

Natural Tourism Potential Assessment Model in Rembang Regency

Artamevia Salsabila Rizaldi*, Rayinda Pramuditya Soesanto, Afrin Fauzya Rizana, Augustina Asih Rumanti

Department of Industrial Engineering, Telkom University Jl. Telekomunikasi No.1 Bandung 40257, Indonesia

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Abstract

This study identifies the criteria for developing natural tourism potential in Rembang Regency. There are problems, such as on the white sand beach of Wates. There are still attractions that have not been managed, namely the mangroves around the beach that have not been managed and around the tour. There are no lodgings such as hotels and guest houses for tourists, so for now, the distance to the beach can be accessed by vehicle because of quite a distance. To meet the requirements of the components that must exist in tourism, there are five criteria or 5A based on a literature study: Attractions, Accommodations, Accessibility, Activities, and Amenities. After obtaining the criteria, a weighting will be carried out for each criterion based on 5A using the AHP approach. Based on the results obtained, it is known that the Accessibility criteria have the highest weight value, followed by the Amenities, Activities, Accommodation and Attractions criteria. Value modelling is carried out to calculate tourism feasibility according to standards.

1. INTRODUCTION

The tourism sector plays an essential role in the Indonesian economy. Tourism development can encourage economic growth and improve people's welfare as a contributor to state revenue through foreign exchange. The tourism sector's contribution to Gross Domestic Product (GDP) in 2020 is estimated at 4.1%. Meanwhile, in 2019, the assistance of the tourism sector was 4.7%, and it can be seen that there was a decline in the contribution of the tourism sector in 2020 (Kementerian Pariwisata dan Ekonomi Kreatif, 2021).

The Ministry of Tourism has a program to promote tourism in Indonesia by using social media to promote Indonesia's tourism potential through accounts that provide information about tourist destinations. Promoting tourism potential in Indonesia has a positive impact by introducing tourist objects in various regions. However, many places are still foreign or not widely known to tourists, one of which is tourism in the Rembang Regency. The location of Rembang Regency, which is on the north coast of the island of Java and right next to the province of East Java, makes Rembang Regency have many beaches that are used for tourism activities. In addition to the beach, Rembang Regency has a lot of natural, cultural, and artificial tourism potential (Septiningtyas and

Soewardikoen, 2018). It is known in Figure 1 that Rembang Regency experienced a decline, namely by looking at 2016 foreign tourists visiting to carry out tourism activities there were 7,137 people and 1,222,448 foreign tourists, while in 2020, there were only ten foreign tourists and 351,731 foreign tourists (Dinas Kepemudaan Olahraga dan Pariwisata Provinsi Jawa Tengah, 2020).

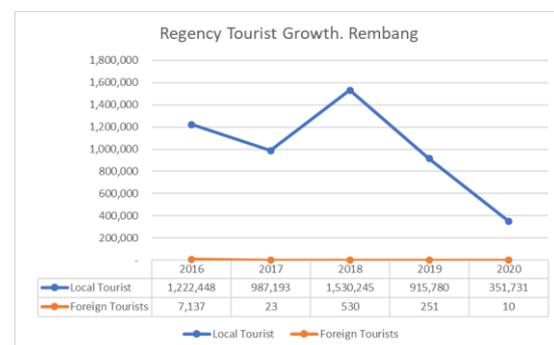


Figure 2.
Number of Tourists

Nature tourism is a form of tourism activity that utilizes the potential of natural resources and environmental management in original and artificial forms (Injoi, Kartikawati and Siahaan, 2019). Nature tourism in Rembang Regency has the most destinations among cultural and artificial tourism. Namely, there are 14 natural tourist destinations

*Corresponding author. Artamevia Salsabila Rizaldi
Email address: artameviasalsabila@gmail.com

with an average overall income of Rp. 41,866,464 in 2020 from fourteen tours spread across six sub-districts of Rembang Regency.

Karang Jahe Beach is one of the natural attractions that have the highest tourist visitors and income in 2020, among other natural attractions. Some factors attract tourists to visit Karang Jahe Beach, namely the attraction factor of the white sandy beach. The activity factor that tourists can do is sunbathe and enjoy the panorama. The facilities are complete, such as places to eat, worship, parking areas, and souvenir shops. The accommodation factor around the tourist area is hotel accommodation for tourists. The accessibility factor of Karang Jahe Beach is the ease for tourists to visit tourist attractions because the distance from the city center is not too far, which is less than 30 minutes, and the road infrastructure to tourist attractions is paved so that tourists are easy visit Karang Jahe Beach. However, several components need to be improved, such as the parking area needs expansion and the distance from the parking area to the tour is quite far (Brilianti, 2021).

Marongan Island is a nature tourism with the lowest number of visits among other natural attractions because visitors have to travel by sea as far as four kilometers, and the journey is taken one hour from the mainland of Rembang Regency. There is continuous abrasion in eroding the mainland of Pulau Gede and Marongan, making the island of Marongan. Marongan was damaged, which resulted in the island sinking and facilities damaged due to the influence of abrasion.

Tourist attractions can affect the interest of tourists to visit these attractions by having complete public facilities that will attract visitors to visit the tourist attraction (Ngajow and Tawas, 2021). In carrying out development, there are requirements for a decent destination to have 5A: Attraction, Accommodation, Accessibility, Activities, and Amenities (Ramesh and Muralidhar, 2019). From the comparison of Karang Jahe Beach tourism which has the most tourist visits in 2020, with Marongan Island tourism which has the least visitors, it can be seen that the availability of tourism facilities will affect the interest of tourists to visit (Ngajow and Tawas, 2021).

As for the literature regarding the assessment of the potential for natural tourism by conducting an assessment based on the nature tourism of the Campground (Nugraha, 2021). Based on these problems, this study identifies the criteria and weights used in determining the potential for natural tourism by making an assessment model, which is expected to be a decision support tool for the Rembang Culture and Tourism Office for determining the potential for nature tourism.

2. METHODOLOGY

This research step is in four stages, as shown in Figure 2. The first step is to identify the problem formulation and objectives. The second step is to carry out the model development process by carrying out three stages, namely determining the criteria, calculating the weight of each criterion, and conducting an assessment model for the development of natural tourism potential. Next, conclusions are drawn from the research that has been done.

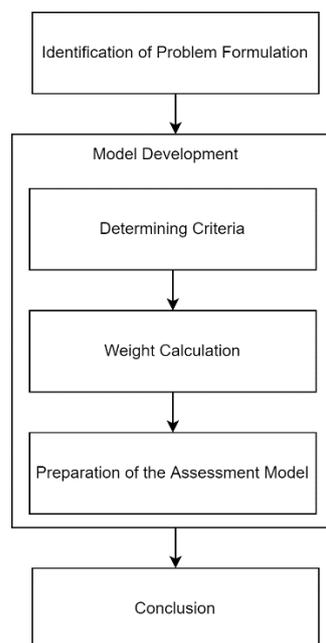


Figure 2.
Research Phase

The determination of the criteria in this study was obtained from a literature study and interviews with the Tourism and Culture Office and Rembang Regency. Five criteria were obtained: *Attraction*, *Accommodation*, *Accessibility*, *Activities*, and *Amenities* (Ramesh and Muralidhar, 2019). *Attraction* is a tourist attraction consisting of natural attractions, attractions built by humans, cultural attractions and social attractions. Attractions can be buildings, beaches, lakes and others. *Attraction* affects attracting tourists to visit tourist destinations. *Accommodation* is a lodging facility provided for tourists in tourist destinations. *Accessibility* is a transportation infrastructure and technology that tourists can use to access the tourist destinations they want to visit. *Activities* are activities carried out by tourists at tourist sites. *Activities* can be activities in nature, culture, agriculture, observing animals' scarcity, water sports, and activities that may provide benefits specifically for tourists. *Amenities* or facilities are buildings that aim to meet the needs of tourists wants and needs. Services are needed to support tourists' comfort in tourist

locations, such as places to eat, toilets, and other facilities.

This study used the Analytical Hierarchy Process (AHP) method in weight determination. AHP is a method developed by Thomas L. Saaty in 1980. The AHP method is a decision-making process that uses paired comparisons (Pairwise Comparisons) to explain evaluation factors and weights in multi-factor conditions (Yulyantari and Wijaya, 2019). Weight is obtained by interviewing a tourism expert who can explain what components must be present in a natural tourist destination.

3. HASIL DAN PEMBAHASAN

3.1 Identification of Problem

The problem that was known through interviews with related parties, namely from the Rembang culture and tourism office, was that there were no criteria and weights to support the assessment model as a determination of natural tourism potential in Rembang Regency, so an interview was conducted to obtain criteria and weights using the AHP method.

3.2 Determining Criteria

From the results of interviews conducted, the results of the criteria that can be based on the 5A tourism development component can be seen in Table 1.

Table 1.
Criteria and Sub Criteria

Criterion	Sub Criteria
Attraction	Uniqueness of Tourism
	Hygiene
	Comfort
Accommodation	Tourist Area Lodging
	Number of Lodging Rooms
Accessibilities	Transportation
	Road Conditions
	Ease of Tourist Access
	Distance
Activities	Variety of Activities
	Event
Amenities	Facility
	Infrastructure

3.3 Weight Calculation

A weight calculation will be carried out using the AHP method to make a feasibility model of a tourist destination. The code of each criterion can be seen in Table 2. The first step is to do a pairwise comparison matrix as in Table 3.

Table 2.
Criteria Code

No	Criterion	Code
1	Attraction	P1
2	Accommodation	P2
3	Accessibility	P3
4	Activities	P4
5	Amenities	P5

Table 3.
Pairwise Comparison Matrix

Criterion	P1	P2	P3	P4	P5
P1	1.00	1.00	0.20	0.33	0.33
P2	1.00	1.00	0.20	1.00	0.33
P3	5.00	5.00	1.00	3.00	5.00
P4	3.00	1.00	0.33	1.00	1.00
P5	3.00	3.00	0.20	1.00	1.00
Sum	13.00	11.00	1.93	6.33	7.67

The second step is to perform the calculation of the normalization matrix can be seen in Table 4.

Table 4.
Normalization Matrix

Criterion	P1	P2	P3	P4	P5	Sum
P1	0.08	0.09	0.10	0.05	0.04	0.37
P2	0.08	0.09	0.10	0.16	0.04	0.47
P3	0.38	0.45	0.52	0.47	0.65	2.48
P4	0.23	0.09	0.17	0.16	0.13	0.78
P5	0.23	0.27	0.10	0.16	0.13	0.90

The normalization matrix is obtained from the comparison matrix in pairs with the criteria divided by the sum of each criterion.

The third step is to perform the calculation of the weights in Table 5 for each of the criteria.

Table 5.
Weighting Criteria

No	Criterion	Code	Weight	Ranking
1	Attraction	P1	0.074	5
2	Accommodation	P2	0.095	4
3	Accessibility	P3	0.496	1
4	Activities	P4	0.156	3
5	Amenities	P5	0.179	2

Weights are derived from the number of normalized matrices divided by the number of criteria. After getting the importance of each criterion, a consistency check can be seen in Table 6.

Table 6.
Consistency Results

Consistency	Value
λ_{max}	5.235
Consistency Index (CI)	0.059
Random Index (RI)	1.410
Consistency Ratio (CR)	0.042

Since the CR value of $0.04 \leq 0.1$, the calculation is said to be consistent.

After weighing the criteria, sub-criteria weighting is carried out. The results are in table Table 7.

Table 7.
Sub Criteria Weights

Criterion	Weight	Sub criteria	Weight
Attraction	0.074	Uniqueness of Tourism	0.007
		Hygiene	0.467
Attraction	0.074	Comfort	0.467
Accommodation	0.095	Tourist Area Lodging	0.833
		Number of Lodging Rooms	0.167
Accessibilities	0.496	Transportation	0.067
		Road Conditions	0.427
Accessibilities	0.496	Ease of Tourist Access	0.427
		Distance	0.079
Activities	0.156	Variety of Activities	0.167
		Event	0.833
Amenities	0.179	Facility	0.125
		Infrastructure	0.875

3.4 Natural Tourism Feasibility Modeling

After weighing, the weight will be used to carry out a feasibility model for assessing natural tourism potential. First, the weight value will be multiplied by its criterion value—obtained criterion values (SPi). The criteria value will later be obtained from assessing facilities or components in natural tourism based on Attraction, Accommodation, Accessibility, Activities, and Amenities. The following is a feasibility model for natural tourism potential:

$$TSC = 0.074P1 + 0.095P2 + 0.496P3 + 0.156P4 + 0.179P5 \dots\dots\dots(1)$$

$$SPi = \sum_{j=1}^n WPij \times SPij \dots\dots\dots(2)$$

Where:

TSC : feasibility value of natural tourism potential

SPi : Statement value

Pij : Weight Sub Criteria

W : Weight Criteria

3.5 Recommendations

In this study, there are recommendations for categories to help calculate tourism feasibility in 5 categories in Table 8.

Table 8.
Consistency Results

Value	Information
TSC ≤ 20	Not very worthy
20 < TSC ≤ 40	Not worth it
40 < TSC ≤ 60	Decent Enough
60 < TSC ≤ 80	Proper
80 < TSC	Very Worthy

Based on the results obtained in this study, practically, this research helps provide guidelines that can be used to determine the potential for nature tourism in Rembang Regency through the evaluation of criteria based on Attractions, Accommodations, Accessibility, Activities, and Amenities as a consideration before determining nature tourism potential. This is done to be able to filter natural tourist attractions that have the potential to be developed. However, this study has some shortcomings, namely that other criteria still need to be identified, and some criteria are still obtained from literature studies. For further research, it is hoped that an assessment of the related assessment model and development components can be carried out. Another drawback of this research is that there is no distribution of questionnaires to determine whether the criteria and sub-criteria that have been made are following the tourist perspective.

4. CONCLUSION

Mengacu The conclusions that can be drawn from this study are:

1. The development of natural tourism in Rembang Regency is based on the components of 5A Attraction, Accommodation, Accessibility, Activities, and Amenities.
2. The weight calculation was obtained using AHP with the results obtained by Accessibility of 0.50, Amenities of 0.18, Activities of 0.16, Accommodation of 0.09, Attraction of 0.07.
3. Calculating the sub-criteria of each of the Attraction, Accommodation, Accessibility, Activities, and Amenities criteria.
4. There are recommendations for determining the feasibility of tourism potential

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