



## POTENTIAL NATURAL TOURISM AREA IN SUPPORTING THE ASAHAN GO WISATA PROGRAM (Case of Asahan River Rafting Tour, Asahan Regency)

Rahmad Kurnia Abdik Nasution<sup>1</sup>, Emrizal<sup>2</sup>, Marciella Elyanta<sup>3</sup>

Master of Applied Science in Tourism Planning and Development, Tourism Polytechnic,  
Medan

Email: [rk.anasution@gmail.com](mailto:rk.anasution@gmail.com)

**Abstract:** *The objectives of this study are: To analyze the ecotourism potential in the Asahan River Rapids area based on the ECOS (Ecotourism Opportunity Spectrum). This qualitative descriptive study uses four data collection techniques: observation, interviews, questionnaires, and documentation. The sampling technique in this study uses non-probability precisely, namely Purposive Sampling and Incidental Sampling. Then the data obtained were analyzed using the ECOS approach. Research shows that the potential for ecotourism in the Asahan River Rapids area based on the ECOS approach is to have an Eco Specialist indicator. Where these indicators are assessed using seven components in ECOS, namely the access component with the Eco Specialist indicator, other related resource components with the intermediate indicator, the attraction component with the Eco Specialist indicator, the infrastructure component with the Eco Specialist indicator, and the social interaction component with the Eco indicator. Specialist, component level of ability and knowledge with indicator Intermediate, and the component of visitor impact with indicator Intermediate.*

**Keywords:** *development, ecotourism, asahan river rapids*

**Abstrak:** Tujuan penelitian ini adalah: Menganalisis potensi ekowisata di kawasan Jeram Sungai Asahan berdasarkan ECOS (Ecotourism Opportunity Spectrum). Penelitian deskriptif kualitatif ini menggunakan empat teknik pengumpulan data yaitu observasi, wawancara, angket, dan dokumentasi. Teknik pengambilan sampel dalam penelitian ini menggunakan tepat non-probability yaitu Purposive Sampling dan Incidental Sampling. Kemudian data yang diperoleh dianalisis dengan menggunakan pendekatan ECOS. Penelitian menunjukkan bahwa potensi ekowisata di kawasan Jeram Sungai Asahan berdasarkan pendekatan ECOS adalah memiliki indikator Eco Specialist. Dimana indikator tersebut dinilai menggunakan tujuh komponen dalam ECOS yaitu komponen akses dengan indikator Eco Specialist, komponen sumber daya terkait lainnya dengan indikator perantara, komponen daya tarik dengan indikator Eco Specialist, komponen infrastruktur dengan indikator Eco Specialist, dan komponen infrastruktur dengan indikator Eco Specialist. komponen interaksi sosial dengan indikator Eco. Spesialis, komponen tingkat kemampuan dan pengetahuan dengan indikator Menengah, dan komponen pengaruh pengunjung dengan indikator Menengah.

**Kata kunci:** pengembangan, ekowisata, jeram sungai asahan

### Introduction

The service sector, especially tourism, plays an important role in the economy of a country today. The huge potential of the global market has resulted in many countries

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competing to build their tourism industry because the tourism industry is so prospective. The tourism industry, if developed in a planned and integrated manner, can become a source of quite a high state income which will exceed the oil and gas sector (oil and gas) and other industries. If the tourism sector can grow and develop properly, it will certainly encourage economic growth, create jobs and increase people's income.

Although its development had been hampered due to the Covid-19 pandemic, tourism objects remained promising potential. Various tourism concepts have been redeveloped. Starting from educational tours, historical tours, marine tourism, nature tourism, and cultural tourism. The development of tourism objects which are the main drivers of the tourism sector requires the cooperation of all stakeholders consisting including the community and government, direct cooperation from the business community as well as from the private sector, by their duties and authorities.

From an economic point of view, tourism activities can contribute to regional revenues sourced from taxes, parking fees, and tickets or can bring in foreign exchange from visiting foreign tourists. The existence of tourism will also grow economic businesses that interweave and support their activities so that they can increase people's income. Asahan Regency is one of the areas that has a tourism destination that has potential and is no less interesting than other regions in Indonesia. The priority tourism areas of Asahan Regency with great potential are Simonang-monang Waterfall in Padang Pulau Village, Silo Baru Beach in Air Joman Subdistrict, Sarang Helang Beach in Sei Kepayang Subdistrict, Lotus Lake in Middle Canal Village, Tinggi Raja District, [www.asahan.wordpress.com/destination](http://www.asahan.wordpress.com/destination)).

The Asahan River is large in North Sumatra Province. This river has its headwaters on Lake Toba and flows through the door of the Sigura-Gura Dam along the downstream area. Asahan River water flows through several areas in Asahan Regency and empties into Nibung Bay, the Malacca Strait. The natural topography along this river is famous for being winding, bumpy, steep, and flanked by cliffs. Meanwhile, the average flowing river water is heavy, has high waves, and has a high water discharge.

The reasons why the author chose the location of this writing include the potential of the Asahan River, especially around Tangga Village, Aek Songsongan District, and Asahan Regency. The swift flow of the Asahan River which has a speed of 120 cubic meters per second with grade IV-V+ is very challenging for fans of heavy current sports which to the wider community has the potential as a special interest tourist attraction. This potential must be developed so that it is increasingly recognized, by foreign tourists and domestic tourists. From 2000 to 2003, the Asahan Regency Government in collaboration with the Youth and Sports Office of North Sumatra Province held an international championship in the form of an international rafting championship festival that featured kayak and rubber boat championships. This event was promoted to a permanent calendar of world championships under the name "Indonesia-Asahan Whitewater Festival". This championship has attracted many world-class kayak athletes to participate. Promotions to increase the number of tourist visits to Asahan Regency are considered still not optimal considering the lack of development of tourist areas and the low number of tourist visits to this region.

Efforts to maximize the potential that exists in the Asahan River Rafting Nature Tourism Area as a tourist spot, it is necessary to have a development strategy that will later be applied

to maximize this potential, and in the long term will make this area develop and benefit tourists, managers and even the surrounding community.

Community-based tourism development is the most appropriate way. Where tourism which will be managed later can have enormous benefits, in addition to natural resources being utilized but also maintaining its sustainability, on the other hand, it will produce positive socio-economic benefits for the surrounding community. In addition, it also creates a sense of ownership of the environment so that ecological care can be carried out together.

The existence of people who have rights to their environment, of course, also has an obligation to it and must contribute to the management of natural tourism areas. Especially if the community also depends on environmental sustainability around the Asahan River Rafting Nature Tourism Area. The integration between managers and the community will have the potential to accelerate efforts to develop the area as well as realize one of the priority programs of the Asahan Regency government, namely "Asahan Go Wisata" which consists of the establishment of RIPPARKAB, Asahan One Stop Adventure Tourism, Religious Tourism, and Culinary Tourism.

A good development strategy, of course, must arise through an analysis process with all kinds of aspects that support the development effort itself. One approach that can be an alternative for analyzing to determine development strategies is ECOS (Ecotourism Opportunity Spectrum) because ECOS is more appropriate if used as a tool to research the development of tourist areas as recreational areas and areas that are truly intended for conservation and conservation purposes. In this approach, tourist areas will be analyzed based on seven components, namely: accessibility, attractions, infrastructure, other related resources, social interaction, level of ability and knowledge, and visitor impact. This ECOS model is very helpful for the development of ecotourism strategies and to find out which natural tourism area is in which phase (Eco Specialist, Intermediate, or Eco Generalist). Only a few authors adopt the ECOS approach but not river rafting tours, so the authors are interested in using this analytical tool because no one has researched using this analytical tool on natural river rafting tours, especially Asahan River Rafting. Each of these components will be scored using the RZI (Recreational Zone Index) formula so that it is hoped that the existing state of the Asahan river rafting tourist area will be known and input that can be given based on the most appropriate development strategy based on the ECOS components an effort to improve the tourism component that has not been optimal.

Many attractions can be enjoyed by tourists who are doing nature tourism activities in the Asahan river rapids area in Asahan Regency, including the Asahan River rafting, and fishing tours, all of which can be enjoyed in one area. Seeing these conditions shows that the tourism potential in the area is very large. However, this huge potential has not been in line with good tourism management, so there is still a lack of public interest, especially in the Asahan community, to visit this area. In addition, there is still a lack of services and facilities provided by the manager so there is a lack of public interest in visiting.

From the description above, this study wants to analyze the potential of ecotourism in the Asahan River Rapids area based on the ECOS (Ecotourism Opportunity Spectrum) approach.

## **Literature Review**

### **1. Tourism Concept**

#### **a. Understanding Tourism**

Tourism is an activity that involves various sectors and institutions, which are not only related to economic aspects, but also environmental, political, and socio-cultural aspects (Febriandhika & Kurniawan, 2020). The movement of people, commodities, and services during tourism is a very complicated phenomena that is intimately tied to organizations, institutional relationships, individual relationships, service requirements, service provision needs, and other factors (Damanik & Weber, *Ecotourism Planning: From Theory to Application*, 2006).

#### **b. Tourism Component**

Parameters of a good tourism object according to (Spillane, 1994) and (Yoeti, 1997) to be a good tourist place to achieve the tourism industry depend on three A (3A), namely attractions (attraction), easy to reach (accessibility), and facilities (amenities).

### **2. Ecotourism Concept**

#### **a. Definition of Ecotourism**

The idea of ecotourism has occasionally evolved. However, in its simplest form, ecotourism may be defined as a type of tourism that protects natural regions, promotes the local economy, and upholds the community's cultural traditions. According to this perspective, ecotourism is a type of conservation movement practiced by the global populace.

Ecotourism is a type of tourism that involves visiting natural regions while trying to protect the environment and the way of life of the locals. At first, ecotourism was practiced by nature-loving travelers who want the tourist site to be untouched and sustainable in addition to preserving the locals' culture and welfare.

It turns out, though, that the reason this type of ecotourism is growing is because it is popular with visitors. Natural regions are popular tourist destinations, which can spur economic activity. The following is a definition of ecotourism. Responsible travel to wild and exciting locations is called ecotourism, and it has the potential to grow the tourist sector (Eplerwood, 1999). From this definition, it is evident that the world's ecotourism has grown very rapidly

#### **b. Ecotourism Principle**

Ecotourism has principles, including growing environmental and cultural awareness, minimizing impact, providing positive experiences for both tourists and recipients, and must provide benefits and be able to empower local or surrounding communities (Tamelan & Harijono, 2019). In principle, ecotourism is very concerned with the naturalness of ODTW (tourist destination objects), conservation ethics, and education and sustainability, so it is concluded that the principle of ecotourism must pay attention to the conservation of natural resources, ensure the involvement of the surrounding or local community, improve experiences, include responsible activities, and encourage productive small businesses (Asmin, 2017).

#### **c. ECOS (Ecotourism Opportunity Spectrum)**

ECOS is an approach developed to obtain a management concept aimed at developing ecotourism. This approach is more inclined to the concept of evolutionary rather than

revolutionary. This model is a development of the existing model in the literature (Boyd & Butler, 1996).

ECOS is used to collect data related to the location, nature, and experience that will be obtained in ecotourism areas, this is done to identify how potential the place is. In its application, seven elements are considered, namely accessibility, relations, attractions, infrastructure, social interaction, visitor influence, and management (Rachman, 2014).

The ecotourism opportunity spectrum (ECOS), which spans from Eco Specialist to Eco Generalist. Is used to compare the first seven elements. The range recommended by (Ferne, 1993) which has been adopted for the ECOS framework is very similar to other classifications of ecotourism including the hard and soft categorizations by (Wilson & Laarman, 1988) and (Boyd & Butler, 1996), which are based on the interests of the tourists. and the physical strength of the experience itself. The eighth-factor links decision-makers and stakeholder groups that may be involved in managing areas for ecotourism.

According to (Ferne, 1993), Eco Specialist is a type of ecotourism that participates as individuals or in small groups, immerses themselves in the natural environment and local culture, requires minimal infrastructure, and generally has a minimal environmental impact. They want long and close contact with the local population and individually have a considerable social and cultural impact on that population by engaging in the cultural activities visited. They often have specialized knowledge and acquire a high level of skill to participate in activities. Eco Generalists are usually involved in larger groups, often arranged in ecotourism packages, prefer a certain level of comfort that tourism infrastructure requires and, as a result, tend to place greater demands on the host culture. and the environment. Intermediate ecotourism is similar, to the 'mainstream' type suggested (Ziffer, 1989) in his typology of ecotourism, which ranges from 'hardcore' types of experiences to 'casual-nature' types. This intermediate form of ecotourism is seen to develop as visitor patterns are established, numbers increase, expectations change, and awareness of the destination and the attractions it offers grows. The components of ECOS can be seen in table 1. to types of 'casual-nature'. This intermediate form of ecotourism is seen to develop as visitor patterns are established, numbers increase, expectations change, and awareness of the destination and the attractions it offers grows. The components of ECOS can be seen in table 1. to types of 'casual-nature'. This intermediate form of ecotourism is seen to develop as visitor patterns are established, numbers increase, expectations change, and awareness of the destination and the attractions it offers grows. The components of ECOS can be seen in table 1.

**Table 1**  
**Components of Ecotourism Opportunity Spectrum**

Variable	Parameter	Ecotourism Spectrum		
		Eco Specialist	Intermediate	Eco Generalist
1. Access	a. Level of difficulty	Very difficult	Difficult	Relatively easy
	b. System access transportation	i. Waterway ii. Footpath	i. Aircraft ii. Highway	Highway
	c. Channel access information	From mouth to mouth	Advertisements and brochures	Travel agent
	d. Means of transportation	i. Walk ii. Canoe ride iii. Riding horse	Motor vehicle	Motor vehicle
2. Resources	Activity relationship related to other resources	Not harmonious	Depending on nature and direction of development	Harmonious
3. Attractions offered	The potential owned	Oriented to natural	Focus on aspects urban and culture	Focus on aspects urban and culture
4. Infrastructure which is available	a. Development	There aren't any development	Only in the area certain	Moderate
	b. accessibility	Do not develop	Prioritize naturality	Continues to grow
	c. Complexity	Not complicated	Complexity develop	Complexity develop
	d. Facility	No facilities	The accommodation is simple	Accommodation in the form of hotels & Cottage
5. Interaction social	a. With each other traveler	Very minimal	Minimal (in small tour group)	Often (in large tour group)
	b. With local people	Very minimal	Give some interpretation basic service	Act as a service provider including crafts hand
6. Knowledge level & Skills	Human Resources	Professional	Limited	Not Requires Special skills
7. Impact visitor reception	Impact Level	There aren't any	Low to medium	Very impactful
	Impact distribution	Minimum	Limited	Equally
	Control level	No control	Limited control	Moderate control until tight

Source: Boyd and Butler, 1996

#### **d. RZI (Recreation Zone Index)**

Recreation Zone Index The purpose of this study is to determine whether a tourist area is appropriate or not in its management Basically, a utilization activity that will be developed should be adjusted to the potential of the resource and its designation. Therefore, the analysis of suitability in question is an analysis of the potential of resources to be developed as natural ecotourism objects because each tourism activity has resource and environmental requirements that are by the tourism object to be developed (Yulianda, 2007). Land suitability is the suitability of land for a particular use purpose, through determining the value (class) of land and a more focused land use pattern as well as efforts to maintain its ecosystem. In this regard, the maximum study on the direction of the use of natural ecotourism uses the component parameter (ECOS) Ecotourism Opportunity Spectrum.

The general formula used for tourism suitability is as follows:

$$RZI = \left( \frac{N_i}{N_{max}} \right) \times 100\%$$

RZI : Recreation Zone Index

RZI: Recreation Zone Index

Ni: Value of Parameter-i

Nmax: Maximum value of entire categories

### **Research Methods**

This qualitative descriptive study uses four data collection techniques: observation, interviews, questionnaires, and documentation. The sampling technique in this study use non-probability sampling, more precisely, namely purposive sampling and incidental sampling. Then the data obtained were analyzed using the ECOS (Ecotourism Opportunity Spectrum) approach. Research shows that the Asahan River Rafting Nature Tourism Area in the ECOS spectrum is on the Eco Specialist indicator, so it can be stated that this area already has an incomplete tourism component and still maintains its naturalness. This indicator is obtained from an assessment of seven components in the ECOS approach, namely accessibility, attractions, infrastructure, other related resources, social interaction, level of ability and knowledge, and visitor impact. The development strategy carried out is still in the indicator corridor that already exists in the Asahan River Rafting Nature Tourism Area, namely Eco Specialist so that development efforts can be carried out according to the conditions of each prioritized component to optimize the seven ECOS components in the tourist area.

### **Results and Discussion**

#### **1. Ecotourism Potential in the Asahan River Rapids Area Based on the ECOS (Ecotourism Opportunity Spectrum) Approach.**

To give a conceptual management strategy for ecotourism, the Ecotourism Opportunity Spectrum or ECOS described in Table 2.1 was created. However, the method is evolutionary rather than revolutionary, building on previously published models.

The first seven factors are determined by the Ecotourism Opportunity Spectrum (ECOS), which ranges from Eco Specialist to Eco Generalist. A style of ecotourism known as “Eco Specialist” involves people or small groups immersing themselves in the local natural and cultural environment, needs little in the way of infrastructure, and typically has little effect on the environment. They desire sustained, deep relationships with the local people, and they each participate in the cultural activities they attend, which has a significant social and cultural influence on that population. They frequently develop a high degree of competence and specific knowledge to engage in activities. Eco generalists typically travel in bigger groups, frequently organized into ecotourism packages, desire a particular degree of comfort that the tourist industry necessitates, and as result, tend to have higher expectations of the host culture as well as the environment. Intermediate ecotourism is comparable to “mainstream” ecotourism, which includes both “hardcore” and “casual-nature” ecotourism. As visiting patterns are established, numbers rise, expectations shift, and locals’ knowledge of the area and its attractions increases, this intermediate type of ecotourism is thought to evolve. They encompass both “hardcore” and “casual nature” encounters. As visiting patterns are established, numbers rise, expectations shift, and locals’ knowledge of the area and its attractions increases, this intermediate type of ecotourism is thought to evolve, which span “hardcore” and “casual-nature” experiences, respectively. As visiting patterns are established, numbers rise, expectations shift, and locals’ knowledge of the area and its attractions increases, this intermediate type of ecotourism is thought to evolve.

In processing the existing data, one of them is by distributing questionnaires to tourists, surrounding communities, and managers to find potential tourist areas and strategies that can be taken. The author based on the questions posed in the questionnaire made 3 rating scales for the ECOS component which were stated in the form of a statement where the Eco Specialist was made into a "disagree" statement scale, Intermediate was made into a "neutral" statement scale and Eco Generalist was made into a statement scale "agree". Calculations are carried out using the value of each indicator in each component.

#### **a. Access Component**

Accessibility is a means that makes it easy for tourists to reach tourist destinations. Factors that are important in accessibility include travel plans, tourist attraction data, airports, land transportation, the time needed to get to tourist attractions, costs for transportation, and the number of vehicles to tourist attractions (Way, Wusiang, & Supardjo, 2017).

To get to the Asahan River Rafting Nature Tourism Area, you can take two routes, namely the first route from the Sumatran causeway, entering from the Pulau Rakyat intersection towards Porsea, it takes approximately two hours, this is an alternative route for tourists from the Kisaran area, Tanjung Balai, Labuhan Batu, and its surroundings. The second route from Siantar to Porsea and Sigura-Gura takes approximately two hours, making it an alternative for visitors from Medan, Tebing Tinggi, Siantar, Parapat, Porsea, and surrounding areas. The condition of the road from Pulau Rakyat to Porsea, although the road is paved, at some points there is road damage that has not been repaired so that it interferes with the comfort of the trip.

Visitors from outside the city will experience certain difficulties. This is due to the Asahan River Rafting Nature Tourism Area’s considerable distance from amenities for public



transit. The distance Kualanamu Airport, in Deli Serdang Regency, which is the closest airport to the site, is +/- 216 kilometers, although the range station, which is around 90 kilometers away is the closest station.

The access component in tourist areas is classified as Eco Specialist with average respondents both tourists, local communities, and managers stating the assessment indicators consisting of difficulty reaching tourist attractions as many as 19 people, transportation to reach the area as many as 19 people, target visitors as many as 19 people and promotions as many as 19 people.

#### **b. Other Related Resource Components (Other than Tourism) Activities**

Tourists in tourist locations engage in activities. Diverse tourism attractions can boost expenditure by visitors. Additionally, inhabitants are capable of conducting commerce. Selling goods or services to visitors can be considered a sort of business activity (Way, Wusiang, & Supardjo, 2017).

It offers more than just a location for tourist amenities in the Asahan River Rafting Nature Tourism Area. Additionally, it offers a location for amenities for training, education, and camping but it is poorly maintained therefore it is ignored.

The results of the questionnaire that have been obtained from 24 tourist respondents as well as 3 managers and 3 community members obtained results stating that other SD components related to the Asahan River Rafting Nature Tourism Area were classified as Intermediate. with an average of respondents both tourists, local communities and managers stating the assessment indicators consisting of linkages with other activities are as many as 18 people.

#### **c. Attraction Components**

Attraction is the attraction of a tourist attraction or the results of the arts of an area that attracts tourists to visit the tourist spot. Attractions can also be realized in the form of rides or the main thing offered in a tourist attraction (Way, Wusiang, & Supardjo, 2017)

The Asahan River Rafting Nature Tourism Area offers a variety of attractions including river crossings, beaches, tropical forests, heritage, culinary, fishing, and nature games. The attraction component in the tourist area is classified as Eco Specialist with an average respondent of both tourists, local communities, and managers stating the assessment indicator, namely the naturalness of recreational vehicles, is 18 people.

#### **d. Infrastructure Components**

An industry that promotes services from a variety of quantifiable and non-measurable factors is tourism as a whole. All modes of transportation, roads, water, health services, lodging, food and drink, OTW visitors, and souvenirs are measurable factors. Other elements associated to tourism activities include banking, security services, and comfort insurance. Rest and relaxation activities, adventure culture, and novel and unusual encounters are among the unmeasured components (Rozy & Koswara, 2017).

When establishing the Asahan River Rafting Nature Tourism Area, Infrastructure is an issue. Tourist attractions that present many shades of this natural river are not supported by adequate infrastructure.

Based on the results of the questionnaire that has been obtained respondents regarding the access component, it was obtained from 24 tourist respondents as well as 3 managers and

3 people from the community. stated that the assessment indicators consisted of 18 people for infrastructure, 18 for tourism facilities, and 18 people for adding and developing facilities.

#### **e. Components of Social Interaction.**

The phenomena of relationships between people that can impact one another in the sense that there is an interaction is known as social interaction. One way for people to respond toward others and sustain social engagement with others is through social interaction (Fatnar & Anam), 2014).

Tourists who come to the Asahan River Rafting Nature Tourism Area carry out recreational tourism activities to enjoy tourist objects and not to earn a living. The tourist activities carried out are also varied because the activities carried out around the river are not just bathing. When carrying out tourism activities, visitors make contact with people who have business products and services related to tourism.

The social interactions that occur in the Asahan River Rafting Nature Tourism Area involve three elements, namely tourists, the surrounding community, and also the area manager. From the results of the questionnaire that has been obtained from 24 tourist respondents as well as 3 managers and 3 community members, the results of the social interaction component in tourist areas are classified as Eco Specialists with the average respondents both tourists, local communities and managers stating assessment indicators consisting of relationships with the local population as many as 18 people.

#### **f. Components of Ability and Knowledge Level**

The element has to do with those who wish to get to the Asahan River Rafting region, including visitors, management, and the locals. Based on the questionnaire's findings, it was determined that 24 tourists, 3 managers, and 3 community members answered the questions on the access component. According to management and local officials, up to 22 visitors' skills and knowledge were used as assessment markers.

#### **g. Visitor Impact Component**

According to Pitana and Gayatri (Suwena & Widyatmaja, 2017), The subject area that has garnered the greatest attention in the literature is the impact of tourism, particularly the influence on local communities. While politics, security, and other areas of people's life are also impacted by tourism, the influence of tourism on society and popular tourist locations is its effect on the economy, the sociocultural environment, and the environment.

Environmental effects are undoubtedly a result of tourism-related activities in the Asahan River Rafting Nature Tourism Area. Results from surveys and discussions with respondents about the access component were gathered from 24 respondents who were tourists as well as 3 managers

and 3 community members. The degree of monitoring and the degree of influence on up to 22 persons are the evaluation metrics.

#### **h. Recreation Zone Index (RZI)**

The RZI method may be used to determine the indicators that belong to the Asahan River Rafting Nature Tourism Area from the seven components that have been identified. The value of each indicator in each component is used in calculations. The indicators of the components have their respective values, if a component has the Eco Specialist indicator, it has

a value of "2", if a component has an Intermediate indicator, it has a value of "1" and if a component has an Eco Generalist indicator, it has a value of "0". Table 2 show the results for each component.

**Table. 2**  
**ECOS Component Value**

No	Component	Indicator	Score
1	Access	Eco Specialist	2
2	Other related SD	Intermediate	1
3	Attractions	Eco Specialist	2
4	Infrastructure	Eco Specialist	2
5	Social interactions	Eco Specialist	2
6	Ability and knowledge level	Intermediate	1
7	Visitor impact	Intermediate	1
<b>AMOUNT</b>			<b>11</b>

Source: Author's Data Process, 2022

From these results, the RZI can be calculated as follows:

So

$$RZI = \left( \frac{11}{14} \right) \times 100\%$$

$$RZI = 78\%$$

The value of Ni is the value of the Indicator component while NMax is the maximum value of the Indicator Component. These findings demonstrate that the RZI's value is at 78%. The graph demonstrates that the Eco Specialist Indicator for the Asahan River Rafting Nature Tourism Area. With these circumstances, there are still several efforts that must be done to develop tourism destinations in order to utilize the potential already present.

When a tour gets an Eco Specialist signals, it means that its development is noticeable but that it isn't progressing smoothly or even at all. However, as a result of the local government's vision to realize Asahan Go Wisata where the Asahan River Rafting Nature Tourism Area is one of the areas or priority tourist attraction to be developed, people's expectations of tourist areas have improved, and they are aware that this tourist area already has an attractiveness that deserves to be visited and developed.

## Discussion

### 1. Ecotourism Potential in the Asahan River Rapids Area Based on the ECOS Approach (Ecotourism Opportunity Spectrum).

#### a. Access Component

When seen from a number of factors, including accessibility challenges, transportation, intended audience, and marketing.

### 1. Accessing tourist places is challenging

One of the elements promoting the growth of tourism-related goods, according to Murti (2014) Tourists will locate tourist destinations more readily if there are good roads and public transit options available. Tourism operations will be disrupted by inadequate accessibility

The difficulty experienced by tourists to reach the Asahan River Rafting Nature Tourism Area is the road to get to a narrow area and its condition is damaged. In addition, the lighting available along the road to the area is also very minimal so if night falls it will be very dangerous for tourists who want to go to the area. Where the visit of tourists who come on average is the first time. All necessary access will certainly be easier with access to good road infrastructure to tourist attractions so that tourism can progress and develop, so good road access is something that must be fulfilled.

To be able to reach the location of the Asahan River rapids is also not good because they have to go through oil palm plantations down to the Asahan River Rapids location which is quite steep by large rocks and footpaths.

### 2. Transportation To Reach Tourist Areas

The goal of transportation is to provide everyone access to a vehicle so that they can fulfill their aspirations. The form of these activities can be described by the purpose of the trip. Therefore, in the analysis of transportation, information about the purpose of a person carrying out a trip become very important (Budhiarta, 2011)

Transportation that can be used to reach this tourist area is very limited where there is no public transportation that can accommodate tourist trips to and from tourist attractions so it must be reached by private vehicles. Only small two-wheeled and four-wheeled vehicles can access the Asahan River Rapids Nature Tourism Area. The existence of mass transportation modes that can access this tourist area is very limited and rare. This has something to do with the condition of the existing road and the damage to the road due to the construction of the Asahan III hydropower plant.

### 3. Target Visitors

A tourism development effort must go through a careful planning process besides that the planning must be comprehensive. The development of tourism does not only rely on nature but what must be developed must also be carefully planned. Some aspects must be considered to develop tourism, one of which is the Tourist (Tourist). It is necessary to know the type/characteristic of tourists, from which country they come, their age, hobbies, and in what season they travel (Nurhidayah, 2017).

The Asahan River Rapids Nature Tourism Area is a tourist area with one of the attractive natural beauties that deserve to be sold to tourists but is less interested in outside tourists because it does not have good accessibility.

Tourists who visit the Asahan River Rafting Nature Tourism Area are dominated by local people. In this case, the local community is the community in the Asahan Regency and bordering regencies such as Labuhan Batu Regency and Toba Regency. The manager appointed by the Asahan Regency Government also stated that the target of temporary visitors is local people, especially those who want to visit other natural attractions that are side by side with the Asahan River Rafting Nature Tourism Area, namely Ponot Waterfall.

#### 4. Promotion

Promotion is a marketing activity used to interact with the market. All sides engage in the same listening, responding, and speaking behaviors throughout the marketing communication process until a mutually beneficial exchange relationship is established (Tasruddin, 2015)

There is a tourist attraction in the Asahan River Rafting Nature Tourism Area, but it is still not supported by maximum promotion. So it's only natural that only well-known tourist attractions continue to get an increase in tourist visits. Meanwhile, other tourist attractions that have very good tourism potential, such as attractions in Aek Songsongan District, are less well known to tourists from other areas because of the lack of promotion.

The very swift currents of the river and the challenges of rapids are an attraction for fans of these outdoor sports to try them out. But for writers and responses from tourists, the Asahan River is not just about rapids. There is a natural and cultural exotic that has been less of a concern for tourists and the local government. The forest area along the Asahan River Rafting Nature Tourism Area still holds many mysteries and challenges that are worthy of exploration to become an international-class local tourist destination.

The manager has made promotional efforts to inform the public regarding the Asahan River Rafting Nature Tourism Area. In its promotion efforts, the manager chooses to promote briefly through the website <https://asahangowisata.asahankab.go.id/> which is managed by DISPORAPAR Asahan Regency. It's just that what has been tried is still not optimal. Seeing that most tourists who visit get information related to tourist areas by word of mouth.

#### **b. Other Related Resource Components Activity (Other Than Tourism)**

Whereas the information gathered from respondents indicated that the Asahan River Rafting Nature Tourism Area may be used for other purposes as well, including learning and other outdoor pursuits like fishing and camping. However, the scope of activities is still relatively limited and is still highly reliant on environmental factors, therefore it is still categorized as an intermediate spectrum indicator.

#### **c. Attraction Components**

Responders claimed that the available attractions are still mostly focused on nature. No significant new technology is required to support the available attractions. The description of area manager also stated that the natural attractions will always be maintained because it is an existing concept. The Asahan River Rafting Nature Tourism Area offers several attractions that still rely on the ecosystem that already exists in the area such as white water rafting, river rafting, fishing tours, and offering natural panoramas. There is no touch of technology that dominates the attractions that are presented. So what is offered in this area is very dependent on environmental and weather conditions.

Every tourist who visits at this time will be charged of Rp. 10,000 for 2-wheeled vehicles and Rp. 20,000 for 4-wheeled vehicles and is open for 24 hours without being charged anymore. However, if tourists come for natural activities or the like, they can set up tents and spend the night, depending on the manager or the surrounding community who helps to provide the facilities and infrastructure needed.

#### **d. Infrastructure Components**

Three evaluation topics-facilities and infrastructure, tourism completeness, and the growth and addition of facilities-are used to evaluate this component.

##### **1. Tourism Facilities and Facilities**

Infrastructure and facilities play a significant role in the tourist sector's expansion. A tourism destination needs infrastructure and facilities to satisfy visitors. Infrastructure and facilities may help make the local tourism sites more popular with visitors. Because if the infrastructure and amenities are not appropriately built, tourists will be less interested in visiting (Way, Wusiang, & Supardjo, 2017)

The facilities and infrastructure in the Asahan River Rafting Nature Tourism Area have been provided by the manager. This is realized by the various facilities provided such as gazebos, trash cans, chairs, and toilets. It's just that of the many facilities that have been provided, there are still various kinds of shortcomings, especially in terms of more maintenance, especially toilet care. In addition, No water or energy infrastructure has been installed to support tourism-related activities.

##### **2. Addition and Development of Facilities**

According to the manager of the Asahan River Rafting Nature Tourism Area, efforts are still being made to expand the area's amenities. Given that the area is one of the objects of tourism development in Asahan Regency, there are still many facilities that must be met. Where until now there has been no addition or development of any more facilities.

#### **e. Social Interaction Component**

Residents of the Asahan River Rafting Nature Tourism Area still seldom communicate with one other. Few locals participate in the tourism-related activities run by the management of the Asahan River Rafting Nature Tourism Area. For several years operating from a team that managed only a few people who were State Civil Apparatus and temporary employees as well as several youths in the neighborhood. While outside of that there are only six residents who become food traders in the tourist area and even then they don't open their stalls every day because the number of visitors is not that many.

This is due to the lack of synergy between managers, communities, and government officials (in this case village officials and district governments) in the development of tourist areas. In addition, several conflicts occur between the manager and the community due to differences in views on the development of the tourist area.

#### **f. Components of Ability and Knowledge Level**

This element has to do with the abilities that every traveler has to have in order to go somewhere. Typically, if someone wants to participate in river rafting activities, they need to be very physically fit and knowledge able about rivers. In the tourist area of the plains, there are rice fields and oil palm plantations. To explore the entire tourist area from the start point of the Asahan river rapids to the finish, tourists are required to use rubber boats or buoys, in addition to utilizing open land areas for camping.

### **g. Visitor Impact Component**

The impact caused by visitors to date is only limited to the waste left in the tourist area. The manager has anticipated that with the trash can, there is no appeal or prohibition not to litter. But if there is still garbage scattered, the manager always cleans it so it doesn't fall into the river.

Visitors effects on interpersonal interactions are like wise negligible. Where local residents seldom interact with tourists, with the exception of those who work in or near tourist attractions, including food vendors. The rest is almost no interaction. So with the existence of this tourist area, there is still no real impact on the community's economy.

### **Conclusion**

From the description of the components and indicators that are used as the basis for the development strategy in the Asahan River Rafting Nature Tourism Area, it can be concluded that the ecotourism potential in the Asahan River Rapids area based on the ECOS approach is to have an Eco Specialist indicator. Where these indicators are assessed using seven components in ECOS, namely the access component with the Eco Specialist indicator, other related resource components with the intermediate indicator, the attraction component with the Eco Specialist indicator, the infrastructure component with the Eco Specialist indicator, and the social interaction component with the Eco indicator. Specialist, the component of skill and knowledge level with Intermediate indicator, and visitor impact component with Intermediate indicator.

### **Bibliography**

- Asmoro, AY, National, AP, Tinggi, S., Satya, P., & Surabaya, W. (2021). Ecotourism Principles. February. <https://doi.org/10.13140/RG.2.2.34530.15284>
- Boyd, SW, & Butler, RW, 1996, Managing Ecotourism: An Opportunity Spectrum Approach, *Tourism Management*, 17(8), 557-566.
- Chandel, A., & Mishra, S. (2016). Ecotourism revisited: Last twenty-five years. *Czech Journal of Tourism*, 5(2), 135–154. <https://doi.org/10.1515/cjot-2016-0008>
- Isdarmanto. (2016). Fundamentals of Tourism and Management of Tourism Destinations. In Purpose. Univpancasila.Ac.id. <http://perpus.univpancasila.ac.id/repository/EBUPT190173.pdf>
- Maulana, G., Winarno, GD, Bakri, S., Lampung, U., Nasional, T., & Kambas, W. (2017). Ecotourism Development By Utilizing Media. 978, 293–307.
- Miles, MB & Huberman, A. M, 1984, *Qualitative Data Analysis: A Sourcebook of New Methods*. London: Sage Publications.
- Safitri, W. (2019). Community-Based Tourism Governance in Masamba District, North Luwu Regency. 104.

Salici, A. (2018). Application of ecotourism opportunities spectrum method in ecotourism resources: A case study of samandaĖ coastal areas in southern turkey. *Applied Ecology and Environmental Research*, 16(3), 2701–2715. [https://doi.org/10.15666/aer/1603\\_27012715](https://doi.org/10.15666/aer/1603_27012715)

Shinde, KA, & Ols, DH (2020). The environmental impacts of religious tourism. *Religious Tourism and the Environment*, February, 1–22. <https://doi.org/10.1079/9781789241600.0001>