

Analysis of Potential Development of Ecotourism Pemandian Alam Lau Kulap in Telagah Village, Sei Bingai District, Langkat Regency

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Abstract. Langkat Regency has many eco-tourism potentials from the available natural resources. One of them is the Pemandian Alam Lau Kulap located in Telagah Village, Sei Bingai District, Langkat Regency, a tour that uses nature as a tourist facility, the Lau Kulap River. Ecotourism is a form of tourism that is closely related to the principle of conservation. The utilisation of natural areas in eco-tourism uses a conservation and utilisation approach. The data collection of this paper is by conducting literature studies, field observations, interviews with the community, tourists and stakeholders. Analysis of the data used in this study is the analysis of internal and external factors and SWOT analysis. Based on the EFE (External Factor Evaluation) matrix, the total score obtained is 3.73; this shows that the Pemandian Alam Lau Kulap stakeholders and managers responded indifferently to the eco-tourism development strategy. A total score of 3.79 is obtained from the IFE matrix. The total score shows that the stakeholders respond well to internal environmental conditions better than external environmental conditions. The development of the ecotourism potential of the Pemandian Alam Lau Kulap Ecotourism with the SWOT analysis method can be seen that the development of ecotourism is very potent with the value of the ecotourism feasibility level of 93.74% and is in the category of feasible to be developed.

Keywords: Tourism; Ecotourism; Internal and External Factors; SWOT Analysis

1 Introduction

Indonesia has a very wide landscape and is supported by diverse natural resources that can be processed and used as tourism. Indonesia has various kinds of tourism potential, both natural and cultural, for Indonesia has various tribes, customs, and cultures due to Indonesia's geographical location as a tropical country that produces natural beauty and animals (Yoeti, 2008). The tourism sector plays a major role in developing Indonesian tourism that can be relied upon to improve people's welfare and national development. In the field of tourism, Indonesia's face will be determined by the ability of its people to provide services for tourism components, like attractions, transportation, accommodation, information and competitive promotion.

National development explained that tourism aims to promote the national and regional economy, which means that the promotion of tourism activities will increase the economic activity of the community and at the same time play a role in efforts to increase the welfare

and income of the community. The participation of the private sector and the government in implementing tourism development needs to be further enhanced and developed in a climate of healthy competition and on a commitment to mutual benefit and mutual support (Sembiring et al., 2004).

Eco-tourism is about creating and satisfying a desire for nature, about exploiting tourism's potential for conservation and development, and about preventing its negative impacts on ecology, culture and beauty (Western 1993, in Asmin 2017). Fandeli (1999) defines eco-tourism as responsible travel to natural areas that protect the environment and improve the well-being of local people.

North Sumatra has large and diverse tourism potential. Tourism in North Sumatra is currently developing its natural potential, the example we can see in Langkat Regency. Langkat Regency has a beautiful natural panorama, varieties of fauna and flora that can enchant tourists. A tourist attraction in Langkat Regency that is currently undergoing development and receiving attention from the public is the Pemandian Alam Lau Kulap located in Telagah Village, Sei Bingai District, Langkat Regency, North Sumatra Province.

Pemandian Alam Lau Kulap offered a swimming pool facility whose water comes directly from the Lau Kulap river itself without any chlorine mixing, and tourists can also enjoy the Lau Kulap river water itself. Around the natural baths, Lau Kulap is surrounded by gorgeous looking forests as another plus. The tourist area at the Lau Kulap River has a length of \pm 1 Km and a width of \pm 8 m. The facilities offered at Pemandian Alam Lau Kulap Ecotourism include a resting place/*lesehan*, a canteen, a prayer room and a dressing room/bathroom. The Lau Kulap swimming pool is across the Lau Kulap River, and we need to cross a bamboo suspension bridge to reach it. Of course, this makes the natural atmosphere presented more accessible to tourists.

The potential of ecotourism is an effort to utilise the potential of tourism, especially the potential of ecotourism for the benefit of environmental conservation and community welfare. The concept of eco-tourism management is generally similar to managing activities related to the utilisation of natural potential. The staff of this place often face classic problems such as the weakness in monitoring environmental quality, the condition of facilities and infrastructure and the lack of human resources ability to maintain existing environmental resources (Mardiastuti, 2000).

Fandeli (2001) mentions that in eco-tourism activities, there are elements that support these eco-tourism activities, namely:

1. Eco-tourism support for nature conservation
 - a. Eco-tourism pays attention to the quality of nature's carrying capacity and is environmentally friendly.
 - b. Eco-tourism is one of the integrated development and conservation programs, between natural resource conservation efforts with economic development and sustainable community empowerment.
 - c. The existence of ecotourism can increase the status of an area as a protected natural area.
 - d. Eco-tourism is an alternative that can increase public, private and community participation in conserving natural resources and biodiversity.
 - e. Eco-tourism activities make contributions to and for the conservation of natural resources and biodiversity. Eco-tourism minimises negative impacts on the quality and quantity of biodiversity caused by mass or conventional tourism activities.
2. Eco-tourism can provide support for community empowerment

- a. Eco-tourism respects the potential of local resources, thereby preventing changes in the community's land ownership and social and cultural structures.
 - b. Community-based ecotourism activities, thus making the community the main owner, actor and beneficiary.
 - c. The attractiveness of ecotourism activities rests on the wealth of natural resources and biodiversity, so that eco-tourism activities are expected to increase community participation in efforts to conserve natural resources and biodiversity.
 - d. The community is strived to have confidence that ecotourism is an alternative to increasing income.
3. Eco-tourism can support sustainable economic development
 - a. Ecotourism opens job opportunities for local people to become direct economic actors.
 - b. Ecotourism is one of the sources of regional income in the context of regional autonomy.
 - c. Ecotourism is an activity that values and utilises local potential and resources.
 - d. Because it requires community participation support, ecotourism can be pursued as a sustainable and integrated economic effort with the conservation of natural resources and biodiversity.

Nature tourism can not be separated from the impact on humans and nature itself, which is positive or negative. This is also inseparable from Pemandian Alam Lau Kulap Ecotourism, which positively and negatively impacts the environment and society

One of the positive impacts of the Pemandian Alam Lau Kulap is that it can increase people's income and open business opportunities for the community. There are also negative impacts by it, like, waste or food waste that is thrown into the river to contaminate river water, erosion caused by the construction of facilities along the river. Therefore, it is necessary to analyse the potential development of Pemandian Alam Lau Kulap tourism object.

2 Methodology

This research used a descriptive method by interviewing questionnaires, direct observations (field observations) and literature studies to collect the necessary data. The types of data used are primary data and secondary data. Primary data was obtained through direct observation and data collection at the research site through direct field observations (observations), interviews, and discussions with the community and local government. Meanwhile, secondary data was gained from local government reports, the Central Bureau of Statistics (BPS) of the sub-districts in the district/city and other literature studies.

The data was processed and analysed using SWOT analysis by looking at internal environmental factors (strengths and weaknesses) and external environmental factors (opportunities and threats). External and internal factors, in this case, were used to analyse more deeply the SWOT of eco-tourism development at the research site. It is necessary to know the external and internal factors that affect eco-tourism. The SWOT analysis approach was carried out by comparing opportunities and threats (external factors) and strengths and weaknesses (internal factors) to conclude an appropriate strategy and direction for eco-tourism development in Telagah Village, Sei Bingai District, Langkat Regency, North Sumatra Province. The SWOT analysis matrix used in this study is listed in Table 1.

Table 1. SWOT analysis matrix

External Factors	Internal Factors	
	Strength (S)	Weakness (W)
Opportunity (O)	SO	WO
Threats (T)	ST	WT

The results of the questionnaire were analysed by giving value and rating to each criterion; namely, each factor (opportunity and strength) was given a scale starting from 4 (very good), 3 (good), 2 (not good), and 1 (very bad). good) (Sihite et al. 2018). Meanwhile, the threat and weakness rating is given a value of -4 to -1 (Rangkuty, 2006). The IFAS and EFAS matrix models are listed in Table 2 and Table 3.

Table 2. Matrix of Internal Strategic Factor Analysis Summary (IFAS)

Internal Strategy Factors	Value	Rating	Score (Value x Rating)
	Threat		
Indicator 1			
Indicator 2			
Indicator 3			
	Opportunity		
Indicator 1			
Indicator 2			
Indicator 3			
Total	1	(100%)	

Table 3. Matriks External Strategic Factor Analysis Summary (EFAS)

External Strategy Factors	Value	Rating	Score (Value x Rating)
	Threat		
Indicator 1			
Indicator 2			
Indicator 3			
	Opportunity		
Indicator 1			
Indicator 2			
Indicator 3			
Total	1	(100%)	

3 Result and Discussion

Pemandian Alam Lau Kulap is one of the tours located in Telagah Village, Sei Bingai District, Langkat Regency, North Sumatra Province with coordinates; LU: 03°18'43.26"/ BT: 098°23'47.70". The area of Telagah Village is 53.36 Km² with a population of 2,961 people (BPS Kabupaten Langkat, 2020).

3.1. Interview Results with Respondents

The values of external environmental factors and internal factors of Pemandian Alam Lau Kulap Ecotourism were determined jointly through interviews with the local government, managers, and the community and visitors using SWOT analysis. Distributing questionnaires

was carried out through a direct observation process to respondents who met the sampling criteria, the number of questionnaires collected reached 100%. After the data and information were collected, the data classification process (tabulation) can be carried out. The results of the interviews conducted can be seen in the following table:

Table 4. Profile of Respondents by Age

Age	Total Respondents	Percentage (%)
< 17 years	0	0
17 – 20 years	49	49
20 – 30 years	6	6
30 – 40 years	9	9
> 40 years	36	36
Total	100	100

Tourists over the age of 60 like cultural and nature-based tourist attractions such as enjoying traditional cultural performances, visiting destinations with flora and fauna attractions such as botanical gardens, parks, conservation areas, etc. (Sudarsono, et al., 2020). The largest number of respondents are aged 17 - 20 years, which is 49 people (49%), and respondents with age > 40 years are 36 people (36%). According to Ismayanti (2010), teenagers or young tourists are those aged 12 to 25 years. This shows that Pemandian Alam Lau Kulap is enjoyed by young tourists and tourists over the age of 40 for the scenery it provides.

Table 5. Profile of Respondents Based on Education Level

Level of education	Total Respondents	Percentage (%)
SD	3	3
junior high school	10	10
senior High School	45	45
Bachelor	37	37
Master	5	5
Total	100	100

Based on the grouping of respondents based on education level, it can be seen that high school graduates are the most respondents with 45 people (45%) and bachelor graduates as many as 37 people (37%). In terms of education owned by tourists can be seen areas of interest to visit. Elementary, Diploma and Bachelor graduates prefer to visit special interest tourist destinations. Junior high school graduates prefer to visit nature-based or natural-based tourist destinations, while Vocational High School or High School graduates prefer nature-based and cultural-based destinations. The postgraduate education category prefers to visit destinations with cultural attractiveness characteristics (Sudarsono, et al., 2020).

Table 6. Profile of Respondents Based on Distance

Distance	Total Respondents	Percentage (%)
< 5 km	0	0
5 – 10 km	0	0
10 – 15 km	0	0
15 – 20 km	35	35
> 20 km	65	65
Total	100	100

The grouping of respondents according to the distance travelled by visitors appears that the majority of visitors have a distance of > 20 km, which is 65 people and is followed by visitors who have a distance of 15 - 20 km, which is 35 people. The number of visitors to the Pemandian Alam Lau Kulap came from travelling more than one hour to two hours because the distance is not too far. This adds to the community's interest to visit the Pemandian Alam Lau Kulap Ecotourism.

Table 7. Profile of Respondents Based on Facilities

Facility	Total Respondents	Percentage (%)
Incomplete	0	0
Less complete	0	0
Quite complete	0	0
Complete	34	34
Perfect	66	66
Total	100	100

Tourist facilities are the spearhead of the tourism business, which can be interpreted as a business that directly or indirectly provides services to tourists in a tourist destination where its existence is very dependent on the existence of activities (Sarim and Wiyana, 2017). Based on the grouping of respondents based on facilities, it can be seen that the majority of respondents stated that the facilities at the Pemandian Alam Lau Kulap are perfect with 66 people and followed by respondents who feel complete with existing facilities, which are 34 people. Based on observations in the field that the facilities are complete, such as clean water for rinsing, parking lots, prayer rooms, souvenir shops, huts, places to eat/restaurants, and bathrooms.

3.2. SWOT Strategy Data Analysis

The SWOT matrix systematically identifies various factors to formulate a strategy that sees everything from the environment outside the organisation. This matrix is based on a logic that can maximise strengths and opportunities while minimising weaknesses and threats. The SWOT is in Table 8.

Table 8. TOWS Matrix Pemandian Alam Lau Kulap Ecotourism

		STRENGTHS	WEAKNESSES
Internal		<ol style="list-style-type: none"> 1. Tourist Attractions 2. Availability of Sufficient Facilities and Infrastructure 3. Tourism Facilities 4. Convenient and Beautiful Tourist Locations 5. Affordable Entrance Fee 	<ol style="list-style-type: none"> 1. Tourism Marketing Is Not Optimal 2. Government Institutions Are Not Optimally Developing Tourism 3. Private Institutions Related to Tourism Management Have Not Been Involved 4. Tourist locations that are quite far from the division of zones near tourism 5. Local customs/customs are less visible at tourist sites
		External	
		STRATEGIES S-O	STRATEGIES W-O
External		<p style="text-align: center;">OPPORTUNITIES</p> <ol style="list-style-type: none"> 1. The interest of local and international communities to travel is increasing 2. Green tourism that provides purity, relaxation and beauty 3. Opportunity to become a family tourist spot 4. Opportunity to attract young tourists who tend to be active on social media 5. Positive public perception and can create job opportunities 	<ol style="list-style-type: none"> 1. Local governments and management institutions need to manage Pemandian Alam Lau Kulap Ecotourism following the eco-tourism concept that is educative and maintains a sustainable environment (S1, S2, S3, S4, O1, O2, O4, O5) 2. Expanding the market by conducting optimal marketing and product diversification. (S4, S5, O4, O5)
		<p style="text-align: center;">THREATS</p> <ol style="list-style-type: none"> 1. Political stability 2. Tourist locations that tourists do not widely know 3. Competitors by similar tourist destinations 4. Illegal logging 5. Poaching 	<ol style="list-style-type: none"> 1. Using tourist attractions and competitive advantages in Pemandian Alam Lau Kulap to increase the number of visitors and market value (S1, S5, T1, T2, T3) 2. Diversify products and maintain the Pemandian Alam Lau Kulap forest area so that it can be preserved and maintained (S1, S3, S4, T3, T4, T5)
		STRATEGIES S-T	STRATEGIES W-T
			<ol style="list-style-type: none"> 1. The government and management institutions need to convey the value of the benefits obtained through social media marketing, mouth to mouth, and create photogenic eco-tourism concepts for young people so that natural baths can be promoted through social media (W1, W2, W3, W4, O1, O2, O3, O4) 2. Exploring the potential of eco-tourism with a traditional/customary approach and developing product diversification related to flora, fauna, and other facilities. (W3, W4, W5, O3, O4, O5)
			<ol style="list-style-type: none"> 1. The government and management institutions need to convey the value of the benefits to visitors and can use visitors as marketers of Pemandian Alam Lau Kulap by facilitating good forest environmental areas to be uploaded to social media such as Instagram, WhatsApp, Facebook, etc. (W3, W4, T2, T3)

Based on the SWOT matrix on the development of Pemandian Alam Lau Kulap Ecotourism in Telagah Village, it can be seen that three competitive strategies are suitable for the development of Pemandian Alam Lau Kulap ecotourism, namely:

- a. Market Penetration (Market Penetration). Based on the SWOT matrix above, what can be categorised into this strategy are SO-1, WO-2, ST-1 and WT-1 strategies.
- b. Market development (Market Development). Based on the SWOT matrix above, what can be categorised into this strategy are SO-2 and WO-1 strategies.
- c. Product Diversification (Product Diversification). Based on the SWOT matrix above, what can be categorised into this strategy are ST-2 and WT-1 strategies.

The SWOT analysis in formulating the strategy is composed of two matrices, the EFE (External Factor Evaluation) matrix and the IFE (Internal Factor Evaluation) matrix. They are carried out according to the needs and actual environmental conditions of the Pemandian Alam Lau Kulap Ecotourism, as listed in Table 9 and Table 10.

Table 9. EFE (External Factor Evaluation) Matrix Pemandian Alam Lau Kulap Ecotourism

External Factors	Value	Rating	B *R
Opportunities			
The interest of local and international communities to travel is increasing	0,2	4	0,8
Green tourism that provides purity, relaxation and beauty	0,2	4	0,8
Opportunity to become a family vacation spot	0,11	4	0.44
Opportunity to attract young tourists who tend to be active on social media	0,11	4	0.44
Positive public perception and can create job opportunities	0,08	4	0.32
Threats			
Political stability	0.04	3	0.08
Tourist locations that tourists do not widely know	0.1	4	0.4
Competitors by similar tourist destinations	0.07	3	0.21
Illegal logging	0.04	3	0.12
Illegal hunting	0.04	3	0.12
Total Score	1		3.73

Description of the value (rating):

1 = less organizational response

2 = mediocre organizational response

3 = organizational response above average

4 = high organizational response

Table 10. Matrix of IFE (Internal Factor Evaluation) Pemandian Alam Lau Kulap Ecotourism

External Factors	Value	Rating	B *R
Strengths			
Tourist attraction	0,21	4	0.84
Availability of Adequate Facilities and Infrastructure	0,14	4	0.56
Tourism Facilities	0,12	4	0.48

External Factors	Value	Rating	B *R
Comfortable and Beautiful Tourist Locations	0,1	4	0.4
Affordable Admission Fee	0,1	4	0.4
Weaknessess			
Tourism Marketing Not Optimal	0,09	2	0,08
Government Institutions Are Not Optimally Developing Tourism	0,08	4	0,4
Private Institutions Related to Tourism Management Have Not Been Involved	0,07	3	0,21
Tourist Locations That Are Quite Far From The Division Of Zones Near Tourism	0,05	3	0,12
Local Customs Are Less Visible At Tourist Locations	0,04	3	0,12
Total Score	1		3.79

Description of the value (rating):

1 = less organizational response

2 = mediocre organizational response

3 = organizational response above average

4 = high organizational response

Based on the external and internal environment analysis using the EFE matrix and the IFE matrix, the score for the EFE matrix is 3.73, while the score for the IFE matrix is 3.79.

After the SWOT analysis has been carried out and the ecotourism development strategy has been obtained, an analysis of the feasibility level of the Pemandian Alam Lau Kulap Ecotourism in Telagah Village will be carried out for the strategy to be carried out. This analysis was conducted by direct observation and interviews with key informants and related stakeholders. The components assessed are the attractiveness of tourist sites, accessibility to tourist sites, accommodation around tourist sites (at the closest distance to tourist sites), and supporting facilities/infrastructure, as listed in Table 11.

Table 11. Feasibility Level of Pemandian Alam Lau Kulap Ecotourism

No	Criteria	Value	Mark (*)	Score (**)	Max Score (***)	Index (****)	Status
1	Attractiveness	6	165	990	1080	91,66	Good
2	Accessibility	5	100	500	600	83,33	Good
3	Accommodation	3	60	180	180	100	Good
4	Facilities and infrastructure	3	100	300	300	100	Good
Eligibility Level						93.74	Worth Developed

Description:

* The results of the assessment of tourist objects and attractions

** Multiplication between weight and value

*** Highest score for each criterion

**** Eligibility index of score comparison with the highest score in percentage %

Based on the interviews conducted, the feasibility level of Pemandian Alam Lau Kulap Ecotourism is very feasible to be developed as a tourist attraction with an index value of 93.74%. In line with Sihite et.al (2018) which states that the feasibility level is >66.6%, it can be stated that Pemandian Alam Lau Kulap Ecotourism is feasible to be developed with the strategy described above.

4 Conclusion

- a. Based on the EFE (External Factor Evaluation) matrix, the total score owned by Pemandian Alam Lau Kulap Ecotourism is 3.73. The total score shows that in the ecotourism development strategy, the Pemandian Alam Lau Kulap are responded to normally by stakeholders and managers. Based on the IFE matrix, the total score of Pemandian Alam Lau Kulap Ecotourism is 3.79. The total score shows that the Pemandian Alam Lau Kulap Ecotourism stakeholders respond well to internal environmental conditions, better than external environmental conditions.
- b. Based on the analysis of the feasibility level of tourism, the total index score for Pemandian Alam Lau Kulap Ecotourism in Telagah Village is 93.74%. It can be categorised that the development of Pemandian Alam Lau Kulap Ecotourism is feasible to be developed. From the total score, it can be said that the feasibility of Pemandian Alam Lau Kulap Ecotourism in Telagah Village has the advantage of a good position in the components of attractiveness, accessibility, facilities and infrastructure, and accommodation.

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