

# How Community Perception of Ecotourism Affect Participation of Ketambe Village Community in Mount Leuser National Park, Southeast Aceh

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**Abstract:** This research was conducted to determine the effect of community perceptions of ecotourism on the participation of Ketambe Village community in Mount Leuser National Park, Southeast Aceh. In this study the method used was descriptive correlational method with simple regression analysis by making the Ketambe Village community as the population in this study. The results of this study show that community perceptions about ecotourism in Mount Leuser National Park are good or positive. The desire to participate also looks good, namely participation in working or doing entrepreneurship in the field of tourism, providing land, participation in maintaining environmental cleanliness and safety, and participation in explaining tourist attraction objects. The correlation between community perceptions of ecotourism towards the participation of the Ketambe Village community is 0.511 which indicates that there is a relationship between community perceptions and community participation. The influence of community perception on community participation is 26.1% and the remaining 73.9% is influenced by other variables.

**Keywords:** Community Perception, Community Participation, Ecotourism, Mount Leuser National Park.

## 1. Introduction

Indonesia as a tropical country has undoubtedly beautiful natural landscape and cultural landscape. Indonesia with its very unique geographical location, located between two oceans and two continents, is an archipelago with a total of 13,466 islands (UN Economic and Social Council, 2012 in Sunkar and Brahmantyo, 2013: 184). The islands are spread along the equator and influenced by specific climate condition. This has resulted a lot of potential resources which makes Indonesia known as a megabiodiversity country. Conservation International (CI); Nugroho (2011) identified that Indonesia (1) was second only to Brazil, from 17 megadiversity countries; (2) has two of the world's 25 hotspots; (3) has 18 of the world's 200 ecosystems; (4) has 24 of the 218 endemic areas of birds; (5) has 10 percent of the flowering plant species in the world; (6) occupies the top rank in the biodiversity of agricultural and livestock species. From the range of potential ecotourism owned by Indonesia, the focus of this study was on the potential of ecotourism in Mount Leuser National Park.

Mount Leuser National Park is administratively located in Aceh Province and North Sumatra Province. Aceh Province delineated by the national park covers the Southwest Aceh District, South Aceh, Aceh Singkil, Southeast Aceh, Gayo Lues, Aceh Tamiang, while North Sumatra Province delineated by the national park includes the Dairi, Karo and Langkat Districts. This national park takes its name from Mount Leuser which rises high at 3404 meters above sea level in Aceh. This national park includes native ecosystems from the coast to high mountains which are covered by dense forests typical of tropical area, managed by a zoning system that is used for the purpose of research, science, education, cultivation support, tourism, and recreation.

One of the villages that has a tourist attraction and can be developed for its ecotourism potential is Ketambe Village in Southeast Aceh. This village has a variety of tourist attractions and has a location adjacent to Mount Leuser National Park. People in this village actually feel they have a responsibility

to Mount Leuser National Park because they feel that this forest / region has been passed down from their ancestors. Most of the youths in Ketambe Village have already understood the tourism activities in this village, precisely at Lawe Gurah Resort, since many of them work as tour guides. To be able to develop ecotourism in Mount Leuser National Park to the fullest, it is necessary to know the community perceptions of ecotourism and their desire to participate. If the community perception about ecotourism in Mount Leuser National Park is positive, it is expected that they will participate in developing ecotourism. On the other hand, if their perception is negative, then community participation will be lower so that it can cause a negative impact on the development of ecotourism in the area. Therefore, research is needed to study the community perception, their participation, and the influence of their perceptions of ecotourism on community participation in Ketambe Village, Southeast Aceh. The results of this study are expected to be useful in developing ecotourism in the future so that it can run optimally.

## **2. Literature Review**

### **2.1 Community Based Tourism Management**

Murphy (1988), Larry D, Peter F, Wayne D (2010) in Sunaryo (2013) states that the development of tourism should be a community-based activity. The prior factor that the resources and uniqueness of the local community are either physical elements or non-physical (traditions and cultures) should inherent in the community, then it must maintain a major movement in tourism. Sunaryo (2013) also added that to create tourism development run well, then well managed, the most fundamental thing to do is how to facilitate the wide involvement of local communities in the development process and maximizing the value of social and economic benefits of tourism activities for local communities. Local communities have an equally important position as one of the stakeholders in tourism development, in addition to government and private industry.

Rahayu et al (2015) explains that the principles of Community-Based Tourism should be done through: 1) recognizing, supporting, and promoting community ownership in tourism; 2) engaging community members from every stage of tourism development in its various aspects, 3) promoting pride in the community; 4) improving the quality of life; 5) ensuring environmental sustainability; 6) protecting the uniqueness and cultural characteristics of local communities; 7) developing cross-cultural learning; 8) giving respect for cultural differences and human dignity; 9) distributing advantages and benefits proportionately to members of the community; 10) contributing to a certain percentage of revenues earned for community development; and 11) highlighting the authenticity of public relations with the environment.

### **2.2 Ecotourism**

Ecotourism according to Weaver (2001) is a form of tourism that fosters learning in the form of experience and respect for the environment or some of its components, in a related cultural context. Ecotourism activities aim to make the environment and social culture sustainable. Three important things in ecotourism according to Weaver (2001) are natural environment, learning, and sustainability. According to Rahman (2003), the notion of ecotourism has evolved over time but in essence ecotourism is: 1. A new form of travel which is responsible for the natural area. 2. Adventure that can create a tourism industry, even in some developing new ideas related to the understanding of ecotourism. The educational phenomenon is needed in the form of tourism.

To be able to develop ecotourism well, Muntasib (2014) states that there are seven principles of ecotourism development that must be considered, namely: 1. Direct contact with nature (touch the nature). 2. A useful experience, both personally and socially. 3. Ecotourism is not a mass tourism. 4. Ecotourism programs must make physical and mental challenges for tourists. 5. Interaction with the community and learn local culture. 6. Adaptive to rural accommodation conditions. 7. Experience is more primary than comfort

According to Hakim (2004), strategies in ecotourism development must encourage conservation actions so that the goal of sustainable tourism is achieved. Based on the definitions of ecotourism from various scholars, Fennel (2002) summarizes the notion of ecotourism as a sustainable form of

natural resource-based tourism whose main focus is on experience and learning about nature, which is managed by minimizing impact, non-consumptive, and locally oriented (control, profit and scale). Ecotourism is expected to have a positive impact on the environment and for stakeholders in tourism, including local communities.

### **2.3 Community Perception on the Impact of Tourism**

According to Rakhmat (2007), perception is the experience of the objects, events, or relationships obtained by concluding information and interpreting the message. Tunjugsari et al (2016) also explained that perception is a process that starts from sight to form the challenge that occurs within the individual so that the individual is aware of everything in the environment through the senses he owns.

According to Umar (2009), there are several factors that can influence people's perceptions, namely:

- a. Actor of perception. When a person views an object and tries to interpret what he sees, that interpretation is greatly influenced by the personal characteristics of the individual's perceptive actors.
- b. Target or object. The characteristics and targets observed can influence what is perceived. Targets are not viewed as isolated, so the relationship of a target to its background influences perceptions such as our tendency to group objects that are close or similar.

Research on the impact of tourism has been carried out and Garcia et al (2015) summarize it by explaining that there are 3 main focuses commonly studied: economic, socio-cultural and environmental impacts. Most studies identify these impacts in two opposing aspects, positive and negative aspects. Thus the public perception of the impact of tourism in terms of economy, social culture and environment can be positive that tourism brings benefits, or negative that tourism in their region causes harm to them.

### **2.4 Community Participation**

Conyers (1991) in Pujoalwanto (2012) states that community participation is a tool to obtain information about the conditions, attitudes, expectations and needs of the local community. Without the presence of local communities the development program and the projects implemented will fail. According to Matsumoto (2010), there are several factors that are predicted to have a relationship with the level of community participation, including: 1) Gender; 2) Age; 3) Income; 4) Education; 5) Availability of time; 6) Frequency of collection; 7) Community attitudes; 8) Community Comfort; and 10) Social norms

## **3. Material & Methodology**

### **3.1. Time, and Reseach Location**

The study was conducted in October and November 2018 in the Mount Leuser National Park area which is administratively located in the Ketambe Village area, Lawe Gurah, Kutacane, Southeast Aceh Regency. This national park includes native ecosystems from the coast to high mountains which are covered by dense forests typical of tropical rain, managed with a zoning system that is used for the purpose of research, science, education, supporting cultivation, tourism and recreation

### **3.2. Methods**

The method used in this research is descriptive analysis with a quantitative phenomenological approach. This approach is used to study human phenomena and their social behavior (Altinay and Paraskevas, 2008). The data sources used are primary data and secondary data, while data collection techniques used are: 1) documentation study, 2) Observation; 3) Questionnaire.

The research instrument used was a closed questionnaire with a Likert scale guide on a scale of 1-7. The sampling technique used in this study was purposive sampling with 42 respondents being sampled. According to Sugiyono (2010), if the sample is divided into categories, then the number of sample members in each category is at least 30 respondents.

Various qualitative data are processed and presented descriptively tabulatively, while quantitative data is processed using basic descriptive statistical techniques in the form of frequency distribution. Frequency distribution indicates the number and percentage of respondents and the object of study included in the existing category to provide initial information about the respondent or object of study. Calculation of quantitative data is done with the help of IBM SPSS Statistics 20 software for Windows. The next test used is the classic simple regression assumption test, to find out how much influence of community perceptions have on their participation.

## **4. Results and Discussion**

### **4.1. Analisis of Community Perception**

Analysis of community perceptions is seen from seven aspects, namely economic, ecological, socio-cultural, infrastructure, service facilities, environmental conditions, and conditions of tourist attraction objects. Assessment is done by giving a score of 1 to 7, which is from strongly disagree to strongly agree. The results of the analysis of each aspect are as follows:

#### **Economic Perception of Ecotourism**

The mean value of the community perception regarding the economic aspects of ecotourism is 6.2. This shows that the community agrees to the economic aspects that will be obtained from the development of ecotourism activities in Ketambe. The community gives a high score on the assessment of the criteria for increasing community income with the score = 6.4 meaning close to the highest score. Furthermore, two scores = 6.3 in the criteria of increasing employment (A) and opening opportunities for cooperation in various business fields (D). The community in Ketambe and around the Landscape of Lawe Gurah Resort realize that with the development of ecotourism they can have a positive economic impact on them directly, indirectly, or additionally. Aside from being able to increase people's income and create jobs, ecotourism can also open opportunities for various business partners working in the tourism industry area.

#### **Ecological Perception of Ecotourism**

The mean value of the community regarding the ecological aspects of ecotourism is 6.5. This shows good results, namely agreeing to the ecological aspects that will be obtained from the development of ecotourism activities in Ketambe. The community gives a high value to the criteria for fostering public awareness of the National Park (E), increasing ecosystem security (F), and minimizing the potential for natural disasters (G), with a score of respectively = 6.7. Communities in Ketambe and around the TNGL Landscape Lawe Gurah Resort are aware that ecotourism development can have a positive ecological impact on them both directly and indirectly. With community ecotourism, it is also made aware of the importance of protecting the environment and its ecosystem, including the TNGL Forest around them. By safeguarding the forest, it also maintains habitats from the flora and also typical Sumatran fauna such as Mawas (orangutans) and other large mammals whose status is protected. The flora and fauna that live in it are the main attraction for tourists visiting Ketambe, TNGL and its surroundings.

#### **Socio-Cultural Perception of Ecotourism**

The mean value of the community regarding the socio-cultural aspects of ecotourism is 6.2 . This shows good results, meaning the community agree to the socio-cultural aspects that will be obtained from the development of ecotourism activities in Ketambe. The community gives a high score on the assessment of three criteria, namely increasing community knowledge (A) score = 6.5, developing social institutions (B) score = 6.4, and preserved cultural values and local wisdom (G) score = 6,3. Communities in Ketambe and around the TNGL Landscape Lawe Gurah Resort realized that with the development of ecotourism they could have a positive social-cultural impact for them in terms of increasing knowledge and skills not only for housewives, but also for the Ketambe community in general. In addition, ecotourism in terms of socio-culture can maintain the cultural values and local wisdom of the existing Alas Gayo tradition, such as bines and saman dances. In addition, the existing social institutions of the community are increasingly tight and strong.

### **Infrastructure Perception**

The mean value of the community regarding aspects of ecotourism infrastructure is 5.7. Perception on each criterion is in good condition for road access and network criteria (A), tourist information center (B), parking area (C), telecommunications network, electricity and water (D), garbage and waste disposal (E), toilet and bathroom (G). It's just that the criteria for places of worship (F) have the smallest value (score = 5.3) because there are only one mosque in Ketambe Village. No other worship facilities were found for different religions.

### **Perception of Condition of Service Facilities**

The mean (mean) of the community regarding aspects of ecotourism service facilities is 5.9. The perceptions in each criterion are in a fairly good condition for the criteria of information and guidance centers (A), places to eat (restaurants and food stalls) (B), Souvenirs (local handicrafts) (C), places of worship (D), facilities health (F), and Toilet / WC (G). Criteria for places to stay (accommodation) (E) are assessed with a score = 6.1 which is the greatest value of the seven criteria assessed. This is because the type of accommodation that is available in Ketambe is already in a fairly good condition in terms of quality, service and cleanliness. The examples of guesthouse with good facilities and services are Pondok Wisata and Thousand Hill.

### **Environmental Conditions**

The mean value of the community regarding the environmental aspects in Ketambe, TNGL, and surrounding areas is 6.2. Each criterion is already in good enough condition and good for the seven criteria. The attitude of the local community (F) and the service of the people in charge (G) have the highest score, which is 6.4. This shows that most people already have a tourism conscious attitude.

### **Condition of Tourist Attraction Object**

Community perceptions of the conditions of tourist attraction in Ketambe, TNGL, and surrounding areas showed a score of 6.5 which means that they almost reached the highest score. Among the indicators of the condition of tourist attraction objects considered the best by the community are the views of hills and mountains as well as the diversity of fauna in Ketambe, TNGL, and surrounding areas with scores = 6.7. Orangutan and endemic fauna have become good examples of tourist attractions in TNGL and Ketambe.

## **4.2. Analysis of Community Participation**

Closely related to the characteristics of ecotourism, community participation is important to know. Based on the results of this study, the community is willing to participate actively in developing ecotourism in Mount Leuser National Park. The community agrees (score 6) to participate by working and doing entrepreneurship in the field of ecotourism and strongly agrees (score 7) to participate in providing land for the tourism sector, maintaining cleanliness and harmony of the surrounding environment, maintaining the security of the surrounding environment, and increasing the ability to explain objects tourist attraction object well.

The community is part of the social elements that contribute to the development of ecotourism in Mount Leuseur National Park area. The community can participate by working and independently opening a business in the field of ecotourism such as selling food and souvenirs. In addition, with regard to resources, the community participates in providing the land needed for a well-developed ecotourism. Community participation in maintaining cleanliness and harmony and security of the surrounding environment as a form of fulfillment of comfort in carrying out tourism activities in Mount Leuser National Park. In connection with the willingness of community participation in terms of increasing their ability to be able to explain the objects of tourist attraction properly, it needs to be supported by a capacity building program. According to Rachmatullah et al. (2017), in an effort to increase human resource capacity, the important thing to do is to facilitate local communities with

various skills in the field of ecotourism. In terms of implementation, at least some programs need to be initiated, such as training in guiding, hospitality and English conversation.

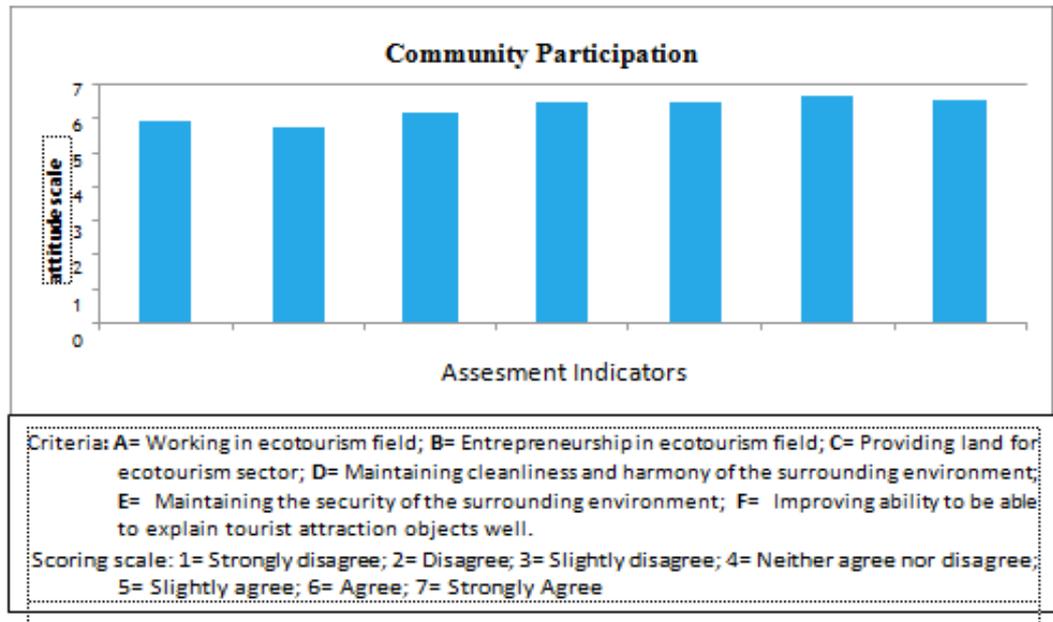


Figure 1. Community Participation

#### 4.3. The Effect of Perception on Community Participation

To find out whether community perceptions of ecotourism in Ketambe Village affect their participation, it is necessary to test whether these variables are interconnected. Table 1 is the result of statistical tests to find out the relationship between perception and participation variables.

**Table 1.** The effect of communitu perception on their participation

Variable	Dimension of Community Perception	Rank Spearman Correlation	Sig
<b>Community Perception</b>	Economy	0.102	0.519
	Ecology	0.244	0.120
	Socio Culture	0.402	0.008
	Infrastructure	0.450	0.003
	Service and facilities	0.481	0.001
	Environment	0.308	0.047
	Tourism Object	0.361	0.019

Source: The result of Data calculation (2019)

Economy has a weak relationship with community participation, where the correlation value is 0.102, which is closer to 0. This indicates that the economic factors arising from the development of Mount Leuser National Park have little influence on community participation. Ecotourism ecology has a weak relationship, where the correlation value is 0.244 and close to 0. It can be interpreted that the ecological conditions in Siberut Park have little influence on community participation in developing ecotourism in Mount Leuser National Park.

Socio-culture has a fairly strong relationship with community participation that is equal to 0.402. Likewise with infrastructure, namely with a correlation value of 0.450. Community service facilities have a correlation value of 0.481, environment of 0.308, and ODTW of 0.361. This shows that

community perceptions of social culture, infrastructure, service facilities, environment, and tourist objects have little effect on community participation.

#### 4.4. Result of Hypothesis Regarding the Influence of Perceptions on Community Participation

The results of hypothesis testing regarding the influence of perceptions on community participation using SPSS can be seen in table 2 as follows:

**Table 2.** SPSS Output Results Perception Effects on Community Participation

Coefficients <sup>a</sup>						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	3.419	.791		4.321	.000
	Community Perception	.482	.128	.511	3.761	.001

a. Dependent Variable: Partisipasi\_Masyarakat

Source: The result of Data calculation (2019)

Data from table 2 shows that there is a significant effect of Community Perception (X) on their Participation (Y). This is because the significance is  $<0.05$  ( $0.001 < 0.05$ ) so that  $H_0$  is rejected. The value of direct influence given by community perceptions on community participation is 0.511. This means that community perceptions will have an influence on their participation in developing ecotourism in Mount Leuser National Park. The coefficient of determination was obtained at 0.261, which means that community participation in the development of ecotourism in Mount Leuser National Park can be influenced by their perception of 26.1% and the remaining 73.9% is influenced by other variables which are not examined in this study.

## 5. Conclusion

Community perception about ecotourism in Mount Leuser National Park as a whole is positive. They consider ecotourism in terms of economy, ecology, social culture, infrastructure, service facilities, environment, and tourism objects to have a positive impact on them. This positive perception makes the community also want to participate in developing ecotourism. This was evidenced by the community's assessment in this study, which on average agree to be able to actively participate in the development of ecotourism in Mount Leuser National Park.

The results of the study also showed that the influence of Ketambe Village community perceptions of ecotourism on their participation was high. This is evidenced by the correlation value obtained, which is equal to 0.511. Meanwhile the coefficient of determination was obtained at 0.261, which means that community participation in the development of ecotourism in Mount Leuser National Park can be influenced by their perceptions of 26.1% and the remaining 73.9% is influenced by other variables. Hypothesis testing results obtained by t count of 3.761 with a significance of 0.001 and  $\alpha = <0.05$  so that the hypothesis which states that there is a positive and significant influence between public perceptions of ecotourism on community participation in Ketambe Village is accepted.

**Acknowledgement.** The authors thank the Tropical Forest Conservation Action (TFCA), Trisakti School of Tourism Jakarta, Leuser National Park staff, and all the respondents who kindly participated and responded to the questions. The authors also would like to thank the editors and anonymous reviewers for their valuable comments on the manuscript.

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