

Orientation of Stakeholders in the Gayo Highlands on Ecoregional Identity for Ecotourism Development of Gayo Lues District, Aceh Province

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Abstract

Directly or indirectly, the development of ecotourism will affect the identity of the Gayo Highlands ecoregion as a living space. On the one hand, it can encourage or become a driving force for the preservation of natural resources and local culture, but on the other hand, it can exacerbate conflicts between stakeholders on ecoregional identities. Therefore, stakeholder orientation towards ecoregional identity for ecotourism development is important to be analyzed and mapped and interpreted in a comprehensive and in-depth manner, such as in Gayo Lues Regency, Aceh Province. This research on Stakeholder Orientation on Ecoregional Identity for Ecotourism Development in Gayo Lues Regency was conducted through an analysis of the perceptions, motivations, and preferences of stakeholder groups; adopts the One Score One Criteria Scoring System method on seven aspects of identity, namely aspects of ecology and conservation, socio-cultural, socio-economic, socio-political, development, regional and ecotourism. The results of the analysis show that the orientation of stakeholders towards ecoregion identity is still low, out of 338 identified potential ecoregion identities, only 43% are recognized by stakeholder groups. In general, it can be said that stakeholder orientation is only focused on various ecoregional identity variables that are currently trending and have high economic value. This fact will not only result in the defragmentation of various living ecosystems, but also is latent in causing massive damage and extinction.

Keywords: ecoregional; identity; conflicts; damage; extinction.

INTRODUCTION

Background

The dynamics of interaction that occur in ecotourism development, directly or indirectly, will lead to identity change in a space of life, whether individual, group, natural resource, regional culture and ecoregional identity. The research of Xue, L. et al. (2017) related to tourism development in China, states that identity change is at least related to shifting government policies, increasing living standards, and improving interaction between community and tourists. If ecotourism contributes to the protection of natural and cultural resources, as pointed out by Khostharia, T. K., and Chachava, N. T. (2017), a change in identity will definitely have a major influence on the preservation of natural resources and regional culture as a tourist attraction that will be promoted and marketed in ecotourism development. Meanwhile, Abdurrahman, A. Z. A, et al. (2016) believe that tourist objects in the form of natural, cultural, attraction and community attributes are the capital for ecotourism development, however, in its practical dynamics, it is necessary to realize that there have been too many misconceptions and implementation errors that have occurred; especially in Indonesia.

Brito, R., *et al.* (2016) stated that the growing conservation issue caused the community, private sector, government and non-government organizations to use ecotourism as a conservation tool. Regarding Indonesia, ecotourism is also an important issue in the development of sustainable tourism for the last 3 decades. Since 1990, ecotourism as a travel industry that adopts environmentally friendly practices, has protected the natural and cultural heritage of the region and supported the income and economy of local communities (Combinah, PB 2015; TIES. 2015; Angelia, et al. 2010; Honey, et al. 2010; Honey, 2008) which is currently being promoted in various regions in Indonesia; including in the

Gayo Highlands, Gayo Lues District, Aceh Province. The existence of the Gayo Plateau is not only very strategic in many ways to support the dynamics of ecological, socio-cultural and economic life, but also in terms of the dynamics of political life in Aceh Province. The existence of Gunung Leuser National Park (TNGL) and Buru Lingga Isak Park as well as the Bintang Mountains in the Gayo Highlands are important ecosystems with high conservation value in many ways and on a large scale. In the economic context, the existence and economic value of Gayo Coffee is not only superior nationally, but also worldwide widely, while in terms of socio-culture and politics, the existence of the Saman Dance and the history of the interaction of the Free Aceh Movement (GAM) and the Militia in the Gayo Highlands can said to be a past and future force for the Acehnese people at large. For those, it can be said that the integrity of identity existence of the Gayo Ethnic along with the ecoregional existence where they live in is something that really needs to be maintained for its sustainability; both for the Acehnese people and for the Indonesian people at large.

On the other hand, the complexity of conservation issues in ecotourism development is increasingly complicated by the presence of threats to the preservation of natural resources and regional culture. The complexity that does not only occurs due to the very high rate of development euphoria which is wrapped in the labeling of tourism villages, special interest tours and/or various other specific labellings, but also arises because of sectoral conflicts and scientific disintegration which leads to the dynamic apriory approach. Ecotourism, which is actually multisectoral and multidisciplinary and can be expected to become a bounding agent in order to harmonize the development process, has in fact trapped many parties into the freedom to participate partially and appropriately according to sector interests and related scientific disciplines. In the context of politics and policy, for example, this complexity can be

seen in the Minister of Home Affairs Regulation No. 41/2010 concerning the main tasks and functions of the Ministry of Home Affairs in developing Tourism Villages, as well as in the Regulation of the Minister of Culture and Tourism Number PM.26/UM.001/MKP/2010 (as amended by the Minister of Culture and Tourism Regulation Number: KM.18/HM.001/MKP/2011) for the development of tourism villages; as well as the authority of the Ministry of Environment and Forestry (LHK) to develop Nature Tourism. Apart from the polarization of orientation and inefficiency in budgeting, these dynamics have also led to a sharp increase in the dynamics of over-exploration (and over-exploitation) and over-promotion.

Responding to the complexity of these problems, a new concept, ecoregional identity, is needed for ecotourism development. The development of this concept needs to be immediately sounded and matured so that various latent negative impacts in over-exploration (and over-exploitation) events can be eliminated optimally, and domino-effects that can be caused by a disturbance in an ecological-chain such as ecosystem defragmentation in an area can be prevented as early as possible; both at the site, on destination and on a broader scale. According to Clayton and Myers (2009), the concept of identity is important for fostering a sense of belonging to the environment, where the concept of identity can influence human behavior towards the environment.

Indeed, Sani and Mahasti (2011) have raised the issue of the need for the concept of identity to be an important issue in various development designs, including in ecotourism development, but this has not received sufficient attention from stakeholders, and this is still limited in the concept of site and destination scale. Meanwhile, globally, some academics have long voiced the importance of the ecoregional concept to help bridge social, economic and biophysical aspects from a conservation perspective by understanding

the interactions between human groups and their local environment, and integrating various disciplines for efficient and sustainable ecosystem management by optimizing efficient use of natural resources at the regional level (Harper, L. et al. 2013; Bouma, et al. 2012; Iachetti & Howard., 2011; Blasi, et al. 2014). In practical space, Hardy, A., et al. 2017) emphasized that stakeholder orientation will be significant in determining decisions that can influence behavior, including behavior on ecoregional identity in development.

Considering the various matters mentioned above, it is deemed necessary to carry out a comprehensive, measured research to explore, map and analyze the orientation of stakeholders in making use of the various ecoregional identities that they have for ecotourism development; In this case, Gayo Lues District is part and example of the case in the Gayo Highlands. In this study, ecoregional identity is defined as a unity of living space that has ecological characteristics of the area, which becomes the identity of the community groups who own it, which is relevant and reciprocal to support the various dynamics of their lives in a sustainable manner; both in terms of the preservation of landscapes, socio-culture, economics, and politics in the life of the people who inhabit it. For all these things, this research aimed to: a) explore various things that are relevant and as an ecoregional identity in Gayo Lues Regency and b) analyze the orientation patterns of the stakeholders involved in it.

METHODS

The research was conducted from October 2018 to January 2019 in the Gayo Highlands area of Gayo Lues Regency, Aceh Province. Geographically, Gayo Lues Regency is located at 96° 43 '24 " - 97° 55' 24" East Longitude and 3° 40 '26 " - 4° 16' 55" North Latitude, bordering Aceh Tamiang and Langkat Regencies, North Sumatra Province in the eastern, Aceh Barat and Nagan Raya districts in the western,

districts of Central Aceh, Nagan Raya and Aceh Timur in the northern, districts of Southeast Aceh, West Aceh and South Aceh in the southern. Judging from the topography, the Gayo Lues area is at an altitude of 100 to 3.000 m above sea level, with high rainfall ranging between 1.300 mm and 2.700 mm per year. This study uses a phenomenological approach with purposive sampling technique, which is a technique that uses deep consideration to select samples that have several desired characteristics so that they are considered the best and most suitable for research (Altinay and Paraskreas, 2008).

The number of respondents was 210 people for 2 stages of the study, namely the classification stage and the verification stage. The total respondents were 210 people for 2 stages of the research, namely the classification stage and the verification stage. Collecting data using a semi-closed questionnaire designed based on the One Score One Criteria/Indicator Scoring System method (Avenzora 2008); of 338 potential ecoregional identities for ecotourism development in Gayo Lues Regency, namely 242 natural resource potentials and 96 regional cultural potentials (Aswita, 2021). This potential ecoregional identity was used to design a series of surveys to explore and map as well as analyze the orientation of stakeholders towards ecoregional identity for ecotourism development in Gayo Lues Regency.

Classification Stage

The classification phase was carried out to analyze the perceptions and motivations of stakeholders in the Gayo Highlands towards ecoregional identity for ecotourism development in Gayo Lues Regency, Aceh Province. The analysis of perceptions and motivations aims to determine the values and desires of stakeholders towards ecoregional identity for ecotourism development which is divided into seven important assessment aspects, namely ecology and conservation, socio-cultural, socio-economic, socio-political,

development, regional and ecotourism. At this stage, the respondents involved were 120 people from 4 stakeholder groups, namely groups of institutions, indigenous peoples, the general public and tourists. Respondents from each stakeholder group were determined purposively on the basis of the following criteria: a) being adults, b) residing and are in the district. Gayo Lues, c) knowing well the environment and the dynamics of life in Gayo Lues Regency, and d) being widely known by the public as an individual who can be a source of knowledge in their environment. Particularly for respondents from the Institution group, the determination of respondents was also determined by considering the rank of their formal position in that institution.

Verification Stage

This stage was carried out to analyze the preferences of stakeholders in the Gayo Highlands for ecoregional identity for ecotourism development. The verification process aimed to validate the ecoregional identity that the stakeholder group has stated in the Classification Stage. The number of respondents involved was 90 respondents who were selected proportionally from 3 stakeholder groups, namely institutional groups, indigenous peoples and the general public.

Data analysis was carried out by tabulating various scores obtained from respondents using One Score One Criteria/Indicator System analysis (Avenzora, 2008). The analysis system is an analytical method that aims to avoid systematic bias in determining the evaluation criteria, both in terms of enforcing the linearity of the criteria used and to avoid multi-interpretation bias in interpreting the resulting score. Each criterion that is built must be discrete, so that each score produced is guaranteed to be free from the effects of multicorreliance and can directly be a reliable basis for the existence of a score generated. Based on the basic principles of the method, in this study, each problem studied was

mapped into 7 independent aspects, which were then translated into 7 criteria that influenced it independently as well. Furthermore, the Spearman Rank correlation test was carried out using the SPSS 25 program, namely to determine the correlation between aspects and between stakeholder groups on the identity of ecoregions for ecotourism development.

RESULTS AND DISCUSSION

Respondent Characteristics

Characteristics of respondents can be seen in Table 1, which in general can be

said that there are 69% male respondents, and 31% female respondents, adults (48%), youth (43%) and old (9%). The education level of respondents is generally high school, and there are those who attain the highest education level of S2 by 3%. The characteristics of these respondents do not only represent a description of whether or not the purposive criteria applied in this study are fulfilled, but also a description of "willingness to involve" the local population to spend their time as respondents.

Table 1. Characteristics of Respondent of District of Gayo Lues

Respondent Identity	Category	Groups of Stakeholder				Total
		Institutions	Indigenous People	General Public	Tourists	
Gender	Male	21	22	16	24	83
	Female	9	8	14	6	37
Total		30	30	30	30	120
Age:	Young (18–35)	17	-	7	27	51
	Adult (36–58)	9	25	21	3	58
	Old (> 58)	4	5	2	-	11
	Total	30	30	30	30	120
Education Level	No School	-	-	-	-	-
	Elementary	-	2	-	-	2
	Junior	-	3	-	-	3
	Senior	5	10	15	12	42
	D3	4	7	8	7	26
	S1	20	8	7	8	43
	S2	1	-	-	3	4
	S3	-	-	-	-	-
Total		30	30	30	30	120
Marriage Status	Single	5	-	9	26	40
	Married	25	30	21	4	80
Total		30	30	30	30	120
Job	State Worker	27	2	9	-	38
	Private Worker	3	28	21	30	82
Total		30	30	30	30	120

Classification Results

Stakeholders' Perceptions of Ecoregional Identity for Ecotourism Development. It is important to assess the

perception of stakeholders in the Gayo Highlands regarding ecoregional identity for ecotourism development in Gayo Lues Regency, Aceh Province. Perception refers

to the results of applying knowledge to certain situations so that it is closely related to the concept of information (Leeuwis, 2009). Based on the results of the analysis, stakeholders' perceptions of ecoregional identity for ecotourism development were still very low. Of the 338 potential ecoregional identities (242 natural resources; 96 regional cultures) that have been identified, only 43% were known and liked by stakeholders (Table 2). This not only reflects a lack of awareness of individuals and populations, but can also be said to be an indicator of the low level of effectiveness of development communications as well as various conservation campaigns so far in the region. Walgito (1989) explains that individual attention to objects is the first step in perception, without attention there will be no perception and this factor makes perceptions different, while Zhang, S., and Chan, C. S. (2016); Lee, T. H., and Jan, F. H. (2019), explained that the presence of

perception is a starting point for the formation of motivation and preferences that will determine the attitude of individuals and/or populations in utilizing various resources in a sustainable manner.

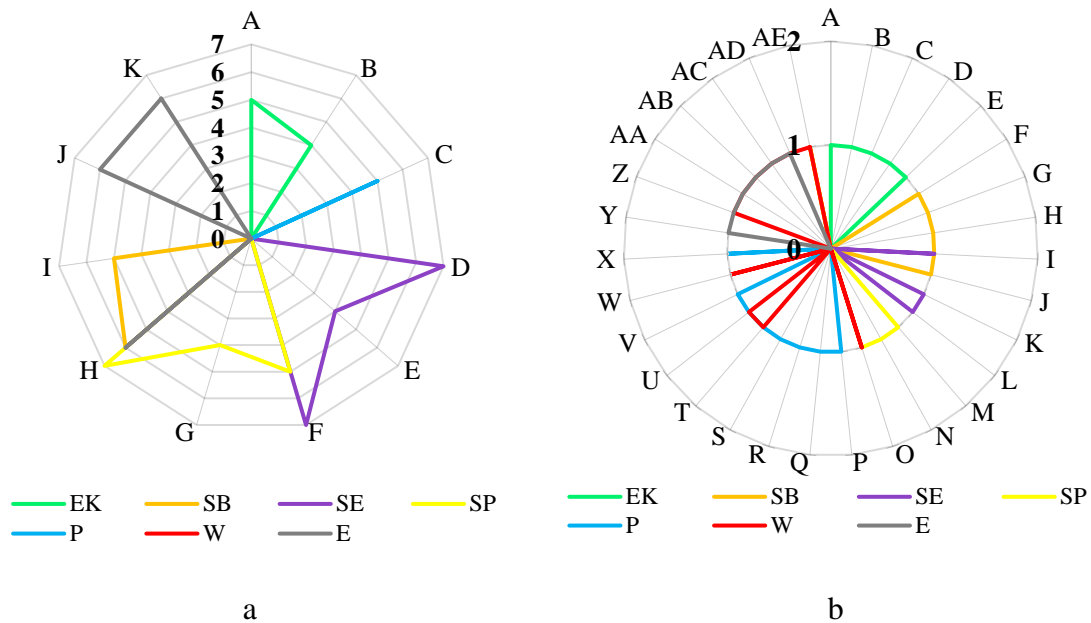
According to Herisman (2006) differences in the perceptions and motivations of stakeholder groups can be caused by professional backgrounds, where most respondents will focus more attention on the potential associated with their respective fields. This shows that the key to understanding perception lies in recognition, in which perception is a unique interpretation of the situation and not a correct recording of the situation, and perception is a cognitive process experienced by everyone in understanding information about their environment. Therefore, it is necessary to introduce and promote in a comprehensive manner both the potential of natural resources and regional culture for ecotourism development.

Tabel 2. Perception of Stakeholders on Ecoregional Identity to Ecotourism Development at Gayo Lues Regency

No	Stakeholders	Potential of Ecoregional Identity		Total of Average	Total of Classification Score
		Natural Resources	Regional Culture		
1	Institutions	48%	34%	41%	5889
2	Indigenous People	36%	55%	46%	6954
3	General Public	46%	52%	49%	7649
4	Tourists	32%	41%	37%	6388
Total Average				43%	6720

Polarization of Stakeholder Motivation on Ecoregional Identity for Ecotourism Development. Analysis of stakeholder motivation is needed to determine stakeholder motivation and desire for ecoregional identity in seven important aspects of the research being built. Masud, et al. (2017) explain that motivation plays an important role in making human beings dedicated and necessary for effective participation; as an effort to protect the potential of local natural and cultural resources for ecotourism development. The results of the

analysis showed that there was a stakeholder motivation polarization of ecoregional identity for ecotourism development in seven important aspects of the assessment as shown in Figure 1a and Figure 1b. Stakeholder motivation polarization of ecoregional identity in Figure 1a is the ecoregional identity with the highest score which is considered important, while in Figure 1b is the ecoregional identity with the lowest score which is considered less important by stakeholders.



Information:

EK = Ecological and Conservation Aspects; SB = Social and Culture; SE = Social and Economic; SP = Social Politics; P = Development; W = Region; E = Ecotourism.

a. Highest score:

A = Gunung Leuser National Park (TNGL); B = Sumatran Orangutan (*Pongo abelii*); C = Nature Tourism; D = Citronella (*Cymbopogon nardus* L); E = Cocoa (*Theobroma cacao* L); F = Gayo Coffee; G = Jema Opat (customary government system); H = Saman dance; I = Kera-wang Gayo (carved motifs on fabrics and houses); J = Coffee Plantation; K = Rafting.

b. Lowest score:

A = Kuala Tripe River; B = Berawang Lopah Lake; C = Hot Springs; D = Thomas Leaf Monkey (*Presbytis thomasi*); E = Sumatran elephant (*Elephas maximus sumatranus* Tem-minck); F = Pawang Uteun (customary institutions in the field of forest management); G = Ku Ulo Noi (custom before going down to the rice fields); H = Pandan Mat; I = Buffalo (*Bubalus bubalis*); J = Customs; K = Candlenut (*Aleurites moluccana*); L = Ampang (sitting mats tradi-tional leaders); M = Resam Kejerun (customary institutions); N = Bejamu Saman custom; O = Sumatran Tiger (*Panthera tigris sumatrae*); P = Pine Sap; Q = Corn (*Zea mays*); R = Cocoa (*Theobroma cacao* L); S = Patchouli (*Pogostemon cablin* Benth); T = Forestry; U = Mining; V = Agusen Tourism (name of tourist spot); W = sugar palm (*Arenga pinnata*); X = Kedah Tour-ism (name of tourist spot); Y = Gayo Culinary; Z = Biru pond; AA = Rafflesia (*Rafflesia ar-noldii*); AB = Leuser Mount; AC = Marpuge Lake (the name of the lake); AD = Hill Landscape; AE = Konyel (liana bark dried).

Figure 1. Stakeholder’s motivation polarization of ecoregional identity in seven-important aspects of the assessment.

Ecological and conservation as-pects. The results of the analysis in Figure 1 showed that there were 2 ecoregional

identities with the highest score (Figure 1a) and 5 ecoregional identities with the lowest scores (Figure 1b). The ecoregional

identity with the highest score is considered important by all stakeholder groups including the Gunung Leuser National Park (TNGL) and the Sumatran Orangutan (*Pongo abelii*), while the ecoregional identities with the lowest score include Hot Springs, Berawang Lopah Lake, Agusen River, Kuala Tripe, Sumatran elephant (*Elephas maximus sumatranus* Temminck), Thomas Leaf Monkey (*Presbytis thomasi*) and Rom Puteh Rice. All the ecoregional identities produced, both the highest scoring and the lowest scoring, indeed theoretically have important values in ecological and conservation aspects for the protection function of Essential Ecosystem Areas (KEE), environmental services, endangered species, conservation areas, endemic species, iconic species, and Key Cultural Species (SKB). Studies conducted by Chiu, H. Y., *et al.* (2016), Nugraha, U. (2015), Hardy, A., and Pearson, L. J. (2017) and Brédif, H., *et al.* (2017) have shown that low motivation can lead to low awareness of the population, whereas The results of studies by Bruyere, B., and Rappe, S. (2007); Tagkaloglou, S., and Kasser, T. (2018) have shown that the intensity of motivation will lead to counter-productive neglect in upholding sustainable development.

Gunung Leuser National Park (TNGL) is an important Nature Conservation Area and was designated by UNESCO in 2004 as a world heritage site. TNGL has an area of 1.094.692 hectares, of which 867.789 hectares are included in the Aceh Province and an area of 202.880,30 hectares is in the administrative area of Gayo Lues Regency (FMUL. 2014). The TNGL Nature Conservation Area has high biodiversity, that is, around 130 species can be identified, including Sumatran tigers, elephants, rhinos, orangutans, leopards, reptiles, fishs and 325 bird species (PIDII. 2016). Sumatran Orangutan is one of the endangered species that is protected based on the Minister of Environment and Forestry Regulation Number: P. 106/Menlhk/Setjen/Kum.1/6/2018; and

currently these endangered species are quite easy to find, especially in Kedah village at the foot of Mount Leuser.

Although the survey results show that hot springs - such as *Penomon*, *Kala Seum* and *Putri Betung* - are considered less important by stakeholders, these hot springs have actually been developed by the community as hot spring tourism spots; with the likewise use of Berawang Lopah Lake which is located on top of the hills of Blang Jerango District as a tourist bathing pool. Meanwhile, the Agusen and Kuala Tripe Rivers which are also given low scores by stakeholders are actually potential natural phenomena surrounded by mountainous and forest landscapes and plantations that have important values for environmental service functions and protection of essential ecosystem areas as well as protection of endemic species such as Gegaring Fish (*Tor sp*) and Ili Fish (*Hemloptera gymnogaster*). All these things do not only re-indicate the existence of indicators of scarcity of information and indicators of infertility of various watershed and riparian conservation programs so far, but also contain threats of damage to river and riparian networks in Gayo Lues Regency. Studies conducted by Wijaya, Y. F., *et al.* (2019); Story P. A., and Forsyth D. R. (2008); Angriani P., *et al.* (2018); Salhi, A., *et al.* (2020) have shown that low public awareness of the value of river sustainability and pedestrian networks are likely to have broad and irreversible negative impacts.

Furthermore, the threat of conservation hazard in Gayo Lues Regency in the future can also be recognized from the low score given to Thomas Leaf Monkey (*Presbytis thomasi*) and Sumatran elephant (*Elephas maximus sumatranus* Temminck), which actually have important values as rare and protected fauna. Thomas Leaf Monkey (*Presbytis thomasi*) is a crested monkey that is endemic to northern Sumatra, namely Sumatra and Aceh which are currently threatened with extinction (Astuti, D. 2020), while the Sumatran

elephant (*Elephas maximus sumatranus* Temminck) is one of the protected animals according to government regulations. No. 7 of 1999 concerning the Preservation of Plant and Animal Species, which according to Mahanani, A. I., et al. (2012) the population from year to year continues to show a decline. More than that, the Sumatran Elephants are also classified as endangered species in the Red List Data Book of the International Union for Conservation of Nature and Natural Resources (IUCN 2012). Ecologically, according to Salsabila, A., et al. (2017) elephants are a key species that can protect the habitat and ensure the availability of food for the elephant group itself and maintain the balance of the ecosystem in the forest, which acts as a spreader for seeds to grow plants or trees in the forest. In terms of flora germplasm, Rom Puteh rice has a distinctive regional value and is also a key cultural species which is now rarely cultivated.

Socio-Cultural Aspects. Soekanto (2003) emphasizes that the socio-cultural order is the key to community support in terms of community interaction with nature. For this reason, it is important to assess the motivation of stakeholders for ecoregional identity in the socio-cultural aspect, because culture can change according to changes in the environment and times, and will differ from one place to another and from one group to another. Based on the results of the analysis in Figure 1, for the socio-cultural aspect there was a motivation polarization of all stakeholders regarding the ecoregional identity of Saman dance and Kerawang Gayo (ecoregional identity with the highest score) and Pandan Mat, Ku Ulo Noih, Buffalo, Customs, and Pawang Uten (ecoregional identity with the lowest score).

Saman dance and Kerawang Gayo are considered important by all stakeholders, where Saman dance is the spirit and soul of all forms of activities and behavior of the Gayo Lues Ethnic community as outlined in cultural customs. Heniwaty, Y.

(2015) states that the acculturation of Saman dance in the Gayo community describes religion and customs and their aspects of shaping dance such as socio-religious life, philosophy, symbols, norms and ethics; and Sartika, M., and Sari, D. P. (2019) state that Saman dance is used as a tool to convey messages (da'wah) that reflect education, religion, courtesy, heroism, cohesiveness and togetherness. Meanwhile, Kerawang Gayo is a cultural element that has become a uniqueness symbol of Gayo Ethnicity in general. Salihin, et al. (2019) and Joni, et al. (2017) stated that Kerawang Gayo is an important carving motif on the clothes and traditional houses of the Gayo ethnic group which philosophically contains information messages in the form of ancestral mandates to the next generation.

As for the Pandan mat which is considered less important by stakeholders, actually has an important value as an element of regional culture as a result of handicrafts by the Gayo ethnic community which is used for various purposes of traditional ceremonies; like Ampang. Pandan mat in the form of Ampang is used as a special seat for certain groups of people to distinguish the strata of society at meetings, wedding ceremonies and other traditional events; like the sunnah of the apostle, custom comes down to the rice fields or what is called Ku Ulu Noih. According to Wibowo, A. B. (2007), for the Gayo ethnic group, the Ku Ulo Noih ceremony has an important value as a traditional ceremony in using springs before the planting season; in the form of a prayer event - accompanied by a meal and drinking event - led by Kejerun Blang as well as announcing the time of seeding. Likewise, the buffalo which actually has an important value as livestock which is an indicator of the economic status of the Gayo ethnic community. Nasution, A. A. (2019) explains that the Gayo Lues community uses buffalo for various purposes, besides for food needs, buffalo are also sold for the needs of school children, pilgrimage, building houses and even

for marriage. Regarding the wedding ceremony, the more buffalos that can be brought as dowry means the higher the economic status of the groom. In addition, the Gayo people slaughter buffalo as the main food at major ceremonies, especially wedding ceremonies.

Socio-Economic Aspects. According to Jackson (2009), the economy is important for community welfare and regional income by optimizing the benefits of local natural and cultural resources, supporting community livelihoods and creating market opportunities and networks. Social economy is a system of activities that are unique, diverse and interrelated so that strategies and cooperation are needed in its development. In this study, the results of the analysis related to socio-economic aspects in Figure 1 showed that there was polarization of stakeholder motivation for ecoregional identity with the highest score for Citronella (*Cymbopogon nardus* L), Cocoa (*Theobroma cacao* L) and Gayo Coffee, and there was ecoregional identity with the lowest score in Candlenut (*Aleurites moluccana*), Ampang and Buffalo (*Bubalus bubalis*).

Citronella (*Cymbopogon nardus*. L) is considered important by all stakeholders, and regional statistical data shows that it is a leading commodity in the plantation sub-sector with a production of 4.800 tons per year (Gayo Lues Agricultural Office, 2018). Although the commodity price of Citronella (*Cymbopogon nardus*. L) is not relatively high compared to other commodities, people tend to use Citronella (*Cymbopogon nardus*. L) as their economic deposit commodity because it can be harvested flexibly in accordance with the dynamics of their financial needs. Meanwhile, Cocoa (*Theobroma cacao* L) is considered important as a commodity to significantly increase their economic income, and currently Cocoa (*Theobroma cacao* L) is only being developed in Putri Betung District. As for Gayo Coffee, they are also starting to develop in Pantan Cuaca, Blang Pegayon and Dabun Gelang

sub-districts. Although Gayo Coffee has a high and stable price, reaching Rp. 397.000.00 per kg for Arabica Wine, and Rp. 100.000.00 per kg for ordinary Gayo Arabica (Supriyanti, E. 2018), the Gayo Lues Community is not entirely interested to cultivate Gayo Coffee such as in Central Aceh and Bener Meriah districts. This is influenced by the culture of the people who are not used to plants that must be maintained and cared for continuously.

On the other hand, although Candlenut (*Aleurites moluccana*) is considered less important by stakeholders in general, Candlenut (*Aleurites moluccana*) is actually a plantation commodity that has a market opportunity to improve the community and regional economy as a superior commodity that has good competitiveness from the plantation sub-sector (Harahap, F.P. 2019). Likewise, Ampang has an important value as a handicraft that is multi-use, durable, and has a relatively high selling value, which can reach 200 thousand per sheet. While the Buffalo (*Bubalus bubalis*) has an important value as a livestock animal that has the potential to be developed again into a source of income for the community and the region, this is related to its cultural historical value as a symbol of the economic status of the Gayo ethnic community.

Socio-Political Aspects. According to Elliott, J. (2002) socio-political dynamics always involve human relations, power, rules and authority. Politics and society cannot be separated because the people who are the actors and in people's life cannot be separated from political elements. The results of various studies related to socio-political aspects can be seen in Figure 1a, where there is a motivational polarization of ecoregional identity with the highest score for Saman dance, Jema Opat and Gayo Coffee, and ecoregional identity with the lowest score in Resam Kejerun, Bejambu Saman Customs, and Tigers. From various study results related to this socio-political aspect, an important issue that needs to be addressed is the low score given by

respondents for important ecoregional identities including Resam Kejerun, Bejamu Saman Customs, and Sumatran Tiger (*Panthera tigris sumatrae*).

In the socio-political context, Saman dance can be said to be the 'Spirit of Leuser' (related to the preservation of the Leuser forest) - which has been recognized by United Nations of Educational, Scientific, and Cultural Organization (UNESCO) as an intangible cultural heritage in 2011, and has received the Indonesian World Records Museum (MURI) record for having the most dancers, namely in 2010 the number of dancers was 3000 people and in 2017 the number of dancers was 12.262 people (Gayo Lues Tourism Office Archives, 2018). Regarding socio-politics, Saman dance does not only have uniqueness, authenticity, philosophical values and a strong contagion to society, but also becomes a political tool in various matters of Gayo Ethnic life. Heniwaty (2015), states that Saman dance has historical traces as a means of preaching to spread Islam since the entry of Islam to the Gayo Highlands in the 18th century. Apart from containing exclamations to humans in dealing with God, the Creator, fellow humans and with the natural surroundings, the verses in Saman dance are not standard and can change according to the times so that they can be used for various purposes; including as a place to build friendship between villages in Gayo Lues known as Bejamu Saman.

On the other hand, although culturally the Bejamu Saman Custom has an important value as a political tool used by the Gayo Lues ethnic community for inter-village gathering, and also to strengthen fraternal relations and the arena for finding a mate (Facette, 2015), it is in line with low scores given by respondents to Bejamu Saman, it can be said that without realizing it, there has actually been a devaluation of Saman's existence in supporting the preservation of socio-cultural life in Gayo Lues. According to Darmawan (2004); Thompson, et al. (1990); Wang, et al. (2020), the preservation of the existence of a cultural

element will at least not only be influenced by the knowledge of the community related to these cultural elements, but also be very much determined by the appreciation and intensity of using these cultural elements in their daily lives.

The presence of the dynamics of the devaluation of the existence of cultural elements in Gayo Lues Regency is also evident from the low scores given by respondents to Resam Kejerun and Sumatran Tiger (*Panthera tigris sumatrae*). In fact, culturally *Resam Kejerun* has an important value as a customary institution that was born from the *Jema Opat* Custom Government System; namely Kejerun Blang for the regulatory function of the agricultural sector, Pengulu Uwer for the livestock sector, Pawang Uten for the forestry sector and Pawang Lut for the parairan sector. On the other hand, the low score given by respondents for Sumatran Tiger (*Panthera tigris sumatrae*) can be said to be a strong indicator of the dynamics of "failure of conservation programs" in the district. If the endangered species that have been protected both nationally and internationally have lost their appreciation and importance in the community, it can be said that the main barricade of protection for these endangered species has lost their spirit and deterrence.

Development Aspects. The development aspect is a complex and broad scope, but Nasution (2007) provides a simple definition for development, namely the process of change for the better. Tisca, et al. (2016) assessed potential ecotourism development as a tool for nature conservation and sustainable regional development. In this study, the results of the development aspect analysis are presented in Figure 1a and Figure 1b. From these figures it can be said that the ecoregional identity that is considered important by all respondents includes nature tourism, while those that are considered less important with low score include Pine Sap, Corn (*Zea mays*), Cocoa (*Theobroma cacao* L), Patchouli (*Pogostemon cablin* Benth), Forestry, Mining,

Agusen tourism and Kedah tourism.

In fact, all ecoregional identities that are considered less important are actually the main sources for producing the Gross Regional Domestic Product (PDRB) in Gayo Lues Regency. For example, data from BPS Gayo Lues, 2013-2017 shows that agriculture and plantations in the last five years have become a sector that has contributed greatly to increasing the Gross Regional Domestic Product (GRDP) and regional economic structure - namely respectively, 41%, 40%, 41%, 41% and 41% of all categories, as well as increasing employment and community welfare, with a land area of 30.948 hectares and production of 2.248.60 tons/year (Gayo Lues in Figures, 2018). Pine sap is a potential non-timber forest product (HHBK) major contributor to regional GDP with a total land concession area of 57 thousand hectares and only 19 thousand hectares has been utilized. Mining is a very large and diverse natural resource potential in Gayo Lues Regency, including Gold, Gelina, Iron, Zinc, Sand, Granite and Tin (Mining and Energy Agency. 2018) which also contributes to regional GRDP (BPS, 2013- 2017). Regarding ecotourism, Fossgard and Fredman. (2019) believe that outdoor recreational activities or natural area activities, where nature is the main attraction provided for recreational activities can commercially provide added economic value and social diversification in an area which is rich of natural resources.

Regional Aspects. Avenzora, R. (2013) states that regional aspects are very important to understand the ins and outs of ecotourism development and activities. On the other hand, Tourism planning and development should be adjusted based on regional characteristics and applicable policies (Suksmawati H. *et al.* 2021). For the regional aspect, the polarization of stakeholder motivation occurred in the ecoregional identities with the lowest scores including Agusen Tourism, Kedah Tourism, Sugar Palm, Pine Sap, Genting Hill and Konyel. In fact, all the resulting

ecoregional identities have an important value for the function of regional aspects, for example the Agusen Tourism is a tourism potential developed by the local community as a natural tourist attraction in the form of rivers, Leuser mountain landscapes, cold air, flora and fauna and coffee plantations. Meanwhile, Kedah tourism object is a natural tourism object that has long been developed by the local community and used for the needs of flora and fauna research, climbing Mount Leuser and other natural scenery objects. Likewise, Genting Hill is a natural tourist attraction that has been developed by the local community.

While Sugar Palm is actually a potential natural resource of the region which is currently being developed for plantations as a superior commodity that has good competitiveness (Pratiwi, F. H. 2019). The pine sap is a natural resource potential from the typical pine forests of the Gayo Highlands. Likewise, Konyel is a type of ecoregional identity that is important for the cultural needs of the Gayo ethnic community that cannot be replaced. *Konyel* is produced from lianas available in the Gayo Lues Forest area.

Ecotourism Aspects. Avenzora, R. (2013) states that ecotourism is not a principle and product or management concept but a spirit and soul for any forms of tourism; which must be implementative to uphold the seven main pillars of ecotourism, namely the pillars of ecology, socio-culture, economy, experience, satisfaction, memories, and education. Therefore, ecotourism needs to be conceptualized in a comprehensive manner with a unique product that has a unique locality for each area. For the ecotourism aspect, the results of the analysis are outlined in Figure 1a and Figure 1b, where in addition to Saman Dance and Coffee Plantation, stakeholder respondents also gave high scores to Rafting activities. Porang, W. (2015) states that the specifications for Rafting in Gayo Lues Regency are classified as very challenging (Grade 5).

Figure 1b shows that many elements of ecoregional identity that should theoretically be classified as important are only given a low score by respondents, including Gayo Culinary, *Biru Pond*, *Rafflesia* flower, *Leuser Mount*, *Marpuge Lake*, *Hilly Landscape* and *Lepat*. *Gayo* culinary is considered less important by stakeholders, even though it is a traditional *Gayo* culinary tourism resource that has distinctive and unique flavors such as *Masam Jaing*, *Cicah*, *Lepat*, *Pengat* and *Gutel* which are made from natural ingredients found in the *Gayo Forest Ecosystem*, and are very closely related to the history of the *Gayo* ethnic civilization. Meanwhile, the *Biru Pond* is a potential natural phenomenon that has important value as a water tourism resource, in the form of a pond that accommodates *Rerebe Waterfall*, which is located in *Tripe Jaya* sub-district. The *Biru Pond* is located on the hills with an area of 100 X 110 m and a depth of 2 to 8 m surrounded by green trees and the chirping of various bird species (Utomo, B. S. 2020; KSMTour. 2020). Meanwhile, *Rafflesia* flower (*Rafflesia arnoldii*) is a rare flower with high economic value as a tourism resource for flora.

Meanwhile, *Mount Leuser* is a potential natural phenomenon that has a wealth of flora and fauna biodiversity, including rare fauna with beautiful mountainous landscapes as a natural tourist attraction. Likewise, *Marpuge Lake* must be

classified as an element of ecoregional identity which has high value as a water tourism resource. *Lake Marpuge* has an area of 8 hectares which is located in the middle of the *Marpuge* forest and is at an altitude of 1.750 m above sea level. *Marpuge Lake* water flows into many tributaries where upstream there are hot springs with temperatures reaching 90⁰ Celsius. The various anomaly dynamics revealed in Figure 1b are strongly suspected to be caused by 3 things, namely: a). The utilization and management of various potential eco-tourism resources has not been optimal so far, b). the low opportunity for community participation in the development of tourist objects so far, and c). uneven and / or insignificant redistribution of benefits obtained or felt by the community.

Rank Spearman. To see the nature of the relationship between various study results between various aspects of ecoregional identity above, this study has conducted the *Spearman Rank* Correlation Test. The results are as shown in Table 3. The significance of the correlation of various elements of ecoregional identity shown in Table 4 is that the various scores given by each group of respondents on various elements of ecoregional identity (as disclosed in Figures 1a and 1b) are can be accepted and trusted as a picture of the orientation of the sample population as a whole. For this reason, the study phase process can be continued to the verification phase.

Tabel 3. The Result of *Rank Spearman* Correlation Test among Main Scoring Aspects

Aspects	1	2	3	4	5	6	7
1	1	0,359**	0,008	0,220*	0,253**	0,154	0,200*
2		1	0,363**	0,309**	0,354**	0,223*	0,414**
3			1	0,282**	0,195*	0,103	0,359**
4				1	0,359**	0,216*	0,144
5					1	0,520**	0,280**
6						1	0,113
7							1

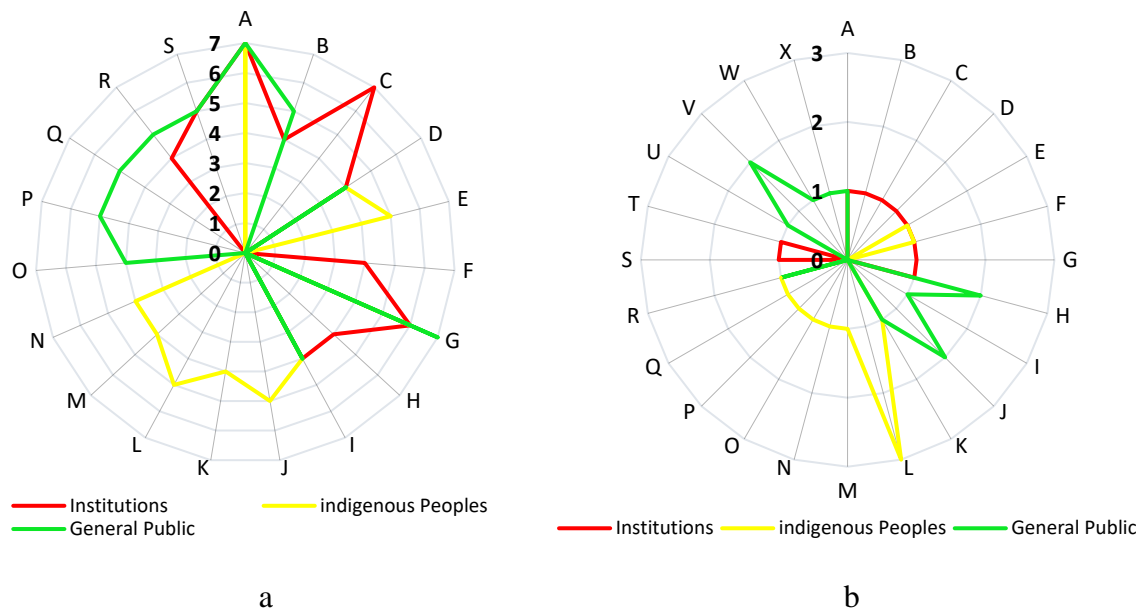
Note: 1= Ecology Conservation; 2=Social Culture; 3=Social Economy; 4=Social Politics; 5=Development; 6=Region; 7=Ecotourism.

**) Significance Correlation at level 1%; *) Significance Correlation at level 5%

Verification Results

The verification process for the various ecoregional identity scores that have been obtained in the elaboration phase is important as an effort to confirm and increase the validity of the ecoregional identity that the respondents have stated. According to Jun J, et al. (2015), identity

verification can maintain stakeholder commitment that is bound by a sense of belonging that impacts behavior. Where this behavior can protect and maintain ecoregional identity for ecotourism development. The ecoregional identity with the highest score is shown in Figure 2a, while the lowest score is in Figure 2b.



Information:

a. Highest score:

A = Saman dance; B = Sumatran Orangutan (*Pongo abelii*); C = Jema Opat; D = Kerawang Gayo; E = Bejamu Saman Customs; F = Citronella (*Cymbopogon nardus*. L); G = Hilly Landscape; H = Gayo Coffee; I = River; J = Marriage customs; K = Tobacco (*Nicotiana tabacum*); L = Bines dance; M = Cultural tourism; N = Customs; O = Citronella Agro tourism; P = Plantation; Q = Rafting Tour; R = Gunung Leuser National Park (TNGL); S = Nature Tourism.

b. Lowest score:

A = Hornbill (*Buceros bicornis*); B = Umah Pitu Ruang (custom home); C = Woven Mat; D = the Ulama's Tomb; E = Cold Air; F = Rerebe Waterfall; G = Putri Betung Hot Water; H = Forest Orchid; I = Ampang (sitting mats traditional leaders); J = Gegaring Fish (*Tor sp*); K = Didong dance; L = Konyel (liana bark dried); M = Fog; N = Mountaineering Tour; O = Natural Scenery; P = Sun Bear (*Helarctos malayanus*); Q = Lukup clothes; R = Lemang (traditional culinary); S = Gayo language; T = Gayo Horse (*Equus caballus*); U = Pine Sap; V = Sumatran Tiger (*Panthera tigris sumatrae*); W = Pine Forest; X = Waterfall.

Figure 2. Polarization results of stakeholder's preferences for ecoregional identity in the Verification Phase

Figure 2a, it can be seen that there has been an increase in the type number of ecoregional identity elements deemed important by stakeholders; namely from 11

types of elements (as shown in Figure 1a) to 19 types of identity elements; whereas in Figure 2b it can be seen that the opposite has happened. If it is related to the results

of the *Spearman Rank* Correlation Test shown in Table 4, it can be said that there is a direct (positive) relationship between stakeholder groups for ecoregional identity in Gayo Lues Regency; thus, various information about the elements of ecoregional

identity presented in Figure 8a and Figure 8b can be considered confirmed and accepted as an agreement of interest group orientation on ecoregional identity for Gayo Lues Regency.

Tabel 4. The Result of *Rank Spearman* Correlation Test among stakeholder

<i>Rank Spearman</i>	Institution	Culture Society	Common Society
Institution	1	0, 015	0, 267
Culture Society		1	0, 212
Common Society			1

According to Ardoin, N. M. (2012), confirmation is important to avoid identity conflicts, especially for groups that interact with these potentials; where human interaction with nature forms the core of nature and cultural conservation that affects environmental sustainability at both local, regional and global scales. In addition, the positive Spearman Rank value above can also be interpreted as an indicator between stakeholder groups having a unidirectional relationship to ecoregional identity for ecotourism development with their respective interests and preferences. Referring to the results of the study by Jaenudin and Marliani (2017); Siagian (2004); Jun, J., *et al.* (2015) and Zajonc and Markus (1982) so in this research there are at least 3 factors that influence responsive choices, namely: 1) respondent characteristics, 2) the importance of ecoregional identity, and 3) environmental characteristics. Characteristics of respondents in the form of age, gender, educational background, culture, beliefs, occupation and income greatly influence the respondent's decision to choose and determine an attitude towards something. The geographical location also greatly influences the attitudes and goals of the respondents. Likewise, the intensity of the value of an identity can generate positive emotions if that identity is important to an individual.

CONCLUSION

The low level of knowledge and appreciation of respondents for the various elements of their ecoregional identity - as described in the previous sections above - at least gives 4 important issues that need to be the attention of all stakeholders in Gayo Lues Regency, namely: a). The dynamics of conservation and ecotourism development communications so far that are still infertile and/or ineffective; b). There is a threat of ecosystem defragmentation which can accelerate the destruction and / or extinction of an ecosystem and its germplasm resources; c). There is a threat of devaluation of the values of socio-cultural life which can cut and destroy the strength of the spiritual and cultural bounding chain; and d). There are dynamics of economic losses due to the non-use of various potential economic resources.

All these important issues become very crucial with the domino effect that each issue can cause. Infertility and / or low effectiveness of communication and conservation programs can not only lead to loss / misdirection or development missions, but can also cause dynamics of over exploitation which will result in various irreversible negative impacts on a wide variety of environmental components. Ecosystem defragmentation will not only cause more rapid danger of island biogeography dynamics (such as the theory of Robert MacArthur and Edward O. Wilson which

has been promoted since 1967), which in turn will inevitably lead to devaluation of value systems and devaluation of economic values.

If it is related to the geographical conditions of the Gayo Ethnic living space in Gayo Lues Regency, the fragility of the upland ecosystem (as indicated by Fatkhiti, S., et al. (2015) will certainly be a significant threat in itself in causing various irreversible negative impacts in Gayo Lues Regency. From a geo-socio-political point of view, it is also necessary to realize the potential dynamics of acculturation that could threaten the existence of the Gayo ethnic population surrounded by Alas and Karo ethnicities, Tamiang ethnicities, Acehnese and Aneuk Jamee ethnicities. Koentjaraningrat (2002) states that the continuity of the existence of an ethnicity will be determined by the existence of its 7 cultural elements.

To mitigate the various threats mentioned above, it is necessary to at least begin with elaborating an ecoregional identity document which must be legally publicized through a Regional Regulation; which is very much needed as a foundation and legal protection for making various regulations as well as policies and budgeting needed to build and develop various ecoregional identities that they have in a sustainable manner. Next, a measurable strategy and program is also needed to optimize the various crowd funds needed for the various financing needed to build them; where one of them is being able to consider the potential for communal funding patterns as reported by Tampubolon (2018). Furthermore, a series of community empowerment programs are also needed that are not only "lip service" at the scale of the Micro small and Medium Enterprises (UMKM), but from the start must be directed and designed to become a communal business cooperative.

Finally, the various dynamics of ecoregional identity threats that have been described above also need to be used as a reflection of thought in the development

and empowerment of environmental NGOs that have been active in Indonesia. The facts that exist in Gayo Lues mentioned above, like it or not, can be a clear proof of the not yet optimal performance of the various programs they have implemented so far in Gayo Lues Regency. Rabiali (2018) states that there are at least 4 things that have become weaknesses of various NGOs in performing in Indonesia so far, namely a). NGOs do not have a code of conduct that is held, so the NGO movement is so free and almost out of control, b). Almost all NGOs are inconsistent on the issues they carry, c). Inconsistent work areas of NGO activities, and d). Do not have the capacity and strong resources to solve environmental problems.

All these weaknesses should be corrected by developing a regional performance strategy and decentralization of authority as well as a sectoral performance strategy. The performance chain, which has been controlled mostly by the main organizations of NGOs in Jakarta, as the capital of the Republic of Indonesia, must begin to be streamlined and strengthened through the decentralization of authority and financial resources; meanwhile, the sectoral performance strategy, which has tended to be concentrated only on the issue of species preservation, should immediately be complemented and refined with a regional development strategy. In preserving local natural and cultural resources for the development of sustainable ecotourism, support from various related elements is needed by providing complete socialization and information to all communities and stakeholders in order to make optimal use of these various potentials.

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