

## ORIENTATION OF STAKEHOLDERS ON THE ECOREGIONAL IDENTITY OF THE GAYO HIGHLANDS FOR ECOTOURISM DEVELOPMENT IN ACEH TENGAH DISTRICT, ACEH PROVINCE

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ORIENTATION OF STAKEHOLDERS ON THE ECOREGIONAL IDENTITY OF THE GAYO HIGHLANDS FOR ECOTOURISM DEVELOPMENT IN ACEH TENGAH DISTRICT, ACEH PROVINCE. The massive increase in efforts to develop ecotourism in Indonesia has made the concept of ecoregional identity necessary for strengthening the comparative advantage of inter-regional ecotourism development. This research was conducted to analyze, map, and interpret stakeholder orientation toward ecoregional identity for ecotourism development in the Gayo Highlands, Aceh Province, especially Aceh Tengah District. The study was conducted by analyzing the perceptions, motivations, and preferences of stakeholder groups; by adopting the One Score One Criteria Scoring System for 7 aspects: ecological, socio-cultural, socio-economic, social politics, development, regional, and ecotourism. The analysis showed that stakeholder orientations toward ecoregional identity for ecotourism development remained relatively low: of the 327 ecoregional identity types mapped, only 41% were recognized by stakeholders. The ecoregional identities that are trending and have significant economic value at this time are Gayo Coffee, Lut Tawar Lake, and Depik Fish, which have the highest stakeholder orientation in Aceh Tengah District. This fact not only weakens the functions of other ecoregional identities, which are also important for ecotourism development, but also causes the loss and even extinction of these identities.

Keywords: Concept, ecoregional identity, ecotourism, Gayo Highlands.

*ORIENTASI PEMANGKU KEPENTINGAN TERHADAP IDENTITAS EKOREGIONAL DATARAN TINGGI GAYO UNTUK PENGEMBANGAN EKOWISATA DI KECAMATAN ACEH TENGAH, PROVINSI ACEH. Peningkatan besar-besaran upaya pengembangan ekowisata di Indonesia telah menjadikan konsep identitas ekoregional sebagai kebutuhan untuk memperkuat keunggulan komparatif pengembangan ekowisata antar wilayah. Penelitian ini dilakukan untuk menganalisis, memetakan, dan menginterpretasikan orientasi pemangku kepentingan terhadap identitas ekoregional untuk pengembangan ekowisata di Dataran Tinggi Gayo, Provinsi Aceh, khususnya di Kecamatan Aceh Tengah. Studi ini dilakukan dengan menganalisis persepsi, motivasi, dan preferensi kelompok pemangku kepentingan; dengan mengadopsi One Score One Criteria Scoring System untuk 7 aspek: ekologis, sosial-budaya, sosial-ekonomi, sosial politik, pembangunan, regional, dan ekowisata. Analisis menunjukkan bahwa orientasi pemangku kepentingan terhadap identitas ekoregional untuk pengembangan ekowisata masih relatif rendah: dari 327 tipe identitas ekoregional yang dipetakan, hanya 41% yang diakui oleh pemangku kepentingan. Identitas ekoregional yang sedang tren dan memiliki nilai ekonomi signifikan saat ini adalah Kopi Gayo, Danau Lut Tawar, dan Ikan Depik, yang memiliki orientasi pemangku kepentingan tertinggi di Kabupaten Aceh Tengah. Fakta ini tidak hanya melemahkan fungsi identitas ekoregional lainnya, yang juga penting untuk pengembangan ekowisata, tetapi juga menyebabkan hilangnya bahkan kepunahan identitas-identitas tersebut.*

*Kata kunci: konsep, identitas ekoregional, ekowisata, Dataran Tinggi Gayo*

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## I. INTRODUCTION

An assessment of stakeholder orientation toward ecoregional identity for ecotourism development is important as a review of the attitudes of various views, interests, and desires of stakeholder elements on this ecoregional identity. Shafeisabet and Haratifard (2020), Cunha et al. (2020), and Grilli et al. (2021) stated that stakeholder orientation such as current perceptions, motivations, and preferences was important for the development of sustainable tourism and ecosystems. Apart from its relevance to management and utilization, stakeholder orientation is also important for protecting various ecoregional identities in ecotourism development. Ecoregional identity is a characteristic of regional ecology that becomes the identity of a group of people within an area boundary, with ecological characteristics relevant across landscapes, cultures, and ethnicities. Referring to the peculiarities of regional ecology, the combination of identity and ecoregional concepts is deemed important for ecotourism development in overcoming threats to the preservation of regional natural and cultural resources. The concept of identity is important to foster a sense of concern for the environment (Clayton & Myers, 2009) and to overcome local problems together (Del Biaggio, 2015). Meanwhile, the ecoregional approach is important as a sustainable ecosystem management approach to help bridge social aspects from a conservation perspective by understanding the interactions between human groups and their local environment (Blasi et al., 2010). For ecotourism development, the concept of identity is considered important for differentiation, competitiveness, and competitive advantage (Andre, 2011), while ecoregionalism is considered important as a holistic concept for promoting integrated natural resource management (Meloncoviu, 2012). However, until now, no one has combined the two concepts into the concept of ecoregional identity for ecotourism development.

Ecotourism is a tourism concept that can provide mutual benefits among tourists, local

communities, and the environment through efforts to conserve local natural resources and culture. Avenzora (2008) states that ecotourism has a complex meaning and should be simplified through a spatial approach, because the characteristics of tourism activities differ from one place to another, even when the resources are the same. Thus, ecotourism as a tool for sustainable development to address all environmental, social and economic problems at once (Durr & Wither, 2018), and the goal of ecotourism to connect local communities with conservation (Butcher, 2003) can be achieved.

The developing ecotourism euphoria, which adds to the complexity of conservation in ecotourism development, becomes increasingly complicated by the threats to the preservation of the region's natural and cultural resources. One of the districts in the Gayo Highlands of Aceh Province, which is promoting ecotourism, is Aceh Tengah. The area has the potential for specific unique natural resources and regional culture, which are currently being exploited to promote and market it as a tourist attraction. If the various potential tourist objects are not managed and utilized optimally, it will leave a negative footprint and threaten the preservation potential of the region's natural and cultural resources. Thus, the concept of ecoregional identity needs to be immediately echoed and better communicated as an ecotourism strategy that can provide an alternative model in planning and designing the utilization of local potential of natural and cultural resources for ecotourism development. Ecoregional identity can be a solution to overcome identity conflicts among stakeholders, and serve as a model for ecoregional identity that can be marketed and promoted in ecotourism development.

With various considerations described above, it is important to conduct this research in a structured and measured manner to explore, map, and analyze orientation of stakeholders in utilizing various existing ecoregional identities for ecotourism development in Aceh Tengah District, Aceh Province. Therefore, this study aimed to explore various things related to

ecoregional identity for ecotourism development and to analyze stakeholder orientation patterns regarding ecoregional identity for ecotourism development in Aceh Tengah District.

## II. MATERIAL AND METHOD

### A. Study Site/Location and/or materials

The research was conducted from August to October 2018 in the Gayo Highlands area of Aceh Tengah District, Aceh Province. Geographically, Central Aceh District is located at 4°10'33" - 5°57'50" N and 95°15'40" - 97°20'25" E, bordering the Bener Meriah district to the north, the Gayo Lues District to the south, the Nagan Raya District to the west, and the Aceh Timur District to the east. Judging from the topography, the Aceh Tengah region lies at altitudes of 850 to 2600 m above sea level, with rainfall ranging from 1900 to 3000 mm per year.

### B. Methods

This study uses a phenomenological approach, and data collection through participant observation is to understand the participants' essential phenomena in their life experiences (Nazir, 2014; Creswell, 2009). The research implementation began with analyzing various secondary data on the potential of ecoregional identities for ecotourism development, resulting in the Potential Ecoregional Identities for Ecotourism Development in Central Aceh Regency (Table 1). This table is used to design a series of surveys to explore, map, and analyze stakeholder orientations, namely by using a

semi-closed questionnaire. The data collection process was carried out in two stages: 1) the classification stage, where data were collected in the form of perception and motivation data, and 2) the verification stage, where data were collected in the form of preference data. Questions for perception were asked which ecoregional identity potentials were known to respondents, and questions for motivation were asked, which ecoregional identity potentials were preferred by respondents for each assessment aspect (ecological and conservation, socio-cultural, socio-economic, socio-political, development, territorial, and ecotourism). Meanwhile, questions for preference were asked which ecoregional identity respondents preferred for ecotourism development. Answers were scored on a scale of 1 to 7, adopting a one-point-one-indicator scoring system (Avenzora, 2008).

**Classification Phase.** The clarification phase was carried out to obtain stakeholder orientation on ecoregional identity for ecotourism development through an analysis of the perception and motivation of stakeholders in the Gayo Highlands, Aceh Tengah District. Listyana and Hartono (2015) states that perception is a process within oneself that enables one to know and evaluate, and that it determines the impression of the surrounding environment. Crompton (1979) and Needham and Little (2013) state that motivation is a series of biological and spiritual desires and needs that encourage us to perform certain tasks or engage in certain activities.

Table 1. Potential of ecoregional identity for ecotourism development in Aceh Tengah District.

No.	Potential of ecoregional identity	The number of elements identified
<b>Potential natural resources</b>		
1	Rare plants	8
2	Endangered animals	8
3	Endemic species	1
4	Species of cultural key	27
4	Regional potential	24
5	Natural phenomena:	
	a. River	1
	b. Water fall	4
	c. Lake	3
	d. Cave	6

No.	Potential of ecoregional identity	The number of elements identified
<b>Potential natural resources</b>		
	e. Mountainous landscape /Pine forest	4
	f. Mountain	2
	g. Fog	1
	h. Cold weather	1
6	Agricultural and horticultural commodities	10
7	Plantation commodities	14
8	Potential of forestry:	
	a. Timber forest product	12
	b. Non-timber forest product	12
9	Fishery commodities	4
10	Livestock commodities	5
11	Industrial commodities	12
12	Tourism commodities:	
	a. Nature tourism	43
	b. Culture tourism	12
	c. Artificial tourism	6
	d. Agro-tourism	2
13	Mining and energy commodities:	
	a. Mining	6
	b. Energy	2
<b>Potential of culture</b>		
1	Equipment and living tools:	
	a. Traditional weapon and production tool	22
	b. Traditional culinary	7
	c. Traditional costum	1
	d. Traditional house	1
2	Livelihood and economic system	9
3	Social system:	
	a. Kinship	9
	b. Customary institution (Kejerun)	7
	c. Legal system	3
	d. Marriage system	2
	e. Customary governmental system	1
	f. Customary regional system	5
	g. Custom	6
4	Language	2
5	Art	10
6	Knowledge system	7
7	Belief system	5
Total		327

This analysis is important to determine the knowledge and motivation of stakeholders' desire for an ecoregional identity for ecotourism development that has been identified in Table 1. Related to the interest of stakeholders, ecoregional identity is classified into seven important aspects of assessment, namely ecological and conservation aspects, social-

cultural, socio-economic, socio-political, development, regional, and ecotourism. Ecological and conservation aspects encompass all steps in regulating and understanding the complex relationships between humans and their environment to conserve biodiversity and ecosystem services (Buckley, 2010; Blasi et al., 2010). These various ecological systems are

unique, complex, and dynamic, thus requiring specific conservation efforts, resulting in specific and unique socio-cultural, socio-economic, socio-political, development, regional, and ecotourism aspects. Thus, these seven aspects are important for the development of ecotourism, as it is multidisciplinary and multisectoral, giving rise to dynamics of reciprocal causality and correlation among ecological aspects related to conservation. Meanwhile, conservation requires socio-cultural and socio-economic support that affects on socio-politics, development, territory, and ecotourism.

At this stage, 30 respondents were selected from each stakeholder group, namely institutional groups (government and non-government institutions), indigenous peoples, the general public, and tourists. The four stakeholder groups that have a role and interest in selecting an ecotourism identity for the ecotourism development. The respondents were determined through purposive sampling based on the following criteria: a). being adults, b). residing in the district of Aceh Tengah, c). knowing well the environment and the dynamics of life in Aceh Tengah District, and d). having wide public recognition as one of the informal figures who can be serve as a source of knowledge for the community in their environment. Particularly for respondents from the Institution group, the determination was also based on the rank of their formal position in the institution; and respondents from selected tourist groups traveling to Aceh Tengah District.

**Verification Phase.** This phase was conducted to confirm the ecoregional identity for ecotourism development through stakeholder preference analysis in the Gayo Highlands, Central Aceh Regency. Preference analysis is important to find out the choices and decisions of stakeholder respondents on ecoregional identity for ecotourism development. The purpose of the verification phase was to validate the ecoregional identities that the stakeholder group had stated in the Clarification Phase. In the verification phase, the number

of respondents involved was 90 respondents from 3 stakeholder groups, namely institutional groups, indigenous peoples and the general public. The three stakeholder groups have power and influence in determining ecoregional identity for ecotourism development.

### **C. Analysis**

The data from stakeholder respondents were analyzed using the One Score One Criteria/Indicator System, with various tabulated. In principle, the One Score One Criteria/Indicator System analysis is an analysis method aimed at avoiding systematic bias in determining evaluation criteria, both in terms of enforcing the validity of the linearity of the criteria used and to avoid multi-interpretation bias in interpreting the resulting scoring (Avenzora, 2008); where each criterion that is built must be discrete, so that each score produced can be ensured that it is free from the multicorelianity effect and can directly become a reliable basis for the existence of a resulting score. So, in this study, every issue that was being researched was mapped to 7 independent aspects, each defined by 7 criteria that influenced it independently.

All results obtained from both the classification and verification phases were carried out by statistical tests through the Spearman Rank correlation test using the SPSS 25 program, in the classification phase the analysis was analyzed to see the nature of the correlation of the seven important aspects of the assessment of the data obtained in each group of respondents elaborated; is in the verification phase in the analysis to see the nature of the correlation between stakeholder groups.

## **III. RESULT AND DISCUSSION**

### ***Classification Results.***

**Stakeholders' Perceptions of Ecoregional Identity for Ecotourism Development.** Stakeholders' perceptions in the classification phase are important as a first step to understand the respondents' perspectives and knowledge

on the potential of ecoregional identity for ecotourism development. The analysis shows that stakeholder perceptions of ecoregional identity for ecotourism development remain low. Generally, stakeholders don't understand the important value of each ecoregional identity for ecotourism development because this is a new concept for stakeholders. As many as 327 potential ecoregional identities were identified (230 natural resource potentials and 97 regional cultural potentials), respondents knew and chose only 41% of these (Table 2). The low knowledge of respondents on various potential ecoregional identities indicates a lack of awareness among individuals and populations, as well as low indicators of socialization to development information on conservation that are running in the district. Leeuwis (2009) states that perception is closely related to the concept of information, while Hateftabar and Chapuis (2020), Cho and Yang (2018), and Lucrezi et al. (2013); state that perception is the first step to predict the attitude of developing motivation and preferences of individuals or groups.

Several authors, such as Csikszentmihalyi (1975), and Tsaur, Lin, and Yen (2020), state that perceptions are influenced not only by differences in environment, location, and activities, but also by differences in professional backgrounds and the attention of respondents. So, it is very possible that there are differences in perceptions among stakeholder groups regarding ecoregional identity for ecotourism development; therefore, it is necessary to socialize information on various potential

ecoregional identities for ecotourism development as a whole.

**Stakeholder Motivation for Ecoregional Identity for Ecotourism Development.** A stakeholder motivation analysis is needed to determine the respondents' motivations as a form of attitude towards ecoregional identity for ecotourism development, mapped onto seven important assessment aspects that are interrelated. Based on the analysis obtained stakeholder polarization of ecoregional identity is presented in Figure 1 for seven important aspects of the assessment, with the highest score (Figure 1a) and the lowest score (Figure 1b). The ecoregional identity with the highest score is considered important, and the ecoregional identity with the lowest score is considered less important by stakeholders. However, the various ecoregional identities actually have their respective important values for the function of the 7 important aspects of assessment, both ecological and conservation aspects, socio-cultural, socio-economic, socio-political, development, regional, and ecotourism.

**Ecology and Conservation Aspects**  
The analysis results for this aspect obtained ecoregional identities with the highest scores, namely Gayo Coffee, Depik Fish, Pine Forest Landscapes, and Lut Tawar Lake (Figure 1a), and ecoregional identities with the lowest score, namely Customary Procession Plants, Nepenthes, Endemic Habitats, Wildlife Corridors, Orangutans, and Rom Puteh Rice (Figure 1b). The various ecoregional identities obtained when viewed from ecological and

Table 2. Perception of stakeholders on potential of ecoregional identity for ecotourism development at Tengah District.

No	Stakeholder groups	Potential of ecoregional identity		Total average	Total score classification
		Natural resources (230 types)	Local culture (97 types)		
1	Institution	28%	46%	37%	5714
2	Indigenous people	40%	56%	48%	7671
3	General public	39%	48%	44%	6962
4	Tourist	29%	41%	35%	6236
Total average				41%	6646

conservation functions all have important values for the protection function of Essential Ecosystem Areas, environmental services, endangered species, conservation areas, endemic species, iconic species, and Key Cultural Species. Studies conducted by Stern and Axt (2020) and Palma et al. (2020). Gilbert (1989, 2005, 2014) has shown that low individual motivation can lead to low awareness in the population, whereas the results of the study by Bopp et al. (2019), and Panzer and Krause (2020) show that low motivation will lead to neglect of the potential use of natural resources.

Gayo coffee (Gayo coffee) is considered important today by all people in Aceh Tengah District; Apart from being a superior commodity which has important economic value, this identity is also becomes the motivation for the community to protect forests and nature. According to Khalid (2017), the demands of the global market require that Gayo Coffee must be from environmentally friendly plantations, and follow the rules of the Green Certification (Eco Labeling) program such as Organic, Fair Trade, CAFÉ Practice, Rainforest Alliance, and Utz Certified. However, another fact in the field, due to the market demand and the high price of Gayo Coffee has caused forest and land degradation. In line with research conducted by Ellyanti et al. (2012) and Salima et al. (2012), Gayo Coffee has ideal growing requirements at an altitude of 900 - 1700 m above sea level to produce good quality beans with a distinctive aroma and taste; thus, causing the expansion of coffee plantations towards forests and mountains. Likewise, Depik fish (*Rasbora tawarensis*) is considered important as an endemic species that is only found in Lut Tawar Lake; which has become one of the identities of the community and the region. However, currently, Depik fish continues to experience population decline due to environmental degradation, introduction of foreign fish, destructive fishing techniques, pollution, and global climate change (Muchlisin, 2008). Meanwhile, the Pine Forest Landscape

is considered important as a homogeneous natural forest which is the specialty of the Gayo Highlands Forest. As for Lut Tawar Lake, besides being used for recreation and fishing; also functions as a source of water from 22 large rivers and 16 small rivers in the Aceh Tengah District (Gayosia et al., 2015).

Although the results of the analysis show that the Orangutan (*Pongo abelii*) is considered less important by stakeholders, this identity has an important value for the protection of endangered species both at the national and international levels. At the national level, one of them is done by the Ministry of Environment and Forestry (KLHK) which launched the 2019-2029 Orangutan Conservation Strategy and Action Plan (SRAK) which was endorsed by the Decree of the Minister of Environment and Forestry Number SK.308/MENLHK/KSDAE/KSA. 2/4/2019. Likewise, the Kantung Semar (*Nepenthes* sp.), has an important value for the protection function of wild plants of tropical carnivorous plants that function as biological plants for insect control (Suwardi & Navia, 2015). Meanwhile, Traditional Procession plants also have important value for the Gayo ethnic community as a Cultural Keystone Species (CKS) used for customary processions.

Likewise, Rom Puteh Rice which is also considered less important, even though it actually has important value for the protection of the local Gayo rice species which is rare and rarely cultivated. These results not only show the lack of information dissemination and the insufficient contact with the conservation programs that have been carried out so far, but imply the threat of extinction for various important species in the district of Aceh Tengah. Studies conducted by Dickman, et al. (2015), Becker et al. (2007), and Saunders (2003) have shown that low awareness of the value of conservation of important species is caused by low governance and regional economic wealth which has a negative impact on the extinction of these species which are difficult to replace.

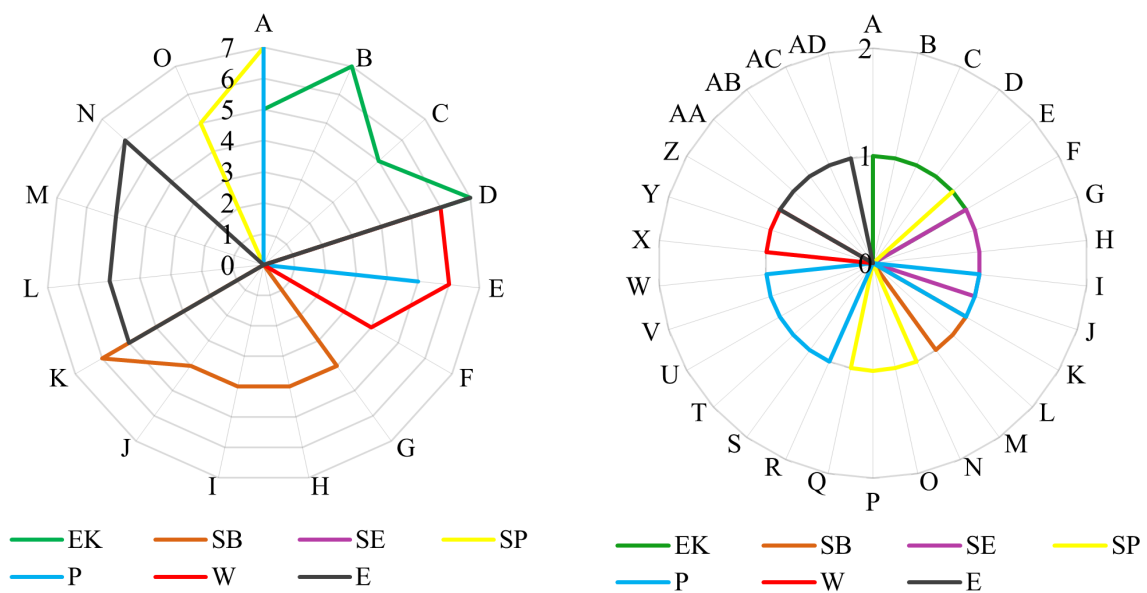


Figure 1. Stakeholder's motivation polarization of Aceh Tengah ecoregional identity in seven important aspects of the assessment.

Remark:

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= Gayo Coffee; B=Depik Fish; C= Pine Forest Landscape; D= Lut Tawar Lake; E= Nature Tourism; F= Plantation; G= Gayo language; H= Kerawang Gayo; I= Gardening; J= Farming; K= Didong Dance; L= Horse Racing; M= Coffee Plantation; N=Asam Jaing (traditional culinary); O= Sara Opat (customary government system)

b Lowest score:

A=Indigenous Procession Plants B= Nephentes; C=Endemic Habitat; D=Wildlife Corridor; E=Orangutan; F=Rom Puteh Rice (Local Rice); G= Lut Tawar Red Onion; H= Gold Mining; I=Non Timber Forest product; J=Gayo Avocado; K=Trading; L=Art and Culture; M=Traditional Culinary; N=hunting Garden; O=Customary Law; P=Tiger; Q=Natural Forest; R=Cocoa; S=Cane; T=Grupel Wood; U=Auction Market; V=Culture Tourism; W=Agriculture; X=Deer; Y=Traditional Guel Dance; Z=Pine; AA=Floating Café; AB=Loyang Mendale Cave; AC=Puteri Pukes Cave; AD=Cold Weather

Furthermore, threats to wildlife and important areas are also reflected in the lowest scores given for Endemic Habitats and Animal Corridors that have important values for the protection of endemic species, rare species, and endangered species; for example, Lut Tawar Lake is an important habitat for Depik Fish, while the Animal Corridor is an important solution related to habitat fragmentation. Atmoko et al. (2014) state that animal corridors are a key landscape element that functions to improve connectivity between fragmented habitats so as to facilitate the movement of animals within and between fragmented habitats. As for

Nature Tourism, although currently considered less important, it has an important value for the function of utilizing various potential natural objects available.

**Socio-Cultural Aspects** Culture has an important role and function in the course of human life related to the environment and nature. Culture and the environment have a very close relationship, as pointed out by Hsu and Huang (2016), that the essence of culture is a symbol of recognition of the fundamental relationship between local communities and heritage, humans and the environment. As for Setiadi et al. (2010) states that the form of socio-

cultural aspects can be seen based on the seven cultural elements that are incarnated in cultural systems, social systems and material systems. Based the analysis results, the ecoregional identities with the highest scores were obtained, namely Gayo Language, Gayo Kerawang, Gardening, Farming and Didong; ecoregional identities with the lowest score were namely Trade, Cultural Arts and Traditional Culinary.

Didong is a traditional dance of the Aceh Tengah Gayo ethnic which is considered important by all stakeholders. Afriadi (2018), states that Didong art is a combination of dance, vocal and literary elements that played an important role in uniting the gayo ethnicity who have various opinions regarding morals and aesthetics. In addition, Didong is also a poem media containing religious values, beauty values and togetherness values, which were previously used as a means of spreading Islam (Directorate of Cultural Heritage and Diplomacy of the Indonesian Ministry of Education & Culture. 2018). Whereas farming is considered important as the main livelihood for the Gayo local community; about 99% of Aceh Tengah population from the total 204,273 people, have main jobs as farmers (Aceh Tengah Dalam Angka, 2018). As for the Gayo Language, although dialects differ slightly between sub-tribes, such as the Gayo Lues dialect, Gayo Kalul, Gayo Serbajadi / Lokop, Gayo Deret and Gayo Lut (Audia et al., 2016), are considered important by stakeholders for the language function as the unifier of the Gayo ethnicity. Gayo. Likewise, Kerawang Gayo is considered important as a cultural element that has high cultural value. Salihin et al. (2019) states that Kerawang Gayo is the result of the creation of Gayo ethnic culture through a process of spontaneous thinking, then deep reflection so that it raises a motive that has a philosophical meaning related to the life of the Gayo community.

Some other ecoregional identities are considered less important by stakeholders such as Cultural Arts, but these identities also have important values as a function of regional

special arts that have their own uniqueness, including carving, painting, literature, poetry, singing, and others. Traditional culinary also has an important value as an element of regional culture as a result of people's knowledge of the surrounding environment which produces a unique taste and is different from other regions. Likewise trading, also has an important value as the main support in managing and utilizing the potential of natural and cultural resources of the region. Various ecoregional identities that are considered less important by stakeholders actually have important values for the function of the socio-cultural aspects of the people of Aceh Tengah. The lowest score given by stakeholders not only shows the people's ignorance of the various cultural elements in their area, but it is an opportunity to lose or even extinction of these cultural elements from the Gayo ethnic community of Aceh Tengah. Duran et al. (2015) and Perez-Hernandez et al. (2020) states that low awareness and sensitivity to cultural elements can cause cultural elements to disappear.

**Socio-Economic Aspects** Socio-economy is related to all activities that support a person's position in a group and region. Weihrauch-Bluher et al. (2018) and Pearce et al. (2012), states that the socio-economy is related to education, employment and income of local communities which can lead to behavior. Based on the analysis results, shown in Figure 1 is the ecoregional identity with the highest score, namely Gayo Coffee; The ecoregional identities with the lowest score were Rom Puteh Rice (*Oryza sativa* L), Lut Red Onions (*Allium cepa* L. var. *aggregatum*), Gold Mining, NTFPs, and Gayo Avocado (*Persea Americana*. Mill).

In terms of socio-economic aspects, Gayo Coffee is considered important as a superior and regional mainstay commodity that has market opportunities and high selling prices today, both on the national and international markets. Taufiq (2018) states that at the international level the selling price of Gayo Coffee is included in the most expensive category compared to other types of coffee in the world,

such as the price offered at the world coffee exhibition organized by the Coffee Association of America (SCAA) specialty organization in Portland, Oregon Convention Center, United States. Supriyanti (2018) also prove that in the regional market the price of Arabica Gayo Wine coffee beans reaches Rp. 397.000.00/kg and the price of ordinary Gayo Arabica coffee is Rp. 100.000.00/kg. Meanwhile, Plantation and Agriculture are considered important as sectors which are the main source of livelihood for most of the Gayo population. Statistical data records that of the total population of Aceh Tengah (51.284 households), as many as 30.900 heads of households work as farmers and/or gardeners (Aceh Tengah Dalam Angka, 2018).

The ecoregional identities that are considered less important, including Tangerines, Lut Tawar Red Onions, Rom Puteh Rice, and Gayo Avocados actually have important values as potential for plantation and agricultural commodities that have the opportunity to increase community income and the regional economy, as well as Depik Fish and Coffee Plantation. Depik fish is sold in the market reaching 80 thousand per kilogram (Field Survey Data, 2019), and coffee plantations are the main sector of people's livelihoods; Statistical data notes that the majority (100%) of coffee plantations in Aceh Tengah are smallholder coffee plantations (Aceh Tengah Dalam Angka, 2018). Furthermore, NTFPs also have an important value as a potential forest resource which turns out to also have an economic value that is no less high than Gayo Coffee, for example Jernang.

The ecoregional identity of Gold Mining even though has the highest economic value and has quite high potential as well, including those already identified in the sub-districts of Rusip Antara, Celala, Linge, Jagong Jegel, Ketol, and Silih Nara (Aceh Mining and Energy Office, 2018), are still considered less important by stakeholders today. Concerning about the bad impact on the environment and the upstream area of several important rivers in Aceh, it is also feared that it will have a

negative impact on the sustainability of coffee plantations as the green gold of the current Gayo Highlands region. This concern is also in line with the research produced by Cristescu et al. (2012), Alvarez-Berrios and Aide (2015), and Screwdriver et al. (2019), that gold mining can cause environmental degradation with adverse effects that are detrimental to flora and fauna, and can inhibit vegetation growth for a long time.

**Socio-Political Aspects** In a political context, society is an actor so that it cannot be separated from political elements, and specific forms of community interaction behavior can certainly raise to specific socio-political aspects. Fay (1991) states that socio-politics is related to humans, power, rules and authority. It can be said that politics always controls and is at the highest level in people's lives. The analysis results presented in Figure 1 for the socio-political aspect are the ecoregional identity with the highest score, namely Gayo Coffee and Sara Opat, and the ecoregional identity with the lowest score, namely Taman Buru, Customary Law, Tiger, and Natural Forest.

Gayo coffee has had a major influence on the development of the Gayo Highlands region, especially Aceh Tengah district. In addition to raising the popularity of the Gayo Highlands which were previously marginalized in the Aceh Province, Gayo Coffee is also now well known in the international market as Gayo Mountain Coffee (ICCRI, 2008); already has a GI certificate (Geographical Indication) issued by the Ministry of Law and Human Rights Republic of Indonesia on May 27, 2010 (Ellyanti et al., 2012). Meanwhile, Sara Opat is considered important as a customary government system that gave birth to customary institutions and laws, where currently this identity is still valid in the village level of government structure in the Aceh Tengah district (Surya & Suhartini, 2019), especially for resolving minor crimes. in the Gayo local community according to the mandate of the Aceh Qanun Number 9 of 2008 article 13 paragraph 1 concerning the fostering of customary life.

Even though the lowest score is given to Customary Legal, this identity actually has an important value as a law that runs according to Islamic Syariah with a combination of the values of the Gayo ethnic customs and culture born from the Sara Opat government system. This fact can unwittingly weaken the function of customary legal in the society. Likewise, Hunting Parks, Natural Forests and Tigers and Orangutans are also considered less important by stakeholders, but functionally have important values in socio-political aspects. The low score given to this identity indicates a lack of conservation echo launched by either the government, NGOs or other related institutions. If the important areas and animals that have been designated and protected by the government are deemed meaningless, then it can be said that political power has lost its meaning for the community.

**Development Aspects** Development is important to produce changes for the better for the community, region and the environment. Riyadi and Bratakusumah (2005) state that development is a process to make changes for the better, which is carried out in a planned manner. The analysis results for this aspect are presented in Figure 1 in the form of ecoregional identity with the highest score and considered important by the important stakeholders, namely Gayo Coffee and Nature Tourism; The ecoregional identity with the lowest score is considered less important, namely NTFPs, Avocado, Trade, Cocoa, Sugarcane, Grupel, Auction Market, Cultural Tourism and Agriculture.

Actually, the resulting ecoregional identity has an important value for the aspect of development; according to the statistical data, all of them are among the contributors to the GRDP of Aceh Tengah district. Examples of Agriculture, Gayo Coffee, Cocoa, Sugarcane, Avocado and Grupel are included in the categories of contributors to Aceh Tengah GRDP in the last 5 years (BPS Aceh Tengah, 2013-2017). In addition, Nature Tourism and Cultural Tourism are also the tourism business

sector which currently has a great opportunity to increase employment and welfare of the local community and the regional economy. Margaryan and Fredman (2017) and Chung et al. (2018) stated that in addition to increasing employment opportunities, increasing the economy of the local community and the region, nature tourism can also preserve biodiversity and other natural objects can bring changes to improve people's welfare. Torre and Scarborough (2017) and Haigh (2020) states that Cultural Tourism has a great opportunity to improve the economy and welfare of the local community and increase regional income if it is presented through a series of commercial and social activities to bring out subjective experiences from tourists.

Trade has been also one of the sectors that ranks fourth as a contributor to the increase in PDRB Aceh Tengah in the last 5 years (BPS Aceh Tengah, 2013-2017). Furthermore, the auction market has an important value related to the marketing of plantation and agricultural commodities. The Aceh Tengah Auction Market was held as an effort to break the long sales chain and has always been detrimental to farmers so far, so that farmers can enjoy the highest selling price in marketing their products to national and international markets.

**Regional Aspects** Territory is an area of control over various potential natural and cultural resources of the region. According to Rustiadi et al. (2009) states that an area is an area with general characteristics or a specific spatial structure, which functions to differentiate one area from another, in natural, economic, demographic or socio-cultural conditions. The study results are presented in Figure 1 for the regional aspect showing the ecoregional identities with the highest scores, such as Nature Tourism, Lut Tawar Lake and Plantation; ecoregional identities with the lowest scores, including Deer, Guel, and Pine.

Various ecoregional identities that are generated in the regional aspect constitute the potential of regional natural and cultural resources which have important values as assets

of regional wealth and pride. For example, Laut Tawar Lake is a natural resource potential which is the identity of the community and the region as the largest and only lake in the Gayo Highlands area. Having an area of approximately 5.671 ha located at an altitude of 1.500 m above sea level (Qanun RIPP Aceh Tengah district, 2019), Lut Tawar Lake also contains another potential identity that is no less important in the form of Depik fish. Depik fish is considered important and has important value as a potential natural resource in the form of endemic species, which are the only species also in the Gayo Highlands. Meanwhile plantations are considered important as a function of strategic areas and important priority areas of the region at this time (RTRW Aceh Tengah, 2016-2032). Likewise, Nature Tourism is considered important as a priority area for the development of various natural tourism objects, in addition to the function of accessibility and availability of infrastructure.

Other important potentials such as Deer (*Cervus timorensis*) and Elephants (*Elephas maximus sumatranus*) are considered less important by stakeholder groups, but in fact this identity has an important value as a potential natural resource that has historical, economic and political values for the Gayo ethnicity. On the other hand, the potential for regional culture such as Guel is also less important, even though it actually has an important value as one of the important cultural elements of the region. Murni (2017) states that Guel is a regional cultural potential with high philosophical, historical and cultural values which are shown at traditional ceremonies and welcoming guests as well as art performance events. The various results presented in this aspect show that people are still not aware of the various natural and cultural potentials they have; the community has not fully utilized the natural and cultural resource potentials in their territory. Ning and Hoon (2011) stated that in the tourism industry, optimal use of natural and regional cultural resources can improve competitiveness and avoid resource conflicts.

**Ecotourism Aspects.** Ecotourism is ecological tourism, a tourism concept that generates mutual benefits among tourists, local communities, and the environment. So that Li et al. (2012) state that ecotourism must be planned, controlled, and adjusted to the natural values and ecological sensitivity of the area. Meanwhile, Avenzora (2013) states that ecotourism needs to be designed into concepts and products with criteria related to the functions of unique and unique tourism resources, which can fulfill the seven pillars of ecotourism, namely the pillars of ecology, socio-culture, economy, experience, satisfaction, memories, and education. The analysis results for the ecotourism aspect as presented in Figure 1, show the ecoregional identity with the highest score, including Lut Tawar Lake, Didong, Horse Racing, Coffee Plantation, and Asam Jaing; ecoregional identity with the lowest score, including Pinus, Floating Cafe, Mendale Cave, Putri Pukes Cave, and Cold Weather.

Natural phenomenon resources, such as Lut Tawar Lake, and art and cultural tourism resources such as Horse Racing, Didong, and Jaing Tamarind in Figure 7a are considered important and well known to the general public as tourist attractions that have their own specific and unique values. For example, Lut Tawar Lake has a beautiful charm in the form of a combination of lakes, hills, cold air, and pine vegetation that can be enjoyed in one landscape. Likewise, Horse Racing, Didong, and Jaing Tamarind are cultural and artistic tourism resources, as well as culinary tourism, which are the main cultural tourism resources of Aceh Tengah District.

The various ecoregional identities in Figure 7b, which are considered less important in the aspect of ecotourism, actually have an important value as natural phenomena of tourism resources, arts and cultural tourism, flora and fauna tourism, culinary tourism, and also water tourism resources. One of them is the Floating Café, a tourist resource combining natural phenomena and cultural tourism that has

just been discussed by some people and is very promising for development at Lut Tawar Lake. Xue et al. (2017) state that, for tourist purposes, a new identity can be presented based on a representation of local culture, traditions, and heritage, alongside socio-economic conditions.

All the ecoregional identities for the ecotourism aspect in Figure 1b, when viewed from the function of the ecotourism aspect, have an important value to increase the economic, ecological, and cultural benefits of the local community. However, the low score given for this ecoregional identity is thought to be due to the inadequate utilization and management of potential ecotourism resources at this time, and there are no examples of ecotourism management that provide significant economic benefits to the community and the region.

**Rank Spearman.** The relationship between various study results on various aspects of producing the ecoregional identity above is seen and analyzed using the Spearman Rank correlation test; the results are shown in Table 3. The correlation of the various aspects shown in Table 3 shows that the various scores given by each group of respondents on various elements of ecoregional identity (as disclosed in Figure 1) indicate the relationship between aspects that can be accepted and trusted as an orientation for the sample population as a whole.

Table 3 shows that, in addition to a significant and positive correlation between aspects, there is a negative relationship, namely between socio-political aspects and ecotourism aspects (-0.061). This happens because respondents

generally think that the ecotourism aspect has nothing to do with politics, and in matters related to ecotourism aspect, the politics of ecotourism is very rarely discussed. It should be realized that, actually, ecotourism development is under the influence of political leadership (Liang & Chan, 2018); and socio-political aspects are actually important to produce policies by helping different stakeholders agree on a common understanding and language in development management (Makki et al., 2015).

### Verification Result

**Stakeholder preference for ecoregional identity for ecotourism development**  
 Reassessment of various ecoregional identities generated in the classification phase based on stakeholder preferences in the verification phase is important and should be considered as an effort to confirm and validate ecoregional identities for ecotourism development. Jun et al. (2015), Thoits (2003), Stryker (1981), and Burke and Stets (1999) state that confirmation efforts through the verification process can build and maintain identity through the positive emotions that are generated, thus affecting activity and commitment to the identity. Thus, confirmation and validation of ecoregional identity can avoid conflicts, thereby maintaining the sustainability of local natural and cultural resources for ecotourism development. The results of the analysis in Figure 2 show that the ecoregional identity with the highest score is considered important (Figure 2a) and the identity with the lowest score is considered less important by stakeholders (Figure 2b).

Table 3. The results of the Spearman Rank correlation test among aspects of the assessment.

	1	2	3	4	5	6	7
1	1	0.533**	0.235**	0.139	0.322**	0.276**	0.271**
2		1	0.302**	0.222*	0.316**	0.396**	0.430**
3			1	0.428**	0.472**	0.353**	0.080
4				1	0.274**	0.332**	-0.061
5					1	0.416**	0.145
6						1	0.261**
7							1

Remark: 1=Ecology & Conservation; 2= Socio-Culture; 3=Socio-Economic; 4=Socio-Politics; 5=Development; 6=Region; 7=Ecotourism.

\*\*\*) significant correlation at level of 1%; \*) significant correlation at level of 5%

Figure 2 still shows differences in choice between stakeholder groups, as shown in Figure 1, although all the ecoregional identities produced have important values for ecotourism development. This further shows that each stakeholder group has its own choices and decisions on ecoregional identity for ecotourism development. The results of the Rank Spearman correlation test (Table 4) show no significant correlation; only unidirectional (positive) and unidirectional (negative) relationships

are observed. This shows that between stakeholder groups do not have an important correlation with each other. This could be due to the attitude of each group on ecoregional identity for ecotourism development, which is influenced by the characteristics of the respondents, as well as because of the group's background. Karas and Ciecuch (2018) state that the respondent's decision to choose an identity is closely related to the development of identity, starting from the process of exploring

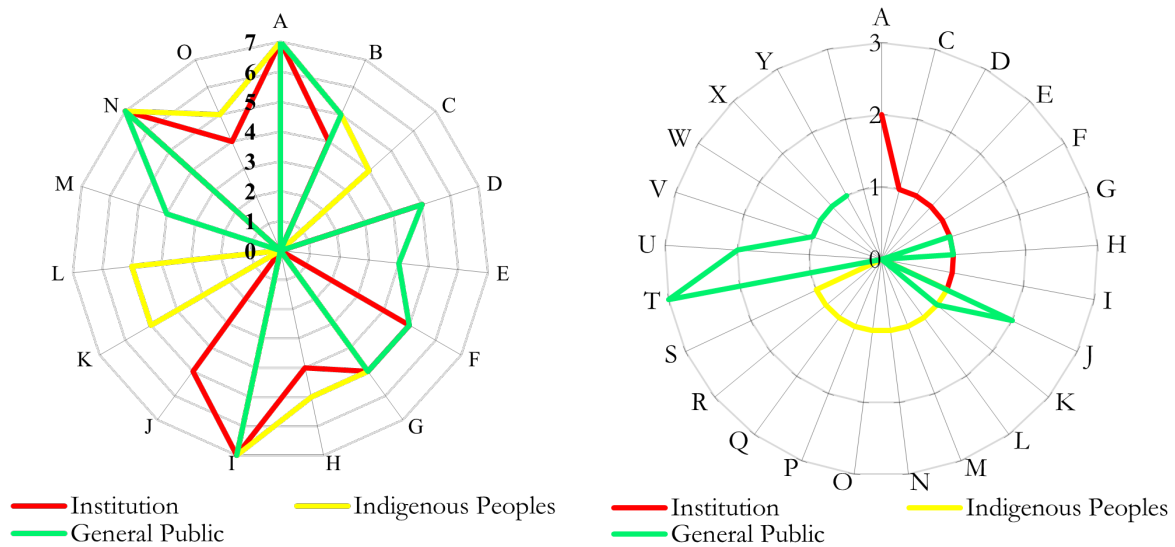


Figure 2. Ecoregional identity with the highest score (a) and ecoregional identity with the lowest score (b) at verification phase.

Notes:

a. Highest score ecoregional identity:

A= Gayo Coffee; B=Cultural Tourism; C= Horse Racing Kuda; D= Nature Tourism; E= Cave; F= Pine Forest Landscape; G= Kerawang Gayo; H= Coffee Plantation; I= Lut Tawar Lake; J=Sara Opat; K=Elephant; L= Custom; M=Jaing Tamarind; N= Depik Fish; O= Didong.

b. Lowest score ecoregional identity:

A=Renggali; B= Asam Jaing; C=Deer; E=Guel Dance; F=Cave; G=Arung Jeram; H=Orangutan; I=Cave Mendele; J= Kantung Semar; K= Orchid Kantung; L= Cold Weather; M=Pengat Gayo; N= Natural Forest; O=Customary Institution; P=Leuser Ecosystem Region; Q=Pine Forest; R=Mountainous Landscape; S=Horticulture; T=Gayo Horse; U=Loyang Koro Cave; V=Custom; W=Sining Dance; X=Forest Orchid; Y=Elephant; Z=Endangered Animal.

Table 4. Result of Rank Spearman correlation test among stakeholder groups at Central Aceh Regency

Rank Spearman	Institution	Indigenous people adat	General public
Institution	1	-0.034	0.168
Indigenous people		1	0.248
General public			1

the various alternatives provided to be selected according to one's personal goals, beliefs, values, and desires. Therefore, it can be said that the various information about ecoregional identity presented in Figure 2 is considered confirmed and accepted as an agreement on the interest group's orientation toward ecoregional identity for ecotourism development in Aceh Tengah district.

Based on the results from the two phases above, the highest priority for stakeholders is the leading ecoregional identity, which is well known and has important economic value today. This fact can have negative consequences for other ecoregional identities, which also have important values for ecotourism development. Makki et al. (2015) and Sani and Mahasti (2012) stated that the importance of identity is needed in facing environmental change, as well as in protecting and promoting the potential of local natural and cultural resources for sustainable tourism development.

#### IV. CONCLUSION

Stakeholder orientation towards ecoregional identity in Central Aceh Regency remains low and tends to be directed towards developing high economic potential. This low stakeholder orientation is caused by: 1) minimal socialization from the government and related elements regarding ecotourism conservation and development, 2) the absence of examples of potential utilization of natural and cultural resources in the region that provide sustainable economic value in ecotourism development to date, and 3) changes in community behavior and socio-culture due to the pressure of economic needs and global information flows. Therefore, efforts are needed to build and strengthen ecoregional identity among individuals and community groups, so that the natural and cultural resources of the region remain sustainable and do not become extinct.

#### REKOMENDATION

Ecoregional identity needs to be spelled out in regional qanuns to become a legal umbrella as legal recognition in planning and designing ecotourism development based on ecoregional identity to ensure the preservation of potential natural and cultural resources in a sustainable manner.

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