

Feasibility Study of Edu-Ecotourism Forest in Gayo Lues Pantan Cuaca Forest

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Abstract:

Background: Ecotourism is a type of tourism that is environmentally sound with various activities. Ecotourism activities that have begun to be developed as a tourist attraction are tourism forests. The Leuser Forest, which has high diversity, has decreased in area from year to year. If this continues, the younger generation will not know how rich the Leuser forest is. One solution to save forest ecosystems so that humans can also get their economic income is ecotourism.

Materials and Methods: The purpose of this research is to determine the feasibility of the Pantan forest in Gayo Lues Cuaca as an edu-ecotourism forest, so that the surrounding community knows the potential of the Pantan Cuaca forest. Data collection was carried out in the Pantan Cuaca forest with 3 stations and the local community. This study uses survey methods, interviews and Likert scale after being obtained, then analyzed by calculation, scoring and thematic maps. The results obtained reveal that the Pantan Cuaca forest is suitable to be used as an educational ecotourism forest.

Results: However, the level in each area of the Pantan Cuaca forest is suitable for use as an edu-ecotourism forest, this result is in accordance with the feasibility that has been determined. obtained a value of 80% so that it is included in the criteria for being an Edu-ecotourism forest from the eight criteria. The highest scores include ecological and educational criteria, while the lowest scores are accessibility criteria and infrastructure criteria.

Conclusion: The Pantan Cuaca Forest of Gayo Lues Regency is worthy of being used as an forest Edu-ecotourism with a feasibility level of 80%.

Key Word: Edu-ecotourism, forest Pantan Cuaca, Feasibility.

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I. Introduction

Indonesia has the potential for natural beauty and cultural richness of high value in the ecotourism industry market. The natural potential can be in the form of biological natural resources and their ecosystems, diversity of flora, fauna and natural phenomena with the beauty of unspoiled scenery. For culture, Indonesia has a system of religion, arts, regional languages, cultural sites, knowledge, and social organizations¹.

Ecotourism can be defined as a type of tourism that is environmentally sound with activities of seeing, witnessing, studying, admiring nature, flora and fauna, socio-cultural local tribes, and tourists who do so participate in fostering the preservation of the surrounding natural environment. involving local residents. Ecotourism activities that have begun to be developed as a tourist attraction are tourism forests².

One of the tourism activities that is widely considered by several researchers is the development of ecotourism (*ecotourism*) as a nature tourism activity based on environmental education. Edu-ecotourism in principle does not only sell natural destinations, but also sells local knowledge and philosophy, or ecosystem and socio-system philosophy³.

Pantan Cuaca is a sub-district located in the Land of a Thousand Hills, namely Gayo Lues Regency, Aceh Province, Indonesia. This district is famous for the Gayo Coffee plant, fragrant citronella oil and natural products. Currently, there are various kinds of disturbances from the community to carry out land use changes, everyone is competing to destroy it for various reasons. On the other hand, forests are needed to save nature or protect areas, it is also very important to educate the younger generation to know about biodiversity.

The Leuser Forest, which has high diversity, has decreased in area from year to year. If this continues, it is certain that future generations of young people will not know how rich the Leuser forest is. One possible alternative to save forest ecosystems so that humans also get their economic income for daily living, the solution is none other than ecotourism.

Based on the results of a research survey, it was determined that a feasibility study and development of an edu-ecotourism forest in the Pantan Cuaca Forest of Gayo Lues Regency had never been carried out. Therefore, it is necessary to conduct research in this area.

II. Material And Methods

Study Location: This research was conducted in the Pantan Cuaca forest area, Gayo Lues Regency. The research was conducted at 3 stations, each station divided into three research locations, namely the Jamur Kering, Tangsaran and Jamur Ulung stations. The research was conducted in September 2021. Pantan Cuaca is a sub-district located in the Gayo Lues Regency. Pantan Cuaca is one of the peaks of the mountain in Gayo Lues Regency.

Tools and Materials: The tools and materials used in this study were a cellphone raffia rope, meter (essen 10 m), step meter (100 m), cloth meter (1 m), stationery, topographic map (garmin 72 H), compost, Global Positioning System (GPS), camera canon (eos 1200d), flora and fauna book and base map (topography, jpg format).

Sampling: Technique The sampling technique used in this research is purposive sampling using survey methods, interviews and Likert scale. Research Parameters Research

Study Design: The techniques used in data collection consisted of primary data and secondary data by conducting direct observations, interviews, literature studies and questionnaires.

Statistical analysis : Data on the feasibility of the Pantan Cuaca forest based on edu-ecotourism with calculation (percentage), appreciation (scoring) and thematic maps (GIS). Then for the development of the Pantan Cuaca forest with a descriptive analysis. Variables that have a large role in forest suitability and ecotourism development will get a greater value according to the weighted value. For different variables, the weighting of each parameter is also different according to its role in forest suitability and edu-ecotourism development can be calculated by the formula:

$$\text{Score} = \text{NXB}$$

Description:

S = score / value of a criterion

N = total value of elements in a criterion

B = weight value

Table no.1 Forest eligibility criteria and scoring

No	Criteria	Indicator	Weight	High	Medium	Low
				Score 3	Score 2	Score 1
1	Ecology	a. Presence of flora	10	Very diverse	Diverse	Less diverse
		b. Presence of fauna	10	Very diverse	Diverse	Less diverse
		c. Cover header	10	Meeting	Moderate	Rarely
2	Accessibility	a. Road conditions	5	Easy	Fairly difficult	Difficult
		b. Mileage	5	<5 km	5-10 km	>10 km
3	Economy	a. Benefits of forest products	5	Timber and non-timber	Wood or non-timber	None
		b. Community income	5	>2 million	1-2 million	100-1 million
		c. Attractions	5	Very attractive	Attractive	Less attractive
4	Social	a. Community support	5	Very	Not supportive	Not supportive
5	Topography	a. Land slope	10	Sloping	Slightly steep	steep
6	Security	a. Location security	5	Very safe	Less safe	Not safe
7	Education	a. Conservation	10	Very need to be conservedto	Needbe conserved	No need to be conserved
8	Facilities and infrastructure	a. Availability of water	5	available	Less	None
		b. Availability of electricity	5	Available	Less	None
		c. Availability of lodging	5	Available	Less	None

Value forest feasibility for the development of ecotourism are presented in four categories: Very decent (S1), decent (S2), a decent bersarat (S3), and not worth the (N). Determination of the assessment category with a range of values as follows:

- a. Very feasible (S1), the results of the assessment of the suitability of the forest for ecotourism development: 78 % - 100 %.
- b. Eligible (S2) assessment result Suitability of forest for ecotourism development : 55 % - <78 %
- c. Eligible (S3) results of assessment The suitability of forest for ecotourism development: 33 % - <55 %
- d. Inappropriate (N) result of assessment Suitability of forest for ecotourism development: <33 %⁴.

III. Result

The feasibility of the Edu-ecotourism forest in the Pantan Cuaca forest, Gayo Lues Regency

The feasibility of the Pantan Cuaca forest as an forest *Edu-eco tourism* with various criteria including ecology, accessibility, economy, social, topography, security, education and facilities and infrastructure can be presented in table no.2.

Table no.2 Eligibility of Pantan Cuaca forest as an forest Edu-Ecotourism

No	Criteria	Indicators	Weight	High	Medium	Low	Mark	total score
				Score3	Score2	Score1		
1.	Ecology	a. Presence of flora	10	3	-	-	30	80
		b. Presence of fauna	10	-	2	-	20	
		c. Canopy cover	10	3	-	-	30	
2.	Accessibility	a. Road conditions	5	3	-	-	15	
		b. Mileage	5	-	-	1	5	
3.	Economy	a. Benefits of forest products	5	3	-	-	15	
		b. Community income	5	-	2	-	10	
		c. Tourism attraction	5	3	-	-	15	
4.	Social	Community support	5	-	2	-	10	
5.	Topography	The slope of the land	10	-	2	-	20	
6.	Security	Location security	5	-	2	-	10	
7.	Education	Conservation	10	3	-	-	30	
8.	Means and Infrastructure	a. Availability of water	5	3	-	-	15	
		b. Availability of electricity	5	-	2	-	10	
		c. Availability of lodging	5	-	-	1	5	
Total number			100	21	12	2	240	

Based on Table no.1, it is known that the Pantan Cuaca forest area is suitable to be used as an forest *Edu-ecotourism* and it was developed, it was concluded that according to the predetermined eligibility category, the feasibility of the Pantan Cuaca forest obtained a value of 80% so that it was included in the criteria for a forest qualifying *Edu-ecotourism*. of the eight criteria. The highest scores include ecological criteria with indicators of flora presence and canopy cover, educational criteria with conservation indicators and the lowest scores, namely accessibility criteria with mileage indicators and infrastructure facilities criteria with accommodation availability indicators.

Ecotourism is a form of tourism that is responsible for the preservation of natural areas that provide economic benefits and maintain cultural integrity for the local community. Ecotourism is rooted in natural tourism activities, in unspoiled or protected areas that are based on ecological functions as an important component in interrelated relationships with economic and social aspects in supporting the continuity of tourism⁵.

Ecological Criteria

Ecological criteria are presented with indicators of the presence of flora, fauna and canopy cover.

Existence of Flora

The existence of flora is one of the indicators in the ecological criteria. The data on the existence of flora obtained at the research location is presented in the table in Table no.3.

No.	Name of Plants	Plant scientific name	\sum Individual	H'
1.	Bird's Nest ferns	<i>Asplenium nidus</i> L.	36	-0.059
2.	Lime fern/trench	<i>Pneumatopteris pennigera</i> (G.Forst.) Holtum	20	-0.038
3.	Nail	<i>Cyathea contaminans</i> (Wall. ex Hook.)	27	-0.048
4.	Forest Orchid	<i>Bulbophyllum macranthum</i> Lindl.	14	-0.028
5.	Pandan Thorns	<i>Pandanus tectorius</i> Parkinson ex Zucc.	32	-0.054
6.	Senggani	<i>Melastoma candidum</i> D.Don.	55	-0.082
7.	Kecombrang forest	<i>Etlingera elatior</i> (Jack) R.M.Sm.	17	-0.033
8.	Clap/Blow up	<i>Physalis peruviana</i> L.	9	-0.002
9.	Sickle fern	<i>Pellaea falcata</i> R.Br.	24	-0.043
10.	Jernang rattan	<i>Daemonorops draco</i> Wild.	200	-0.198
11.	Fan clubmoss	<i>Lycopodium digitatum</i> Dill. ex A. Braun	250	-0.225
12.	ferns rane	<i>Selaginella doederleinii</i> Hieron.	251	-0.226
13.	Leaf moss	<i>Polytrichum juniperinum</i> Hedwig	276	-0.238
14.	Pink kenikir	<i>Cosmos caudatus</i> Kunth.	10	-0.021
15.	Wire ferns	<i>Lycopodium cernuum</i> L.	17	-0.033
16.	Begonia flower	<i>Begonia cucullata</i> Willd.	6	-0.014
17.	Guava	<i>Syzygium cormiflorum</i> F. Muell.	21	-0.039
18.	Lipstick flower	<i>Aeschynanthus acuminatus</i> Wall.	11	-0.023

No.	Name of Plants	Plant scientific name	Σ Individual	H'
19.	Flowering plant	<i>Miconia ciliata</i> (Rich.) DC.	20	-0.038
20.	Ki rinyu	<i>Chromolaena odorata</i> L.	26	-0.046
21.	Fatima grass	<i>Labisia pumila</i> Var.	6	-0.014
22.	Piji	<i>Ageratum houstonianum</i> Mill.	31	-0.053
23.	Forest moss	<i>Leucobryum glaucum</i> Angstrom.	276	-0.238
24.	Sri sustenance flower	<i>Aglaonema modestum</i> Schott.	7	-0.016
25.	Evil glass	<i>Strobilanthes crispa</i> BL.	2	-0.006
26.	Sitting fur	<i>Clidemia hirta</i> D.Don	25	-0.045
27.	Rhino rattan	<i>Plectocomia elongata</i> Mart. ex Blume	4	-0.001
28.	Agarwood	<i>Aquilaria malaccensis</i> Lamk.	13	-0.027
29.	waregu palm/finger	<i>Rhapis excelsa</i> (Thunb.) A.Henry.	46	-0.072
30.	Dewandaru	<i>Eugenia uniflora</i> L.	11	-0.023
31.	Dollar propagates	<i>Ficus pumila</i> Syn.	9	-0.02
32.	Tarum flower	<i>Indigpfera tinctoria</i> Linn.	11	-0.023
33.	Resam/andam ferns	<i>Dicranopteris linearis</i> (Burm. F)	32	-0.054
34.	Sword ferns	<i>Nephrolepis exaltata</i> (L.) schott.	23	-0.042
35.	Busera plant	<i>Bursera simaruba</i> (L.) Sarg.	9	-0.02
36.	Bitterness	<i>Sambucus Javanica</i> Reinv	18	-0.034
37.	Heart moss	<i>Riccardia chamaedryfolia</i> (With.) Grolle	357	-0.273
38.	White orchid	<i>Bulbophyllum gibbosum</i> (Blume) Lindl.	222	-0.21
39.	Forest betel	<i>Piper aduncum</i> L.	15	-0.03
40.	Gembolo	<i>Dioscorea bulbifera</i> L.	12	-0.025
41.	Drool/miana plant	<i>Coleus scutellarioides</i> (L.) Benth.	3	-0.008
42.	Pandan	<i>Pandanus amaryllifolius</i> Roxb. ex Lindl.	9	-0.02
43.	Fig tree	<i>Ficus carica</i> L.	1	-0.003
44.	Suji leave	<i>Dracaena angustifolia</i> Roxb.	3	-0.008
45.	Pine trees	<i>Pinus merkusii</i> Jungh. & de Vriese	6	-0.014
46.	Prayer beads	<i>Canna generalis</i> L.H.Bailey	5	-0.012
47.	Lemongrass scented	<i>Cymbopogon nardus</i> (L.) Rendle	6	-0.014
48.	Tobacco	<i>Nicotiana tabacum</i> L.	8	-0.018
49.	Mango tree	<i>Mangifera indica</i> L.	10	-0.021
50.	Patchouli	<i>Pogostemon cablin</i> (Blanco) Benth	26	-0.046
51.	Bamboo	<i>Bambusa spinosa</i> Roxb.	17	-0.033
52.	Pratia flower	<i>Lobelia Angulate</i> G.Forst.	13	-0.027
53.	Palm Tree	<i>Arenga pinnata</i> (Wurmb) Merr.	31	-0.053
54.	Arabica coffee	<i>Coffea arabica</i> L.	5	-0.012
Amount			2594	3.028

Based on Table 4.4, it is known that the presence of flora in the research location obtained the number of species as many as 54 species consisting of 2594 individuals with a flora diversity index of $H' = 3.1605$ which is included in the category of high or very diverse diversity. The most common species of flora found are: *Riccardia chamaedryfolia* (With) Grolle or liverworts with a total of 357 individuals. Meanwhile, the least abundant flora species was *Ficus carica* L or fig tree with 3 individuals.

Inventory of flora diversity along the ecotourism route of Wiyono Waterfall found 28 plant species⁶. Criteria diversity of plant species in the ecotourism area of Wiyono Waterfall is in the good category to be used as ecotourism objects. This is because the ecotourism area of Wiyono Waterfall still has various types of trees that need to be maintained and preserved considering that the area is a conservation area, thus making the area have a fairly high diversity of flora. The higher the number of species in an area, the better the quality of diversity⁷.

Presence of Fauna

The presence of fauna is one of the indicators in the ecological criteria. The fauna presence data obtained can be presented in table no.4

Table no.4 The presence of fauna in the Forest of Gayo Lues district Pantan Cuaca

No.	Names of animal	Animal scientific name	Σ Individual	H'
1.	Sparrows	<i>Lonchura punctulata</i> Linnaeus.	38	-0.29
2.	Ordinary Monkey	<i>Macaca fascicularis</i> Raffles.	20	-0.2
3.	Bee	<i>Apis andreniformis</i> Smith.	60	-0.34
4.	Brown squirrel	<i>Prinia polychroa</i> Temminck.	14	-0.16
5.	Kedih	<i>Presbytis thomasi</i> Collett.	20	-0.2
6.	Insect	<i>Glomeris marginata</i> Villers.	16	-0.18
7.	Butterfly	<i>Graphium agamemnon</i> Linnaeus	18	-0.19
8.	Snail	<i>Achatina fulica</i> Ferussac.	3	-0.05

No.	Names of animal	Animal scientific name	Σ Individual	H'
9.	Jungle Goat	<i>Capricornis sumatraensis</i> subsp	5	-0.08
10.	Ivory hornbill	<i>Rhinoplax vigil</i> J.R.Forster.	2	-0.04
11.	Bear	<i>Ursus americanus</i> Pallas	1	-0.02
12.	Deer	<i>Cervus unicolor</i> Kerr.	4	-0.07
13.	Tiger	<i>Panthera tigris</i> Linnaeus.	1	-0.02
14.	Key wiwik bird	<i>Cacomantis sepulcralis</i> S.Muller	19	-0.19
15.	forest crow	<i>Corvus enca</i> Horsfield	14	-0.16
16.	Orangutan	<i>Pongo pygmaeus</i> Linnaeus	3	-0.05
17.	hornbill	<i>Buceros rhinoceros</i> Linnaeus	2	-0.04
18.	Pig	<i>Potamochoerus porcus</i> Linnaeus	1	-0.02
19.	Turtledove	<i>Streptopelia chinensis</i> Scopoli	4	-0.07
20.	Merbah bird	<i>Pycnonotus goiavier</i> Scopoli	5	-0.08
21.	Black eagle	<i>Ictinaetus malayensis</i> Temminck	2	-0.04
Amount			252	-2.48

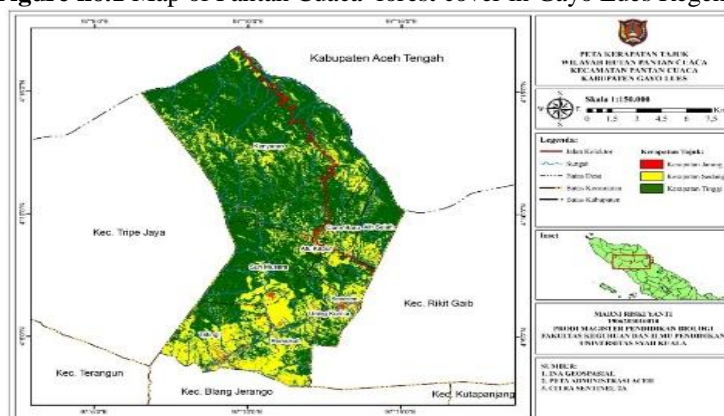
Based on Table 4, it is known that the presence of fauna in the research location obtained the number of species as many as 21 species consisting of 252 individuals with a fauna diversity index of 2.48 which included the category of moderate or diverse diversity. The most common fauna species found was *Apis andreniformis* Smith or bees with a total of 60 individuals. While the fauna species that are the least found are *Ursus americanus* Pallas or bear, *Panthera tigris* Linnaeus or tiger dan *Potamochoerus porcus* Linnaeus or pigs with 1 individual each.

The ecotourism development of Wiyono Waterfall must pay attention to the sustainability and existence of these animals by looking at the existing criteria, so that they can provide value that can support ecotourism management activities by considering the conservation of local biodiversity. For this reason, in the development of animal behavior attractions, ecotourism that will be developed is not allowed to change the behavior of these animals⁷.

Canopy Cover

Title cover is one of the indicators in ecological criteria. The title cover data obtained are presented in Figure no.1

Figure no.1 Map of Pantan Cuaca forest cover in Gayo Lues Regency



Based on Figure 1, it is known that the canopy cover at the study site is in the category of high density or dense, this can be seen in Figure 4.1 with a green illustration with an NDVI value of 0.72-1 at the study site. The dense canopy cover makes the plants grow densely overlapping each other so that it is difficult for sunlight to penetrate the forest floor.

The type of canopy cover in the former plantation community type is relatively open, causing sunlight to penetrate to the forest floor. This ecosystem generally has a single layer of canopy that does not overlap each other, so that there is still a lot of sunlight that can enter the forest to the forest floor. This allows the growth and development of various species of shrubs and herbs that cover the forest floor tightly⁸.

Accessibility

Based on Figure 4.3, it is known that the road conditions at the research location are in the easy category, well paved and equipped with unbroken yellow lines that make it easier for drivers not to cross the line and avoid accidents. The condition of the road that has been paved can also make it easier for tourists to reach the location. Difficult access to an area is not something that causes access to the area to be difficult, the

most important thing in ecotourism is tourists who come with special interests who do not need complete facilities but clarity of the way to get there. tourism site.

Based on Figure 4.3, it is known that the distance traveled at the research location in the category category > 10 km or too far from the city center so that it becomes a consideration for tourists who want to visit. Access to the Laiwangi Wanggameti forest area of Matalawa National Park can use 2-wheeled and 4-wheeled vehicles via: (1) The western route (through the Tabundung sub-district) with a distance of 115 km from the city of Waingapu⁹.

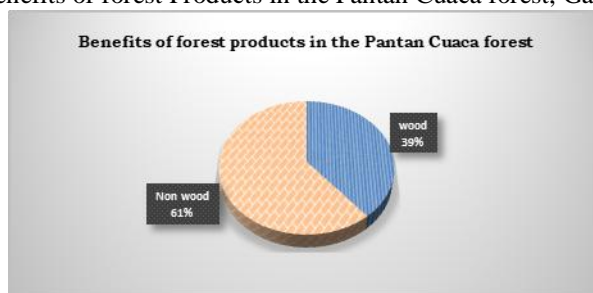
Economics

Criteria are presented with indicators of forest product benefits, community income and tourism objects.

Benefits of forest products

The benefits of forest products are one of the indicators in the economic criteria. The data on the benefits of forest products obtained are presented in

Figure no.2 Benefits of forest Products in the Pantan Cuaca forest, Gayo Lues Regency



Based on the picture, it is known that the benefits of forest products in the research location are in the wood and non-timber categories, in the form of wood consisting of 7 types including rattan, building wood, firewood, pine trunks, matches, fig trees and palm trees. Meanwhile, non-timber forest products consist of 11 kinds, including palm sugar, palm fiber brooms, honey, citronella oil, kolang kaling, sago palm leaves, pine resin, cacao flowers, woven bags, ornamental plants and woven mats. The comparison of the benefits of forest products, namely 39% timber and 61% non-timber products is presented in Figure 2.

Forest products are biological, non-biological objects and their derivatives, as well as services originating from the forest¹⁰. In the explanation, it is stated that biological forest products can be in the form of (a) vegetable forest products and their derivatives such as wood, bamboo, rattan and others, and (b) animal forest products and their derivatives such as wild animals and their captive animals, hunting animals and others. others and their parts or products there of¹¹.

Community Income

The income of the community from 4 villages in Pantan Cuaca District from downtown Blangkejeren is around Rp. 1,887,937 are included in the second category, which is 1-2 million. This result is obtained from the income of each village which has been averaged, namely Kenyaran Village of around Rp. 1,502,550, Suri Musara Village around Rp. 2,725,150, Seneren Village around Rp. 1,150,750 and Uning Kurnia Village around Rp. 2,173,300 with an average dominant profession of farming and gardening. These results are consistent with the statement which states that the income of the villagers Lolah II are closely related to economic activities, agriculture and plantations and other businesses that do the community in supporting the daily income¹¹.

Tourism Objects

The tourist objects in the very attractive category locations with a percentage of 89.1% from 40 respondents, so that they can be the choice of tourist locations for tourists who want to visit.

Tourist Attractions are divided into Natural Tourist Attractions, Artificial Tourist Attractions and culture¹². Tourism which is also called a tourist attraction is the potential that drives the presence of tourists to a tourist destination, consisting of the exploitation of natural tourism attractions, cultural tourism attractions, and special interest tourism attractions¹³.

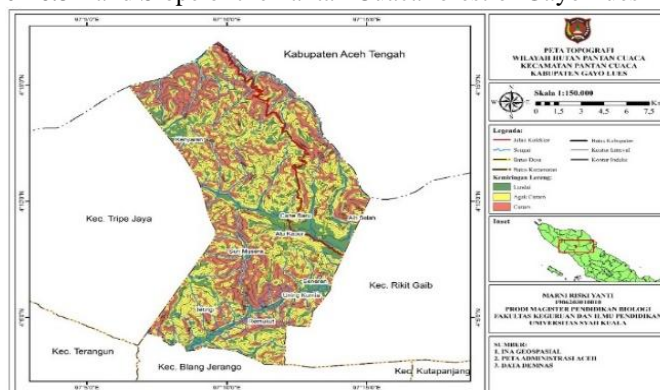
Social

Community supportin in research including supporting category with the percentage obtained 68% of the 40 respondents, so it can be developed into a forest of *Edu-eco tourism* which will benefit the local community. Stated that community support for tourism development depends on their perception of the negative and positive impacts of tourism itself. A positive perception will encourage the community to support tourism

development while a negative perception will actually make the community to reduce their support for tourism development¹⁴.

Topography

Figure no.3 Land Slope of the Pantan Cuaca forest of Gayo Lues Regency



Based on Figure no.3 it is known that the slope of the land in the research location is a rather steep category, this is presented in Figure 4.1 with a yellow illustration with a slope value of 25-45% at the study site. The slope of the slope is a factor that needs to be considered, starting from the preparation of agricultural land, its planting business, taking products and preserving land. Land that has a slope can be more easily disturbed or damaged¹⁵.

Security

Security at the research site is categorized as less secure, with the percentage obtained by 45.5% from 40 respondents, so it is necessary to pay attention from all aspects so that the level of security increases. Stated that the results of his research obtained the level of security and comfort of the area with the highest attractiveness criteria, this was because at the research location, namely Matalalang, crimes such as theft did not exist during that period, there was no encroachment, there was no dangerous disease, free from noise and clean air¹⁶.

Education

Conservation at the research site is included in the category of need to be conserved, with a percentage obtained by 85% from 40 respondents, so that the availability of rare flora and fauna can be protected together and used as objects of scientific research, besides that it can also be an attraction for visitors to the Pantan Cuaca Forest location.

One of the principles of ecotourism development is to fulfill the educational aspect, namely that tourism activities carried out should provide an educational element. This can be done in several ways, among others, by providing interesting information such as the names and benefits of animals around the tourist area, namely ecological, economic and socio-cultural benefits¹⁷.

Facilities and Infrastructure

Di know that the availability of water at the study site category is already available, the water flow which is owned so as to support the tourist sites. The availability of electricity obtained is categorized as lacking, the electricity supply is very minimal because the location is difficult to reach and far from the city center, so that it becomes a limitation to get electricity in that location. The availability of lodging is included in the category of no lodging, absolutely no lodging because the location is difficult to provide electricity and it is not possible to build lodging.

Physical facilities are facilities provided by tourism object managers to provide services or opportunities for tourists to enjoy them. With the availability of facilities, it will encourage potential tourists to visit and enjoy tourist objects for a relatively long time¹⁸.

Physical Factors in the Pantan Cuaca Forest

The results of physical factors from the three stations obtained an average air temperature of 25° C and humidity with an average of 48% in the Pantan Cuaca forest area. Climate is the dominant factor influencing the distribution pattern of flora and fauna. In the tropics is an optimal area for the life of these species. Climatic factors that affect the distribution of flora and fauna include temperature, humidity, wind, and rainfall¹⁹.

IV. Conclusion

The Pantan Cuaca forest of Gayo Lues regency is worthy of being used as an Edu-eco tourism forest with a feasibility level of 80%.

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