by showcasing Tomohon's unique attractions, but also provides practical insights into the potential of digital platforms in enhancing regional tourism.

Much of the existing literature highlights the need for digital tourism platforms that offer comprehensive information to enhance the tourist experience (Pasca et al., 2021). However, there is limited research on how these platforms can be adapted for smaller but rich tourist destinations, such as Tomohon. By focusing on 10 major tourist attractions, this study shows the importance of presenting a balance between nature, culture, and religion in digital platforms. Previous research by Swayne et al. (2023) emphasized the importance of integrating amenities such as cafes, toilets, and accessibility tools into tourism promotions, and this study supports these findings by ensuring that each featured attraction provides detailed information about these aspects.

Additionally, the integration of Google Maps and real-time access to information addresses a gap identified by Müller et al. (2022), who noted that tourists often face challenges in navigation and information gathering when visiting regional attractions. By embedding location services and offering links to booking facilities, this study provides a practical solution to a common problem in tourism promotion. Finally, the focus on sustainable tourism, as emphasized in the description of the Nature Tourism Park, is in line with recent findings by Dolnicar (2020) who stated that environmentally friendly tourism models will be essential to maintaining tourist interest in the long term.

This study highlights the importance of sustainable tourism practices in maintaining the attractiveness of local attractions while addressing the growing environmental awareness among visitors (Streimikiene, et al., 2021; Cunha et al., 2020). By creating this blog, this study not only provides an informative and accessible platform, but also makes a significant contribution to the literature by integrating digital innovation, user-friendly navigation, and detailed information about Tomohon attractions. This approach has the potential to serve as a model for other regions seeking to enhance tourism through locally tailored web-based platforms.

## **Conclusion**

This study successfully addresses the gap in the literature by developing a user-friendly blog that showcases Tomohon's top 10 tourist destinations through the lens of the A3 analysis (Attractions, Accessibility, and Amenities). By integrating digital tools such as Google Maps, and providing comprehensive information on each site's amenities and accessibility, the blog

enhances tourists' ability to plan their visits effectively. This platform not only supports local tourism by highlighting Tomohon's unique natural, cultural, and religious attractions but also contributes to the growing field of digital tourism promotion. Furthermore, the emphasis on sustainable tourism aligns with current trends in eco-friendly travel, ensuring that Tomohon remains a competitive and attractive destination for both local and international visitors.

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