

## **Analysis Of Object And Attractiveness Of Community-Based Ecotourism In Coastal Area Of Mempawah Regency**

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### **ABSTRACT**

Mangrove ecotourism in the Mempawah coastal area began to be developed and initiated by local communities who are concerned in the sustainability of the mangrove ecosystem. This is also supported by the increasing number of tourists to visit ecotourism, so that the development of ecotourism needs to be supported by tourist attractiveness as well as learning to tourists to care about their environment in accordance with the principles of ecotourism namely responsible travel to natural areas, conserving the environment and improving the well-being of local people. This paper focuses on analyzing the potential value of community-based ecotourism objects and its attractiveness. The assessment indicator based on the guidelines for assessment of natural tourism attractiveness was used to assess the objects and attractiveness in three specific ecotourism locations which are managed by local communities in Mempawah, namely Pasir, Bakau, and Mendalok Village. This study involves the participation of tourists who have visited the ecotourism site. The study found that the potential value of the object and attractiveness mangrove ecotourism in Mempawah Area was 3,105 with an average score of 388 meaning that it is potentially developed, and also increasing recommendations related to community-based ecotourism development.

**Keywords:** attractiveness, coastal, conservation, ecotourism, mangrove

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### **INTRODUCTION**

Ecotourism is defined as "... a form of tourism that fosters learning experiences and appreciation of the natural environment, or some component thereof, within its associated cultural context, it is managed in accordance with industry best practice to attain environmentally and socio-culturally sustainable outcomes as

well as financial viability (Weaver, 2008). Ecotourism differs from other forms of tourism by the closeness to nature, an of tourism resources (Nistoreanu et al., 2011). The main motivation of the tourists in ecotourism is the observation and appreciation of nature and local traditions related to nature (Dorobantu & Nistoreanu, 2012).

Since the people aware of the environment, ecotourism has been developed quite rapidly in West Kalimantan. It brought many benefits to the local communities and natural environment. However, the important things are how to educate people to conserve the environment while ensuring the welfare of the local people around ecotourism area. It has shown a positive change in communities' perceptions on the use of natural and cultural resources (Mbaiwa, 2011). Mempawah regency has enormous potential for development of tourism, especially ecotourism. The number of tourists visiting in the year 2011 was 27,808, which increased to 36,503 in the year 2016, an increase of 23.82% (BPS Kabupaten Mempawah, 2017). One of the main tourist destinations in Mempawah regency is the ecotourism Mempawah Mangrove Park which attracts 5,000 tourists every month on average. This ecotourism has been managed by local community. Community based ecotourism is purposed to conciliate development and conservation and undertaken by varying stakeholders (Stone, 2015).

In order to increase the number of tourist visits, the important thing is interesting attractiveness, because attractiveness is the key of tourism growth. An ecotourism area may attract

many visitors because it offers products and services that meet visitor's need. Jin, (2012) define attractiveness as "an experience in which the supplier binds together different products and services". The main attractiveness of ecotourism is the existence of natural tourism objects and attractiveness from the beauty and uniqueness of the natural resources (flora, fauna, landscape) and socio-cultural objects of the local community. There are some key factors of attractiveness (i.e., accessibility, amenities and infrastructure, scenery, and local community) having potential to encourage people to visit and spend time at destination (Henkel et al., 2006). Meanwhile, Kim et al. (2012) stated that factors that constitute an attractive destination has mainly centered on a destination's accessibility, amenities and infrastructure, scenery, and local community.

Research has noted the previous studies, for instance Marzuki et al., (2011) assessed the potential of natural tourism destinations in South Kelantan based on GIS application. They evaluated and classified based on indicators of the three main categories, namely physical features, infrastructure and accessibility. Meanwhile, Reitsamer et al., (2016) researched the impact of destination attractiveness factors (i.e., accessibility, amenities, scenery and local community)

on tourists' attitude. Results showed that only amenities show a positive, significant effect on attachment formation. Some research used the Guidelines for Assessment of Natural Tourism Object and of Directorate General of Forest Protection and Nature Conservation (PHKA) 2003 to identify and analyze the object potential and attraction (Purwanto et al., 2014) and (Siahaan et al., 2018). This study aims to determine the potential value of objects and the attractiveness of community-based ecotourism in the form of attractiveness, accessibility, accommodation, infrastructures, management and service, clean water availability, marketing and safety and security. Some indicators that were used, namely, tourist attraction, market potential accessibility Socio-economic environment conditions, community services, climate conditions, accommodation, infrastructure and facilities and availability of clean water.

This paper focuses on analyzing the potential value of community-based ecotourism objects and attractiveness.

## **METHODS**

This research was done in April to May 2018, and used primary data that was acquired through interviewing visitors who have visited three mangrove parks, namely Mempawah Mangrove Park in Village of Pasir, Cinta Mangrove Park in Village of Bakau, and Polaria

Mangrove Park in Village of Mendalok. The sample was selected purposively involving 140 respondents.

Validity Test using Correlation of Pearson Product Moment. If the correlation results show significant results ( $r_{\text{count}} > r_{\text{table}}$ ), it means valid. Based on the data obtained, the Pearson Correlation showed that  $r_{\text{count}} > r_{\text{table}}$ , meaning valid. Testing Reliability using Alpha Cronbach's was measured based on Alpha Cronbach's scale 0 - 1. Alpha Cronbach's value above 0,6 means reliable. the Cronbach's  $\alpha$  of the questionnaire in this study appeared in 0,7 - 0,8, conforming to the reliability range.

The assessment indicators based on the Guidelines for Assessment of Natural Tourism Attraction of Directorate General of Forest Protection and Nature Conservation (PHKA) 2003 in Siahaan et al., (2018), and some works of literature have been expanded to assess the ecotourism mangrove destinations in Mempawah. The number of values for an assessment criterion can be calculated with the following equation:

$$S = N \times B$$

S = score/value of a criterion

N = number of values of indicators in criterion

B = value of weight

The criteria of attractiveness and clean water availability were given a

weight of 6 because attractiveness is the main factor why a person travels, and clean water availability is the primary need. Accessibility, safety and security were given a weight of 5 because they are an important factor supporting tourists to do tourism activities. Meanwhile, the management and service were given a weight of 4. Accommodation, infrastructure, and marketing were given a weight of 3 as supporting matters in tourism activities

Based on Guidelines for Assessment of Natural Tourism Attraction of Directorate General of Forest Protection and Nature Conservation (PHKA) in Siahaan, et al., (2018) and Purwanto et al., (2014) each of the highest and lowest values in every criteria is added up, and multiplied by the weight value of each criterion. Then the highest number of values was deducted by the lowest number of values then divided by 3 to determine the final score categorize (Potentially Developed (A); Pretty Potentially Developed (B); Not Potentially Developed (C) as shown in table 2.

## **RESULT & DISCUSSIONS**

### **Community-Based Ecotourism in The Coastal Area**

Mempawah is one of the regency in West Kalimantan that has coastal areas with mangrove ecosystems, which

is filled with very high pressure either caused by human activity or the natural pressure. The damage that often occurs in coastal areas is the decreasing of mangrove ecosystems which in turn may lead to erosion, abrasion and accretion along the coast. The area of mangrove ecosystems in Mempawah coastal area from 1989 to 2014 has been degraded. For 25 years 250.88 ha of mangroves have been lost (Khairudin, 2016). Declining mangrove area on the coastline is largely due to natural processes, namely, abrasion caused by currents and waves, while those on the coastline to land are caused by human activities where mangroves are cut down, wood is used as fuelwood, and the coastal area is used for fisheries, plantations and housing (Khairudin, 2016). Therefore a number of communities who care about this condition have replanted mangroves in this coastal area. They plant mangroves successfully in mutual cooperation on the coast area of Dusun Benteng, village of Pasir, there are already 7,500 mangrove seedlings planted on 1 ha area. The planting process took place in 2011-2012. The success of planting in Dusun Benteng triggered the concern of many people to do the same. Throughout 2014-2018 mangroves planted reached 142,500 seeds on 14 hectares of coastal areas. Furthermore, they tried to develop ecotourism in this area with the aim

**Table 1.** Criteria for Assessing Objects and Natural Tourism

Criteria	indicators	Value				
		5 items (30)	4 items (25)	3 items (20)	2 items (15)	1 items (10)
Attractiveness. Weight value : 6	<ul style="list-style-type: none"> <li>- The beauty (scenic view,the sea, cultures, flora fauna, photo spots)</li> <li>- The uniqueness of natural resources (flora, fauna, the sea, ecosystem, natural craft)</li> <li>- The sensitivity of natural resources (damage to endemic plants, disruption of animal life, marine fouling, climate change, changes in ecosystems),</li> <li>- variety of activities (photo shoot, trekking, watching flora fauna, research, camping)</li> <li>- safety attractions (safe for children, elderly, non-toxic material, supervisory officer, warning sign)</li> <li>- cleanliness (toilet, shelter, foodstall, mushola, availability of trash bins)</li> <li>- convenience (fresh air, peacefull, good service, noiseless,)</li> </ul>					
		Good (30)	Fair (25)	Moderate (20)	low (15)	Poor (10)
Accesibility. Weight value : 5	<ul style="list-style-type: none"> <li>- Road Condition</li> <li>- distance from the city center</li> <li>- travelling time</li> </ul>					
		5 hotels, > 100 rooms (30)	4 hotels 80-99 rooms (25)	3 hotels, 60-79 rooms (20)	2 hotels, 40-59 rooms (15)	1 hotels, < 40 rooms (10)
Accomodation Weight value : 3	<ul style="list-style-type: none"> <li>- number of accommodations</li> <li>- room occupied</li> </ul>					
		5 items (30)	4 items (25)	3 items (20)	2 items (15)	1 items (10)
Infrastructure. Weight value: 3	<ul style="list-style-type: none"> <li>- Supporting equipments (electricity, water, phone, wifi, )</li> <li>- Infrastructure (mushola, foodstall, clinic, market, shelter)</li> </ul>					
		Good (30)	Fair (25)	Moderate (20)	low (15)	Poor (10)
management and service. Weight value : 4	<ul style="list-style-type: none"> <li>- Management</li> <li>- Language capability</li> <li>- Tourist service</li> </ul>					

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		Good (30)	Fair (25)	Moderate (20)	low (15)	Poor (10)
clean water availability	- Volume - distance					
weight value : 6	- suitable for consumption - availability					
		5 items (30)	4 items (25)	3 items (20)	2 items (15)	1 items (10)
Marketing Weight value : 3	- Marketing mix (product, price, promotion, place, people) - Visitor origin (international, national, provincial, regencies, districts) - Education level (university, academy ,high school, basic ,no education) - Livelihood (entrepreneur,private,civil servant, employee,laborer)					
		Good (30)	Fair (25)	Moderate (20)	low (15)	Poor (10)
safety & security	- safety - fire prevention					
Weight value : 5	- disease prevention					

Source: Guidelines for Assessment of Natural Tourism Object and of Directorate General of Forest Protection and Nature Conservation (PHKA) 2003 in (Siahaan, Rifanjani, & Siahaan, 2018)

**Table 2.** Potential assessment scoring of developing Objects and the attractiveness of the community based ecotourism

Total value	Assessment of Element Potential
≥ 389 - 495	Potentially Developed (A)
≥ 281 - 388	Pretty Potentially Developed (B)
173-280	Not Potentially Developed (C)

Source: (Siahaan et al., 2018) and (Purwanto et al., 2014)

to educate the communities about the important function of mangrove ecosystems to human life, so that the mangrove area can be conserved. This activity awakened many volunteers and

communities who were increasingly concerned about the environment and then emulated by several local communities in Village of Bakau and Mendalok.

There are three ecotourism areas in Mempawah Regency, namely Mempawah Mangrove Park, Cinta Mangrove Park, and Polaria Tanjung Pagar Mangrove Park. Conservation activities are intended as centers for education and conservation of mangroves, as an alternative to Green Open Space, and as a centre for economic development of coastal communities. They also created some campaign via social media and it works, many Non-

**Table 3.** The results of the assessment of Objects and Natural Attractiveness

Criteria	Indicators	Weight (B)	Value (N)	Score (S)	Score range
Attractiveness	• The beauty	6	30	1,080	981-1,260 : A
	• The uniqueness of natural resources		20		701-980 : B
	• The sensitivity of natural resources		30		420-700 : C
	• variety of activities		25		
	• safety attractions		20		
	• cleanliness		25		
	• comfort				
	Total score				
Accessibility	• Road Condition	5	30	450	351-450 : A
	• distance from the city center		30		251-350 : B
	• travelling time		30		200-250 : C
	Total score				
Accommodation	• number of accommodations	3	15	120	141-180 : A
	• room occupied		25		101-140 : B 60-100 : C
	Total score				
Infrastructure	• Supporting equipments	3	20	135	141-180 : A
	• Infrastructure		25		101-140 : B 60-100 : C
	Total score				
management and service	• Management	4	25	220	281-360 : A
	• Language capability		15		201-280 : B
	• Tourist service		15		120-200 : C
	Total score				
clean water availability	• Volume	6	20	450	561-720 : A
	• distance		20		401-560 : B
	• consumption		15		240-400 : C
	• water cleanliness		15		
	Total score				
Marketing	• Marketing mix	3	25	300	281-360 : A
	• Visitor origin		25		201-280 : B
	• Education level		25		120-200 : C
	• Livelihood		25		
	Total score				
safety and security	• safety	5	25	350	351-450 : A
	• fire prevention		25		251-350 : B
	• disease prevention		20		150-250 : C
	Total score				

Source: analysis of primary data, 2018

A : Potentially; B: pretty potentially;

C: Not Potentially

Governmental Organisation (NGO) like World Wild Fund (WWF), Lions club, and reputable companies, such as Indofood and PLN,, also local government joined the conservation activities, primarily planting thousands of mangroves. Bank Indonesia also supported to develop ecotourism through the Community Social Responsible (CSR) program.

### **Assessment of The Potential of Objects and The Attractiveness of The Community-Based Ecotourism of Mempawah Regency**

The findings of this study were explained based on eight categories, namely attractiveness, accessibility, accommodation, infrastructures, management & service, clean water availability, marketing, safety & security ecotourism. Findings of ecotourism of coastal-based attractiveness were varied (Table 3).

Criteria for the attractiveness of this mangrove ecotourism scored at 1,080, which means potentially developed. The area of coconut and banana plantations adjacent to the location with a row of mangrove ecosystems along the coast, save the beauty and uniqueness of natural resources that attract tourists. There were several attractions such as some Instagram-able photo area, crossing to a small island using a canoe, studying the mangrove ecosystem. As

(Campo & Alvarez, 2014) stated, that tourism attraction plays a major role in drawing travelers to a destination and is the basic motivation for visiting a place. If the destination activities are attractive to tourists, they will have greater experiential value and be more willing to revisit. (Ko & Liu, 2011) also found that attraction is positively correlated with experiential value, satisfaction and willingness to revisit. The attractiveness of activities has the strongest influence on the loyalty of moderately frequent visitors, indicating that tourists in this group place more emphasis on appealing activities, compared to infrequent and highly frequent visitors (Shwu-Ing & Yu-Hua, 2014). Accessibility gaining a score of 450 (table 3) also shows potential situation. Road infrastructure to the location of ecotourism area was very good and smooth. The location of Mempawah is very strategic, close to Pontianak, the capital city of Kalimantan Barat province which is a distance around 76 km, and can be reached in 1.5 hours, also as the main access to several districts. It will make visitors feel comfortable enough to commute.

Meanwhile, the accommodation gained a score of 120 which means that it is quite potential. There were no hotels or inns in Mempawah, so it was quite difficult to develop ecotourism activities for a long time. Actually,



the accommodation that is suitable for community-based ecotourism is homestay. Local communities as homeowners can directly attain the economic benefits from tourist visits, and the distribution of benefits in the community is more guaranteed. The homestay system has a high value as an ecotourism product where a tourist gets the opportunity to learn about nature, local culture and community's everyday life. Infrastructure at these sites did not yet have adequate infrastructure to support tourist activities. Based on the information from tourists, trekking facilities had not been equipped with a safety fence, and food stall has not been equipped with adequate trash bins, also the toilette facilities were not quite clean. Services and management for visitors achieved a 220 score, in which is considered good enough, with the availability of sufficient information for the tourism activity and notice boards . However, field staff had low language skills, including low English language skills, inadequate politeness in communication, and low ability to convey information clearly.

The availability of clean water is a priority for an ecotourism, because visitors need it for their personal needs. This ecotourism area has pretty potential in the provision of clean water with a score of 450. The volume of water was

sufficient in the area of ecotourism for the hygiene needs of tourists and ablution, but it looked not clean enough because the color of the water tends to be yellowish due to the presence of iron in the water. This should be a concern for management to be able to treat water to be more feasible to use. In addition, the ecotourism management must pay attention to the occurrence of water contamination. The large amount of waste and improper dry waste and waste disposal, as well as increased salt water intrusion, will result in the community becoming dependent on irregular public supply or unregulated private vendors. The absence of monitoring here means that there is limited knowledge of existing and future water availability (Ecolab, 2012)

The marketing of this ecotourism gained a score of 300 which means that this ecotourism has the potential market. Visitors received enough information about this tourist location. Tourism operators had used social networks to promote the eco-tourism. Mempawah and its surrounding area had few tourist attraction area, but tourists need to have recreational activities or go to some interesting place like ecotourism. Most visitors came from Pontianak city and small towns around Mempawah. There were also visitors from other islands in

Indonesia, and other countries such as Malaysia, Singapore, also from Europe countries. Meanwhile, (Ahmad, 2012) pointed out that attraction contributes to satisfaction levels and word of mouth marketing; in other words, the attractiveness of an activity makes engagement more satisfying. The levels of education of the visitors were university graduates, academics, basic education, some are uneducated. Likewise, the types of livelihoods of visitors vary greatly. It indicates the high need for ecotourism for many people. So that, the management that was supported by local communities market this ecotourism by holding various activities such as traditional music festivals, mangrove painting competitions for children, campaign of mangrove planting movement, etc. In line with that, (Zambrano et al.,

2010) which have researched in Lore Lindu, have proved that "*Lore Lindu has been successful in its campaign to educate employees on environmental issues. They found Lore Lindu employees to have far better knowledge of the concepts of conservation, biodiversity, and ecotourism*".

Security is one of the factors that most influences a person's motivation in carrying out activities such as travel. The safety factor is a priority for visitors, so tourist operators must make visitors feel safe and comfortable by maintaining the condition of tourist facilities. Ecotourism activities by traveling also include changes in weather, temperature and humidity, and may be exposed to bites of dangerous animals and insects, so that precautions must be taken to anticipate them (Becken, 2010). The possibility of infection is high in shore water, as a result of a large number of pathogen microorganism inhalation due to human and animal factor, and water pollution effects (World Health Organization, 2009)

**Table 4.** Recapitulation of Potential Value of developing Objects and the attractiveness of the community-based ecotourism

Criteria	Score
Attractions	1,080
Accessibility	450
Accomodation	120
Infrastructres	135
Management &service	220
Clean water availability	450
Marketing	300
Safety &security	350
Total	3,105
Average	388

Source: Analysis of Primary Data, 2018

### **Potential Assessment of The Development of Objects and The Attractiveness of The Community-Based Ecotourism**

Each criteria value was obtained from the Guidelines for Assessment of Natural Tourism Attraction that has been

modified according to the conditions in the field. The potential value of object and attractiveness of developing community-based ecotourism in Mempawah was 3,105 out of 8 criterias, with an average value of 388 having the potential to be pretty potentially developed (B).

### **CONCLUSION AND SUGGESTION**

This community-based ecotourism object and attractiveness on Mempawah coastal area gained a value of 3,105 with an average score of 388 or pretty potentially developed. The management or local communities who managed this ecotourism area is expected to maintain the convenience for visitors by providing accommodation and facilities such as homestay. The management should conduct water treatment to ensure the availability of sufficient quantity of clean water. The security of the mangrove ecotourism area needs to be improved to ensure visitors are safe in their activities in and around the ecotourism area. Management should also be more creative and innovative to create attractive attractions so that they can compete with tourism objects in other places such as Singkawang, which is the closest city to Mempawah.

Results shows that the more visitors were attracted to the tourism image and activities, the more loyal they were to the location, through

the mediating effects of experiential value and satisfaction. Therefore, we recommend that the management or tourist operator employ marketing strategies to promote the image of Kabupaten Mempawah and the tourist activities offered, raising awareness of its environmental value and encouraging the loyalty of tourists. Management should also try to gain the key factors that influence travellers to ecotourism on Mempawah, which would assist them in planning relevant activities and devising marketing strategies. For example, local government authorities could support this ecotourism by promoting its unique natural resources and recreational facilities through national and international tourism exhibition and social media. It would increase the satisfaction of visitors and convey to them about these uniqueness of community-based ecotourism in Mempawah.

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