

## Polarization among Stakeholders Perception on the Interpretation of Ecotourism Resources in Gunung Halimun Salak National Park

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### Abstract

*The study of polarization of stakeholder perceptions is important to consider the policies that must be taken by area managers related to the development of interpretation programs in national park areas. This study was aimed to analyze and evaluate the characteristics of the subject of interpretation that are considered important by stakeholders, to analyze the differences in perceptions among stakeholders of the attractiveness of the subject of interpretation and to determine the polarization of perceptions of the subject of interpretation among stakeholders in relation to the management of Gunung Halimun Salak National Park (TNGHS). Stakeholder perception data was obtained by distributing a closed pattern questionnaire. Cluster analysis was used to determine the variety of stakeholder perception in interpretation subjects within the TNGHS area. As for knowing the direction and scale of the polarization of stakeholder perceptions, it was analyzed by Kruskal Wallis and Mann Whitney test. The results showed that the largest polarization among stakeholders occurred in the cultural subjects, and the direction of polarization was negative. This indicates the weak attractiveness of the subject of cultural interpretation to stakeholders. The greater commonality of perception between the community and managers forms the basis for the development of cultural interpretations. This development is expected to bridge the community's needs for the TNGHS area as well as provide stronger support for the management of the national park area.*

*Keywords: polarization, interpretation subject, ecotourism, Gunung Halimun Salak National Park*

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### Introduction

Interpretation plays a very important role in the success of ecotourism programs, especially in national park locations. In the interpretation program, tourists can gain in-depth insight into all ecotourism objects and attractions that found within the national park area. Ecotourism resources in the form of flora, fauna, natural and cultural phenomena must be fully interpreted by tourists so that messages of concern about nature and environmental conservation efforts can be conveyed. In the context of tourism management in national parks, some of the functions and benefits of interpretation programs include communicating ideas about conservation, providing minimal impact messages and enriching the visitor experience (Tiberghien & Lennon, 2019; Kuo, 2002; Dileep Kumar et al., 2020), to promote the sustainable use of natural tourist destinations (Murti, 2019; Cornelisse, 2020; Stoffle et al., 2020), and to support visitor safety (Fang et al., 2021). Madin and Fenton (2004) state that interpretation programs can bring about a change in the wider community's

understanding of important natural and cultural values, awaken the interrelationships in ecosystems, and encourage behaviors that are expected to be useful for supporting area management (Vásquez Lavín et al., 2016; Tiberghien et al., 2018). Based on the various benefits and important functions of the interpretation program in the national park area, serious attention is needed, especially for area managers to implement a sustainable tourism development strategy by implementing a complete and optimum interpretation program (Orams, 1996; Mocior & Kruse, 2016; Bushell & Bricker, 2017; Cornelisse, 2020; Tang et al., 2020).

There are two different points of view in carrying out the interpretation program on ecotourism in the national park area, namely the "subject of interpretation" perspective and the "object of interpretation" perspective. The difference in perspective is based on different points of view in understanding the values contained in each ecotourism resource used. So far, ecotourism resources such as flora, fauna, natural and cultural phenomena are only interpreted

from the point of view of understanding as objects of interpretation. By considering all ecotourism resources as objects of interpretation, the focus of their meaning tends to be only for the interests of the individual person, both in the position as interpreters and as tourists/audiences (Flower et al., 2021).

On the other hand, in the concept of “subject interpretation” perspectives, all objects and resources that exist in the natural and cultural environment are considered to have value in themselves, regardless of human interests (Keraf, 2002; Girard & Vecco, 2021). The concept of interpretive thinking that places something as a “subject” will pay respect to the intrinsic value of each component and pay attention to all components that exist in nature and is not solely focused on the value of benefits for humans (Indrawan et al., 2007; Kim & Coghlan, 2018; Tiberghien et al., 2018; Woźniak et al., 2018; Sheng et al., 2019; Tauro et al., 2021).

In the practice of interpreting management in national parks, placing resources as the subject of interpretation is very important (Cornelise, 2020). Appreciation of the intrinsic value of each resource will avoid certain resources as the focus of interpretation, and provide understanding to the wider community about the importance of protecting all resources in conservation areas. Stakeholder perceptions and motivations for various interpretation resources and their activities are important for park area managers to consider in order to provide views on specific resources that are important in area interpretation (Cornelise, 2020; Hausmann et al., 2020; Villamediana-Pedrosa et al., 2020; Tauro et al., 2021). Various stakeholder interests in national park resources will have a bad impact on area management if they are wrong in responding to them.

The study of the polarization of stakeholder perceptions of the interpretation program is important for several reasons. The first reason is the negative impact because improper management must be minimized (Tarver et al., 2019). It is important for managers to know the needs and interests of stakeholders and how to implement them in the field (Hearne & Salinas, 2002; Dileep Kumar et al., 2020). Second, program designs that are not in accordance with the needs of users or other stakeholders will cause messages in the interpretation not to be conveyed properly (Tiberghien & Lennon, 2019; Fang et al., 2021). The third reason, polarization studies will also provide valuable information on the diversity of tourist segments and their interest in interpreting resources and activities, which have an impact on travel decision making (Servidio & Ruffolo, 2016; Mutanga et al., 2017; Woźniak et al., 2018; López-Guzmán et al., 2019; Flower et al., 2021). The visible diversity provides an opportunity for managers to explore various potential new program designs that are more varied and unique for each tourist segment.

Several studies with the theme of interpretation in ecotourism have been carried out (Richards & Wilson, 2014; Benur & Bramwell, 2015). However, in general, this research only leads to interpretation activities in general (such as guiding activities, interpreter and interpretation program) and still emphasizes the “object of interpretation” aspect (such as spectacular mountain, flora and fauna). Research on “subjects of interpretation” especially in national parks is still

rarely done. More research is directed at rare species or abiotic components that are valuable for the life of the people living around the area. Therefore, in order to fill the “gap” void in the subject of interpretation, it is important to conduct this research. This study has several objectives including: 1) analyzing and evaluating the subject of interpretation that is considered important by stakeholders; 2) analyze the differences in perceptions among stakeholders of the attractiveness of the subject of interpretation; and 3) determine the polarization of perceptions of the subject of interpretation among stakeholders in relation to the management of the Gunung Halimun Salak National Park (TNGHS).

## Methods

**Research location and time** This research was conducted in TNGHS. Administratively, this national park area is located in Bogor Regency and Sukabumi, West Java Province. Geographically, the national park area is located at S06°32'14"S06°55'12" and E106°12'58"E106°45'50". Research data collection was focused on the following areas: 1) Kabandungan area, 2) Eagle sanctuary, 3) Cigamea waterfall, 4) Nangka waterfall, 5) Bakukung Village, and 6) *Kasepuhan* Sirna Resmi. The research was conducted for 8 months, starting from September 2019 to May 2020.

**Data collection** The research method used is a combination of qualitative and quantitative approaches. This type of research is more inclined towards exploratory research while maintaining the power of quantitative analysis and in-depth meaning of various phenomena that occur at the study site through a phenomenology approach. Primary research data was obtained by distributing questionnaires to stakeholders. Respondents consist of tourists and non tourists. Tourist respondents were selected using a random sampling method with a minimum number of 150 respondents from the 5 main tourist entrances (Eagle Sanctuary, Cigamea waterfall, Nangka waterfall, Bakukung Village, and *Kasepuhan* Sirna Resmi). Non-tourist respondents (area managers/tour operators and communities), taken mainly at the main office of area managers in Kabandungan, were selected by purposive sampling method by considering their involvement in tourism programs or interpretations developed by national park managers with a minimum number of 30 respondents. The number of respondents collected was 228 respondents, consisting of 171 tourists, 18 area managers/tour operators, and 39 communities. Secondary data obtained through literature studies were analyzed qualitatively for in-depth understanding of the conditions at study site. Various supporting data were collected from management documents and other studies conducted in TNGHS to strengthen the analysis of research results.

In this study, various potential ecotourism resources or ecotourism objects and attractions contained in the national park area are interpreted from the point of view of “subject of interpretation”. There are two groups of interpretation subjects that are the focus of research, namely natural subjects and cultural subjects. These two interpretation

subjects were further classified into 12 criteria and 396 indicators of interpretation subjects with details of 232 indicators of natural subjects and 164 indicators of cultural subjects.

The questionnaire used to assess stakeholder perceptions of the subject of interpretation was designed referring to the one score one indicator scoring system method (Avenzora, 2008), which was made in the form of closed-ended questions. Each answer to the question in the questionnaire is given a score of 1 to 7 which aims to give an assessment of the qualitative data and make it easier for respondents to answer each question that is considered appropriate. Giving a score of 1 to 7 according to the character of the Indonesian people which means something very detailed. A score of 1 to 7 represents: 1) very unattractive, 2) unattractive, 3) somewhat unattractive, 4) average, 5) moderately attractive, 6) attractive, and 7) very attractive. Validity and reliability tests were conducted to test the feasibility of the questionnaire as a research instrument. Secondary data was obtained by reviewing area management documents and literature studies relevant to the research theme.

**Data analysis** Data on stakeholder perceptions of the subject of interpretation are presented in the form of a radar diagram (spider chart) to make it easier to see the criteria and indicators that have a striking score. The cluster analysis is used to obtain a complete picture of the polarization of stakeholder perceptions of the subject of interpretation. Cluster analysis was carried out on each category of respondents (tourists, area managers/tour operators, and the community). The clustering technique used is hierarchical clustering. Based on the cluster formed, then a descriptive analysis of the cluster member elements is carried out to understand the cluster and the basis for its formation (Dwyer et al., 2012).

Furthermore, to determine the direction and scale of the polarization of stakeholder perceptions, it is analyzed using a comparison test or compare means test with the Kruskal Wallis and Mann Whitney test. The cluster analysis and comparison test were processed with the help of SPSS software version 20. The polarization of stakeholder orientation towards the subject of interpretation was divided into two categories, namely the direction of polarization and scale polarization. Stakeholder orientation polarization is positive if the average score is  $> 4$ , while direction is negative if the average score is  $< 4$ . Furthermore, the polarization scale can be seen from the value of its significance ( $p$ -value). If the  $p$ -value is  $\leq \alpha$ , then the polarization scale is strong. Meanwhile, if  $p$ -value  $> \alpha$  then the polarization scale is low.

## Results and Discussion

**Validity and reliability** The subject of interpretation which is the focus of the research consists of two groups, namely the subject of nature and the subject of culture which are further classified into 12 components of the subject of interpretation. Table 1 shows that the results of the research instrument reliability test using the Cronbach's Alpha method were reliable on all components of the subject of interpretation (Cronbach's Alpha value  $> .6$ ). The results of the validity test of the research instrument using the Pearson correlation

method also obtained valid results (correlation value or calculated  $r$  value  $> r$  table) for all variables. Based on this, the results of the stakeholder perception survey on the subject of interpretation can be analyzed further.

**Diversity of interpretation subjects for the TNGHS** Based on a literature study of various national park area management documents, in particular the Long-Term National Park Management Plan document owned by area managers (BTNGHS, 2017), information about the potential diversity of interpretation subjects is obtained as follows:

*The subject of interpretation of nature* **Flora** The TNGHS national park area has a high diversity of flora species consisting of trees, shrubs, herbs, lianas, epiphytes, palms, pandanus and bananas. The types of flora that grow in TNGHS are reported to have identified more than 700 species of flowering plants covering 391 genera from 119 families.

**Fauna** The faunal wealth of TNGHS consists of 70 species of mammals, 276 species of birds, 30 species of amphibians, 49 species of reptiles, 50 species of fish, 36 species of molluscs, and various types of insects. It is suspected that there are still many species of wild life that have not been identified, especially insects and micro-organisms.

**Abiotic components** TNGHS has an altitude between 500–2,211 m above sea level (m asl). There are high mountains, namely Mount Salak 1 (2,211 m asl), Mount Salak 2 (2,180 m asl), Mount South Halimun (1,920 m asl), Mount North Halimun (1,929 m asl), and Mount Kendeng (1,680 m asl). In this area there are more than 10 waterfalls. In addition, there are hot springs (one location that has been developed, namely hot water on the hiking trail), three caves (one cave that has been used for spiritual purposes is Goa Gumuruh, while the other cave is protected because its ecosystem is very fragile). There are at least 115 rivers originating from the national park area. Currently, rivers are

Table 1 Validity and reliability test of interpretation subject

Interpretation subject	Product moment correlation ( $r$ )	Cronbach's Alpha
Flora	.642**	.977
Fauna	.580**	.958
Abiotic component	.609**	.942
Ecological phenomena	.653**	.977
Natural phenomena	.784**	.968
Language	.753**	.972
Living equipment	.699**	.974
Art	.789**	.981
Livelihood system	.689**	.943
Religious system	.741**	.977
Knowledge system	.716**	.976
Social system	.569**	.976

\*)  $\alpha = 0.1$ ,  $r$ -value  $> r$  table (0.463) = valid

\*\*)  $\alpha = 0.05$ ,  $r$ -value  $> r$  table (0.361) = valid

Cronbach's Alpha  $> 0.60$  = reliable



mostly used for irrigation and non-commercial needs for the community.

**Ecological phenomena** Ecosystems in the TNGHS area consist of four types of ecosystems according to altitude, namely: lowland forest (<1,000 m asl.), lower montane forest (1,000–1,500 m asl), central mountain forest/montane (1,500–2,000 m asl), and alpine ecosystems. There are also crater ecosystems and plantation forest ecosystems. In the lower montane forest type, there are individual trees that have a tall stature (up to 40 m) and a large trunk diameter (up to 120 cm in diameter). Alpine ecosystems have simple and short canopy strata composed of stunted tree species, with less dense understorey. The diversity of vegetation types in this type of ecosystem is lower than other types of ecosystems. The types of plantation forests are *rasamala* (*Altingia excelsa*), pine (*Pinus merkusii*), resin (*Agathis* sp.), and *puspa* (*Schima wallichii*).

Another form of ecological phenomenon is the rarity and endemism of species. The national park is an important habitat for various endangered species, especially the top predators of the ecosystem, such as the javan leopard (*Panthera pardus melas*), jungle cat (*Prionailurus bengalensis* and *Felis bengalensis*), and root cat (*Mustela flavigula*). In addition there are other rare mammals such as the javan gibbon (*Hylobates moloch*), *surili* (*Presbytis comata*), javan langur (*Trachypithecus auratus*), *ajag* or forest dog (*Cuon alpinus javanicus*), deer (*Muntiacus muntjak*), mouse deer (*Tragulus javanicus*), and skunk (*Mydaus javanensis*). Thirty-two species of birds are endemic to Java. Several bird species are critically endangered, namely the *echidna* (*Cissa thalassina*), *poksai* horse (*Garrulax rufifrons*), and white starling (*Sturnus melanopterus*). Several species with Endangered status are the javan eagle (*Nisaetus bartelsi*), the javan mungkal ciung (*Cochoa azurea*), the javan plop (*Otus angelinae*), and the mountain faded (*Harpactes reinwardtii*). From the flora group, 47 species of orchids are endemic species and 5 species are new discoveries for Java Island. There are also types of glowing mushrooms around Cikaniki.

**Natural phenomena** Fog is a characteristic of the Halimun Salak area, where the name "Halimun" is taken from the local language which means fog. In everyday conditions, fog often covers this mountainous area.

**Subject of cultural interpretation Language** The languages used in this area are Indonesian, regional languages (Sundanese), and foreign languages. Indonesian is the official language used by managers in carrying out daily tasks, preparing reports and correspondence, and delivering information to visitors. Sundanese is a language that is widely used by people living around the area, and is still used as the main language in daily community interactions. The foreign language used is English. This language is used for special purposes, such as when conveying information to foreign tourists.

**Live equipment system** The traditional houses show similarities to Sundanese architectural patterns in general. The materials used tend to use materials found around the

settlement, such as cubicle walls (woven bamboo), wooden frames and roofs of palm fiber, thatch or *tepus*. Their type of house is a house on stilts with a pit as high as approximately 60 cm. The pit is generally covered with boards. The shape of the house is on average rectangular with *suhunan panjang* (plus *teritis* on the front and back) and the *suhunan jure* is the shape of the elongated shield roof. Roofing materials that are widely used are *tepus* leaves, thatch, or palm fiber. Using a tiled roof is taboo for the *kasepuhan* community because the material for making tiles is soil. In the belief of the Sundanese, soil is part of the underworld (a place for the dead) so it should not be placed at the top (Suryaningsih, 2020). In addition, modern houses use materials commonly used in urban areas such as brick and cement. The roof of the house uses clay or asbestos and does not follow traditional beliefs that prohibit the use of earthen materials for roofing.

**Art** Some of the art forms that are usually displayed are *Jipeng*, one of the traditional arts in West Java Province which was created by taking three elements of art, namely *tanji* or *tanjidor*, *ketuk tilu* or *kliningan*, and masks (Sundanese plays). *Jipeng* performances can be performed indoors or on stage and in open spaces. *Angklung dog-dog lojor* is a musical instrument made of large diameter bamboo sticks and covered with goat skin. This musical instrument consists of five *angklungs* with different tone marks and one *dog-dog* (percussion instrument). Another art is *wayang golek*, which is a puppet show that tells the story of Ramayana and Mahabharata using wooden puppets and accompanied by gamelan strains. These arts are usually performed during ceremonies or traditional events, there are also weddings and circumcisions.

**Livelihood system** The livelihoods of the majority of the population still depend on natural resources. The dominant livelihood system is as farmers and farm laborers. The local community utilizes the forest and surrounding land in various ways, such as *huma*/field (swidden cultivation), rice field (rice growing), garden, *talun* (mixed garden), and *talon* (mixed forest). There are also residents who hunt wild animals (pigs, birds, and sonari worms) in the area. Other types of livelihood are self-employed, private employees/factory workers, traders, and a small part as civil servants/armed forces. Related to the agricultural system, in the *kasepuhan* community there is a habit of making *leuit*, which is a place to store crops (rice). Every family must have a *leuit*, even if they do not have a private rice field. *Leuit* became a symbol of prosperity, meaning that the number of *leuit* owned by a family is a sign of the prosperity of the family. The more *leuit* you have, it means that the family has a lot of sustenance.

**System of religion and belief** Most of the people living in/around the TNGHS area adhere to Islam, and a small proportion still adhere to the old belief (*Sunda Wiwitan*). The *kasepuhan* community has the belief that a person who wants to live a successful or happy life, he must be able to achieve a unity of life or a sense of oneness, namely uniting the macro-cosmos with the micro-cosmos. Furthermore, in an effort to achieve order and harmony in human life, citizens must harmonize speech, behavior and determination. Guidelines

for life in the form of *tatali paranti karuhun* must be implemented because any violation of it will result in disaster (*kabendon*), both for himself and the community. In that way, the people of *kasepuhan* hope to avoid various calamities. The belief in *tatali paranti karuhun* is carried out in various symbols in the form of taboos (abstinence), namely the taboo on selling rice, the taboo on issuing rice on birthdays (*wedal*), and the taboo on cultivating rice fields on Fridays and Sundays.

**Knowledge system** The community has traditional wisdom that is passed down from generation to generation in the use and conservation of forests, through the division of forested areas based on the intensity of use and the level of protection, namely the existence of '*leuweung surang*' (protected forest), '*leuweung tutupan*' (conservation forest), or '*leuweung sampalan*' (open forest). They still have a strong interaction with the surrounding forest. The community also has ethnobotanical knowledge and uses plants or plants around them based on this knowledge, and maintains an agricultural pattern that is able to preserve local rice genetic resources.

**Social system** There are 123 villages and 348 small villages, some/all of which are located within/directly adjacent to the national park. The local community is generally Sundanese, which is divided into *kasepuhan* and non-*kasepuhan* community groups. The distribution of the *kasepuhan* community has historically been centered in Urug, Citorek, Bayah, Ciptamulya, Cicarucub, Cisungsang, Sirnaresmi, Ciptagelar, and Cisitua Villages. The *kasepuhan* community still has a traditional organizational structure that is separate from the formal government organizational structure (village). The customs that are often found in the community are mutual cooperation activities both in building houses, cleaning worship facilities, weddings, maintaining waterways, and also in mourning events.

**Stakeholder perception of interpretation subjects**

Figure 1 shows that there are strong differences in perceptions among stakeholders on the subject of interpretation in the TNGHS area. Tourists gave a low average rating on all subjects (score < 3 = somewhat unattractive) except for the abiotic component subject which had a score > 3. In general, the community gave an average score of 4 (average) on all interpretation subjects, with higher scores on the subject of flora, language, and knowledge systems. The manager gives an average score of 5 (somewhat interesting) on the subject of fauna and language, but gives an average score of 4 to 5 for other interpretation subjects. Based on the perception assessment of the interpretation subject at TNGHS, it can be said that the tourist group still gives a negative score to the interpretation subject (score < 3), while the surrounding community groups and area managers tend to give a positive score to the interpretation subject (score > 3). This can be interpreted that the stakeholders have different directions in terms of assessing the subject of interpretation within the TNGHS area.

In general, stakeholders have different perceptions in assessing the attractiveness of the subject of interpretation. Tourist perceptions of abiotic components are very prominent in the TNGHS area with a relatively high average value. Other natural subjects that get the attention of tourists are flora and fauna. This indicates that although the subject of flora is easy to find and composes most of the natural atmosphere that is built in the TNGHS area, it does not receive the highest rating or is not considered an interesting thing by tourists. Likewise, the subject of fauna, although it has high diversity and is a topic that is often raised by area managers, the subject of fauna also does not get the highest score from tourists. For most tourists, the unity of the natural components in the national park area creates a different natural atmosphere. Many visitors may simply want to absorb the surrounding atmosphere and have little interest in studying plants and ecosystems (Ballantyne et al., 2008).

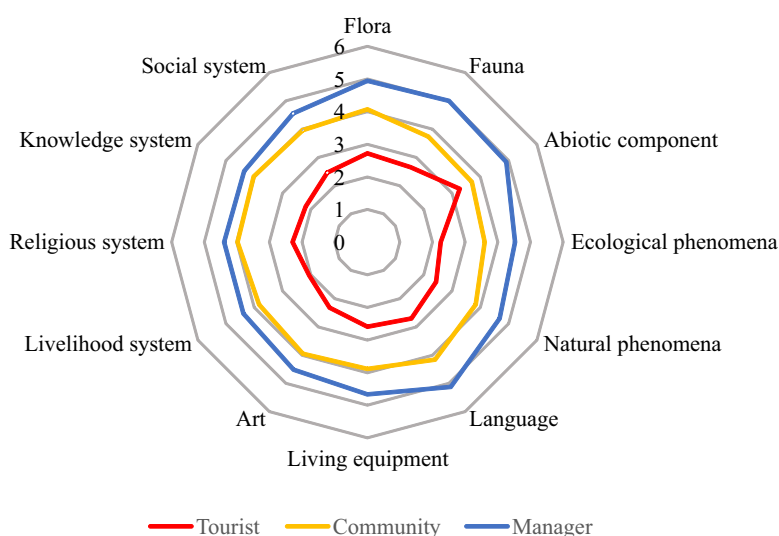


Figure 1 Stakeholders perception on natural and cultural subject at TNGHS area.

Cultural subjects generally scored lower on average than natural subjects. Cultural subjects who scored relatively higher were language, equipment of life and social system. The subject who gets the lowest average score from tourists is the livelihood system.

Community groups scored higher on cultural subjects. Natural subjects who score higher than other natural subjects are flora and natural phenomena. Language, religious systems and knowledge systems scored higher on average than other cultural subjects. The manager/tour operator respondent groups gave a higher score on the natural subject. Flora, fauna, and abiotic components are nature subjects that get the highest score on nature subjects. The cultural subject that obtained the highest average score was language.

The polarization of stakeholder perceptions of the interpretation subject in the TNGHS area can be seen in more detail using cluster analysis as shown in Table 2. The results of the cluster analysis on the interpretation subject resulted in 3 tourist clusters, 3 community clusters, and 2 management clusters. The cluster formed consists of respondents who provide a similar composition of assessments (in terms of subject choice and the score given). Clusters with large respondent members also contribute to a large perception of respondents' tendencies towards the subject of interpretation. Interpretation subjects that are of concern to each stakeholder group are characterized by a high average score in each cluster.

In general, tourists' perceptions of the subject of interpretation are divided into three groups, namely:

1) perceptions of natural subjects, 2) perceptions of natural-cultural subjects, and 3) perceptions of cultural subjects. Perceptions of natural subjects were seen in the third cluster, with the highest average score on abiotic components (score 5.35), flora (score 4.93), and fauna (score 4.82). Perceptions of natural-cultural subjects were seen in

the first cluster, with the highest average scores on abiotic components (score 1.79) and language (score 1.36). The perception of cultural subjects is seen in the second cluster, with the highest scores on living equipment (score 3.49) and religious systems (score 3.63). The subject of nature-culture is the subject of interpretation which is the focus of attention of the tourist respondent group. The subject of cultural interpretation is only shown by a small number of tourists.

The perception of the surrounding community towards the subject of interpretation in TNGHS is divided into two groups, namely: 1) the perception of the cultural aspect (clusters 1 and 2) and 2) the perception of the nature-culture (cluster 3). Judging from the number of respondents who formed cluster members, the perception of community respondents towards the subject of interpretation is more likely to be natural-cultural subjects (cluster 3).

The perception of area managers is divided into two, namely perceptions of cultural subjects (cluster 1) and perceptions of natural-cultural subjects (cluster 2). The tendency of the TNGHS manager's perception is seen in the cluster with the largest number of respondent members (cluster 1), namely the perception of the cultural subject. This can be interpreted that the subject of culture still dominates other subjects, especially on the subject of nature. The manager considers that cultural subjects are more attractive to be developed in ecotourism program packages compared to the uniqueness and diversity of flora/fauna attractions and natural phenomena. Cochrane (2000) assumes that there are differences in understanding and vision among managers so that they do not consider natural subjects as the main aspect in ecotourism development in the TNGHS area. If this assumption is true, then the subject of natural interpretation with their uniqueness and value has not been able to convey the message of management to the wider community.

Of the eight clusters that have been identified, it can be

Table 2 Interpretation subject selected by respondent group

Subject	Clusters formed in each category of respondents							
	Tourist 1 (n = 94)	Tourist 2 (n = 8)	Tourist 3 (n = 69)	Comm 1 (n = 4)	Comm 2 (n = 6)	Comm 3 (n = 29)	Man 1 (n = 14)	Man 2 (n = 4)
Flora	1.06	3.23	<b>4.93</b>	2.21	1.29	<b>4.90</b>	5.19	<b>4.11</b>
Fauna	1.06	2.66	<b>4.82</b>	1.05	1.06	4.66	5.12	<b>4.60</b>
Abiotic component	<b>1.79</b>	2.84	<b>5.35</b>	.23	1.40	4.66	5.18	<b>3.99</b>
Ecological phenomena	.54	1.24	4.70	.37	.69	4.65	5.06	2.67
Natural phenomena	.73	2.42	4.76	1.35	.91	4.78	5.02	3.51
Language	<b>1.36</b>	2.93	4.49	2.58	<b>1.80</b>	<b>4.86</b>	<b>5.41</b>	<b>4.10</b>
Living equipment	1.18	<b>3.49</b>	4.41	2.99	.92	4.62	<b>5.36</b>	2.23
Art	.79	2.67	4.35	<b>3.44</b>	.67	4.70	5.19	2.16
Livelihood system	.43	3.11	4.14	2.86	.55	4.65	5.12	1.81
Religious system	.64	<b>3.63</b>	4.39	1.91	.98	<b>4.89</b>	5.28	1.27
Knowledge system	.55	2.93	4.32	2.84	.86	<b>4.84</b>	5.24	1.29
Social system	.97	2.83	4.45	<b>3.85</b>	.17	4.76	<b>5.43</b>	1.50

Notes: Data obtained from the results of processing cluster analysis; Score is the average value in the cluster that is formed; The number written in bold is the highest value in the cluster

conveyed that the subject of abiotic components and the subject of social systems receive high attention from the three stakeholder groups. The abiotic component got a relatively high score from tourist stakeholders (score 5.35), while the social system got a high score from area management stakeholders (score 5.43). Subject perception Art and knowledge systems are specifically identified in community stakeholder groups. Livelihood systems, ecological phenomena, and natural phenomena are not perceptions of the subject of interpretation that can be identified from the three stakeholders in the TNGHS area. Table 3 shows that the interpretation subjects that have been identified consist of 3 natural subjects (flora, fauna, and abiotic components) and 6 cultural subjects (language, living equipment, arts, knowledge systems, religious systems, and social systems).

Figure 2 shows that stakeholder perceptions of the subject of nature place abiotic, flora, and fauna components as the main components. Abiotic components get great interest from tourists and managers in the TNGHS area. The characteristics of abiotic components that are of concern are the type, shape, sound of the abiotic components. In addition to abiotic components, the three stakeholders have perceptions of the subject of flora and fauna. Plant species and plant body parts receive greater attention than other floristic aspects (shape, color, plant secretions). Tourist respondents are more interested in the subject of fauna interpretation related to animal body parts and animal colors compared to other fauna aspects such as the type, shape of body parts, behavior, and material released from the animal's body.

The subject of flora (plant species) was identified as the only major natural subject that received attention from community respondents. For managers, there are three natural subjects that are considered important, namely flora, fauna, and abiotic components. The three subjects received a fairly high average score from the manager (score > 4). The characteristics of the subject of flora that are considered interesting by the manager are plant parts, while the characteristics of the subject of fauna that are of interest to the manager are aspects of animal behavior. The characteristics of abiotic components that are interest to managers are the shape and sound of abiotic components.

Although the national park area is known to have high biodiversity, there are still many species of flora and fauna that are not well known to the general public (Ishibashi et al., 2020). Of the many types of flora and fauna in this area, as stated at the beginning of this paper, only a few species are well known by the general public. Some of the information obtained during data collection, known tree species such as *rasamala* (*A. excelsa*), *puspa* (*S. wallichii*), pairs (*Quercus gamelliflora*), pine (*P. merkusii*), areca nut (*Arenga* sp.), *kihujan* (*Samanea saman*), and child *kiriung* (*Castanopsis acuminatissima*). From the fauna group, several types of fauna are known by tourists, namely the long-tailed monkey (*Macaca fascicularis*), the javan langur (*T. auratus*), and the javan gibbon (*H. moloch*), the eagle (*N. bartelsi*), and the finches (*Pycnonotus* sp.). Other known species are those commonly cultivated by the community (agricultural crops and livestock). The difference between the various types of flora and fauna is mostly seen from the morphological characteristics shown (De Bastiani et al., 2020; Ishibashi et al., 2020).

Table 3 Important interpretation subject based on stakeholders

Subjects	Characteristics
Flora	Tree, epiphytic, and herbaceous species The plant parts (leaves, flowers, fruits, and crowns)
Fauna	The animal body parts (body parts, limbs) Animal body color (abdomen, chest, limb colors) Animal behavior (nesting, territorial, colony, migration, camouflage)
Abiotic component	Type of water Mountain formation, waterfalls, water flows Sound of waterfalls, river sound
Language	Intonation of verbal language, language style and figurative language, spoken language Areal script, written literature
Housing	Residential (architecture, house direction, layout) Cooking and eating equipment (material storage equipment, material preparation equipment, food processing equipment) Transportation (human vehicles)
Art	<i>Kidung/tembang</i>
Religious system	Worship procedures, reject reinforcement ceremonies
Knowledge system	Knowledge about humans (human body as benchmark unit and premonition symbol)
Social system	Kinship system, social structure, life rules and norms, and village government

Note: Data obtained from further study analysis



Basically there are wide opportunities to carry out interpretation activities of various types of flora, fauna, and ecosystems (Vásquez Lavín et al., 2016; Mocior & Kruse, 2016; Woźniak et al., 2018; Dell'Eva et al., 2020; Mutiara et al., 2021), but the reality that occurs will have an impact on the low understanding of flora and fauna conservation. The wider community needs to know the biological richness and the importance of complex ecological interactions in the national park area. The encounter with flora and fauna in their natural habitat has an impact on tourists (Dell'Eva et al., 2020; Cornelisse, 2020; Mocior & Kruse, 2016; Mutanga et al., 2017), because it will encourage tourists to connect physiologically and psychologically with the natural environment (Cooley et al., 2020).

Figure 3 shows that the subject of cultural interpretation has received less attention from tourists. Cultural subjects that become tourist preferences are language, living

equipment, and religious systems. The characteristic of language that becomes the preference of tourists is written language. Living equipment that gets the attention of tourists is a house and cooking and drinking utensils. Furthermore, religious subjects that get the attention of tourists in both areas are ceremonies and holidays.

The low attention of tourists to the subject of cultural interpretation needs serious attention considering the potential for cultural attraction around the TNGHS area is quite high because it is bordered by residential areas and close to the traditional residence of *kasepuhan*. The villages located around the national park have the potential to provide an attraction for tourists, where the language and daily life of the community provide a different atmosphere for tourists (Kausar & Gunawan, 2018; Raimkulov et al., 2021). The community culture has great potential as a resource for interpretation, but currently it has not been developed. The

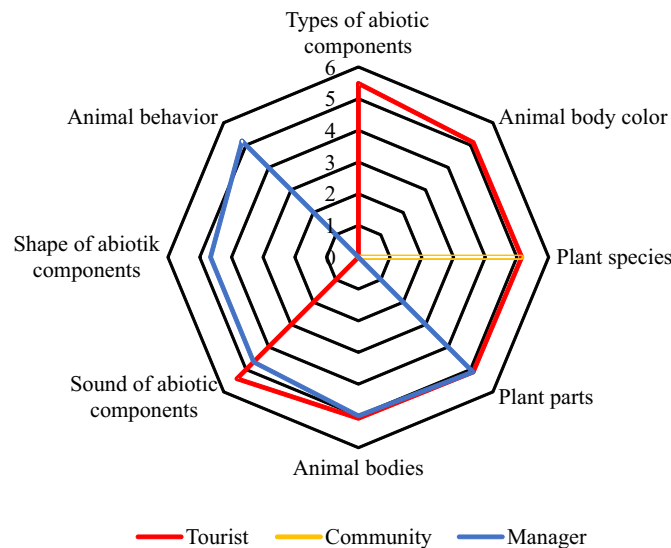


Figure 2 Perception towards characteristics of natural interpretation subject.

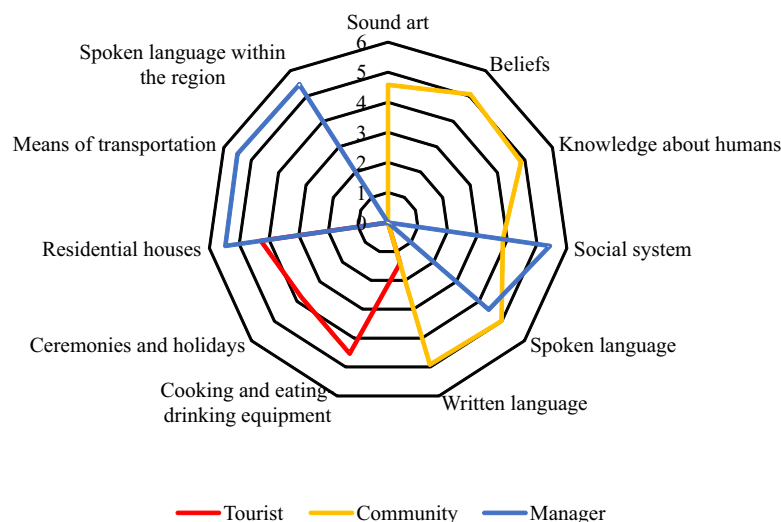


Figure 3 Perception towards characteristics of cultural interpretation subject.



low attention of tourists to the subject of cultural interpretation is suspected because the location of the traditional village area is in an area that is far away and difficult to reach by tourists. Besides, in general, the entrances to visits to national park areas that are opened for tourism are in areas where the main attraction is in the form of natural tourist attractions, not cultural tourism. White et al. (2013) stated that the lack of consumer awareness on the part of tourists, the scarcity of products available to tourists and the lack of utilization of partnerships between local product suppliers and tour operators caused the low interest of domestic tourists in several countries to the culture of local communities.

On the subject of cultural interpretation, knowledge systems (knowledge of humans), language (oral and written), and religious systems (beliefs) are subjects of interpretation that are quite prominent in the TNGHS area. This indicates that there is public awareness that the cultural aspects inherent in everyday life have an attraction for tourists. People do not need to display artistic attractions to attract tourist visits, but with the conditions they have, they can provide a different experience for tourists (McIntosh & Johnson, 2005; Cornelisse, 2020; Kausar & Gunawan, 2018; Raimkulov et al., 2021), and this is also educationally valuable for tourists (Mocior & Kruse, 2016). Educational experience, authenticity, personal interaction, genuine hospitality and emotion are important dimensions of the tourist experience in indigenous peoples (McIntosh & Johnson, 2005; Servidio & Ruffolo, 2016). Cultural subjects that are considered important by managers are social systems, written language, language in area management, means of transportation, and houses. The number of villages in and around the national park area, and the presence of indigenous communities are thought to provide an alternative to diverse cultural subjects (Raimkulov et al., 2021).

It is also important to introduce historical and cultural values in the national park area to the wider community as an intrinsic value for the development of the national park area (Mocior & Kruse, 2016; Radomskaya & Pearce, 2021). The national park area cannot be separated from the life of the surrounding community. In addition to economic value, there are also other important values contained in national park areas such as the value of local wisdom in natural resource management (Mavhura & Mushure, 2019; Djatmiko et al., 2021). Conservation areas and protected areas also have important resources for traditional subsistence uses such as fodder, plants or animals (Eagles & McCool, 2000). Communities often have deep spiritual ties

to resources within the region (Gunara et al., 2019). This becomes important for people who live close to the national park area, so that the community will have a strong interest in protecting the area.

The implementation of an interpretation program in order to introduce biodiversity and ecosystems, as well as culture around the national park area to tourists requires certain tools and methods as shown in Table 4. The use of various tools and methods is carried out in order to arouse feelings of wonder, awe, empathy, and concern audiences (Wolf & Croft, 2012; Lück, 2016; Tiberghien & Lennon, 2019; Dell'Eva et al., 2020; Tan & Choy, 2020; Ballantyne et al., 2021; Flower et al., 2021; Zhu et al., 2021). Traveling around is a method favored by many audiences in the TNGHS area, in this way tourists can enjoy open spaces and enrich their experiences in the national park area (Piccininni et al., 2018; Hudson, 2016). The results of the study indicate that the provision of subject-related and ecological information is highly favored by tourists and can be an important tool to encourage conservation-minded behavior (Vásquez Lavín et al., 2016; Moscardo, 2017; Muneenam et al., 2017; Tung et al., 2018).

Several studies have shown that the use of guide services can provide more satisfaction for visitors than the use of audio or self-guided (Moscardo, 2017; Beattie & Schneider, 2018), and direct experience in natural conditions is considered important by visitors (Lück, 2016; Muneenam et al., 2017; Dell'Eva et al., 2020; Farkic et al., 2021; Flower et al., 2021). One of the considerations that can improve services to visitors in the national park area is by involving more interpreters in the national park area (Dileep Kumar et al., 2020). In order to achieve optimum tourist satisfaction, interpretation programs and guided trips must be encouraged more optimally by the managers of the national park area (Moscardo, 2017; Beattie & Schneider, 2018; Xiang et al., 2020; Tatarusanu et al., 2021). Furthermore, one of the weaknesses in the implementation of the traveling method is the motivation of tourists in accepting the presence of a guide/interpreter on their tour. Tourist arrivals to the area are mostly with friends or family, which for some tourists is considered a personal activity. Officers/interpreters are usually involved if tourists want a guide for their travel activities.

**Polarization of stakeholder perceptions on the subject of interpretation** Differences in perceptions among stakeholders regarding the subject of interpretation need to be known to facilitate the formulation of policies regarding the preparation of interpretation programs within the

Table 4 Interpretation techniques for various methods

Space	Methods	Contents	Delivery techniques
Outdoor	Travel around, Tell a story On-site panel	Subject of interpretation, ecological subject, legends and myths related to the subjects	Tell stories at certain points along the way, Interspersed with play activities, interspersed with observation activities, panels are placed at certain points along the way
Indoor	Exhibition, education center	Subject of interpretation, ecological subjects	Using poster images, using card, videos, process flow

Source: Secondary data

TNGHS area. Information about the polarization of perceptions is also needed to find out about visitor needs and satisfaction with visits made by tourists and to determine subjects that need more attention in supporting the achievement of ecotourism management goals in the TNGHS area (Ballantyne et al., 2008; Mutanga et al., 2017). Based on the Kruskal-Wallis test, it can be said that there are significant differences between the 12 Asymp interpretation subjects Sig. = .000 <  $\alpha$  = 5% as shown in Table 5. This can be interpreted that the polarization scale of stakeholder perceptions of the subject of interpretation is very strong. Each stakeholder has different perceptions, motivations and preferences on the subject of interpretation of ecotourism products in the TNGHS area. Among the 12 interpretation subjects assessed, the abiotic component got a significantly higher score which means that the abiotic component received a more uniform perception from the respondents. Furthermore, the stakeholders have a strong polarization on the subject of language, livelihood systems, knowledge systems and arts.

Stakeholder perceptions of the subject of interpretation in the TNGHS area show a negative direction of polarization (score < 4) for each subject of interpretation. Cultural

subjects got the lowest mean score compared to all interpretation subjects. Although language subjects scored higher in various clusters, but in general stakeholder perceptions of cultural subjects were quite diverse. Cultural subjects scored high in the community and management clusters, but only a small percentage of tourists gave high ratings. This indicates that there is public awareness that culture can be an interesting subject for tourists and can be used as a good start for the development of cultural interpretation programs for communities around the national park area. Indigenous peoples and the many villages in/around the national park area are opportunities for the development of cultural interpretation in TNGHS (McIntosh & Johnson, 2005; Djatmiko et al., 2021; Radomskaya & Pearce, 2021).

Table 6 shows that the biggest difference in perception (value of asymp.sig <  $\alpha$  = 5%) for the 12 interpretation subjects occurred between tourists-community and tourist-managers. From the previous description it can be said that community are more inclined to cultural subjects, while tourists give a low perceived value to cultural subjects. The TNGHS area has many villages located within/directly adjacent to the national park area. The existence of the

Table 5 Result of difference test of stakeholder' perception related to interpretation subject attractiveness

Subject	Mean	Test statistics <sup>a,b</sup>		
		Kruskal-Wallis H	df	Asymp. Sig.
Flora	3.13	31.644	2	.000
Fauna	3.02	29.307	2	.000
Abiotic components	3.48	9.899	2	.007
Ecological phenomena	2.66	22.397	2	.000
Natural phenomena	2.85	25.833	2	.000
Language	3.14	47.025	2	.000
Living equipment	2.98	33.940	2	.000
Art	2.77	37.840	2	.000
Livelihood system	2.54	45.766	2	.000
Religious system	2.75	37.526	2	.000
Knowledge system	2.67	38.760	2	.000
Social system	2.88	28.175	2	.000

Note: a = Kruskal Wallis test; b = Grouping variable is stakeholder

Table 6 The results of the pairwise difference test among stakeholders related to the attractiveness of the interpretation subject

Subject	Asymp.sig value test statistics <sup>a</sup>		
	Tourist-Community	Tourist-Manager	Community-Manager
Flora	.000	.000	.032
Fauna	.002	.000	.002
Abiotic component	.549	.002	.009
Ecological phenomena	.002	.000	.049
Natural phenomena	.001	.000	.089
Language	.000	.000	.017
Living equipment	.000	.000	.006
Art	.000	.000	.052
Livelihood system	.000	.000	.175
Religious system	.000	.000	.077
Knowledge system	.000	.000	.194
Social system	.000	.000	.026

Note: Mann Whitney Statistic test; a = Grouping variable is stakeholders

community cannot be ignored and efforts will continue to be made to become a strong supporter for the management of the area. Although culture is not the main motivation for tourist visits, local cultural wisdom still needs attention from conservation area managers (Vitasurya, 2016).

The most prominent perception similarity regarding the subject of interpretation between groups of tourists and the community is the abiotic component (Sig value > .05). This indicates that abiotic components are more accepted as an important subject of natural interpretation, especially for tourists and the community. The sound of the river and the sound of waterfalls provide an attraction for tourists visiting the TNGHS area. The common perception between the community and managers on the subject of interpretation is the most prominent on the components of natural phenomena, arts, livelihood systems and knowledge systems (Sig value > .05).

The difference in perception that is quite large occurs in tourists and managers, while the smallest difference in perception occurs in the community and managers. This shows that tourists more positive response compared to other stakeholders. Greater tourist interest in natural subjects (especially in abiotic components) should be an important consideration in the development of interpretation programs within the TNGHS area. Meanwhile, the greater commonality of perception between the community and managers is a good basis for the development of interpretation programs outside the TNGHS area.

**Perception polarization among stakeholders in relation to the management of the TNGHS** Management of national park areas must not separate the conservation aspect from the socio-economic interests of the community in or around the national park area (Cochrane, 2000; Elwell et al., 2020). Community dependence on various resources in the area is still high. and will cause conflict if the manager rigidly enforces a ban on entry to the area for the surrounding community (Bhandari, 2011). As an area that has many villages in and around the area, increasing community support is one of the efforts to achieve the goals of sustainable national park management (Stem et al., 2003; Bushell & Bricker, 2017; Mayaka et al., 2018; Elwell et al., 2020; Sinaga et al., 2020; Muzambiq et al., 2021). Therefore, collaboration with stakeholders is very important (Manning & Anderson, 2012; Bushell & Bricker, 2017).

The abiotic component is an important subject of interpretation in the development of ecotourism products in the TNGHS area. Protection of abiotic components will provide a natural atmosphere as a medium of interpretation so that tourists can hear the sounds of nature (the sound of waterfalls and rivers), as well as enjoy the natural scenery of the mountains (Brown & Muhar, 2004; Hudson, 2016; Lane & Stoltman, 2017; Piccininni et al., 2018; Elwell et al., 2020; Farkic et al., 2021). Tourists also need to get more information about geological history, ecological processes involving abiotic components of the waters, or the relationship of community culture to abiotic components (Vásquez Lavín et al., 2016; Bowan & Dallam, 2020; Mutiara et al., 2021; Tauro et al., 2021).

Strong differences in perceptions among stakeholders regarding cultural aspects and the low assessment of

stakeholder perceptions on cultural subjects indicate that cultural subjects need to receive greater attention in managing interpretations in the TNGHS area. Even though the TNGHS area is not known as a cultural destination, but taking into account social and cultural conditions of the communities who still have a close dependence on resources in the national park area, the development of cultural interpretations still needs to be done (McIntosh & Johnson, 2005; Lonardi et al., 2020; Stoffle et al., 2020; Tauro et al., 2021).

Tourist stakeholders have a strong perception of the natural and language components. This shows that the cultural aspect also provides an attraction for tourists (Lonardi et al., 2020). Moreover it is known that in the TNGHS area, the *kasepuhan* indigenous people live who still closely hold on to their traditions. Providing wider access to tourists related to rural tourism activities is expected to provide another attraction and increase interest in cultural subjects (Elwell et al., 2020; Villamediana-Pedrosa et al., 2020). Audiences need to get more information about the people living around the area and their culture (Tung et al., 2018; Lonardi et al., 2020; Stoffle et al., 2020; Djatmiko et al., 2021). The use of publication media can be an option to disseminate information about cultural diversity in ecotourism destinations quickly and widely (Villamediana-Pedrosa et al., 2020).

Tourist stakeholders have a strong perception of the natural and language components. This shows that the cultural aspect also provides an attraction for tourists (Lonardi et al., 2020). Moreover, it is known that in the TNGHS area. The *kasepuhan* indigenous people live who still closely hold on to their traditions. Providing wider access to tourists related to rural tourism activities is expected to bridge the gap in interest in cultural subjects (Elwell et al., 2020; Villamediana-Pedrosa et al., 2020). Audiences need to get more information about the people living around the area and their culture (Tung et al., 2018; Lonardi et al., 2020; Stoffle et al., 2020; Djatmiko et al., 2021). The use of publication media can be an option to disseminate information about cultural diversity in ecotourism destinations quickly and widely (Villamediana-Pedrosa et al., 2020).

What needs to be avoided in interpreting community culture is allochronism, which is a term that places indigenous peoples in a different place from ourselves. Indigenous peoples are often seen as primitive and living in past civilizations (White et al., 2013). This view gives rise to stereotypes that often hinder policy change and prevent indigenous peoples from taking part in the global economy in their own way' (White et al., 2013; Gao et al., 2020). Indigenous peoples and traditional knowledge should not be viewed or described in an ancient and static condition in any field including in the field of ecotourism (Lonardi et al., 2020). Thus, socio-political support from the community for conservation will be obtained (Elwell et al., 2020; Hausmann et al., 2020).

In managing interpretation programs in the TNGHS area, it is very necessary to involve the community more deeply by making them interpreters (Stem et al., 2003; Mayaka et al., 2018; Sinaga et al., 2020). In principle, the community has deeper knowledge of aspects of local culture (Gunara et al.,



2019). Community culture has been attached to the natural characteristics that surround it. Communities have interacted with nature in such a way as to form harmony with nature and form knowledge in natural resource management (Tauro et al., 2021; Joa et al., 2018). The knowledge possessed by this community is very good when conveyed to tourists to provide a different perspective on the use of natural resources (Kausar & Gunawan, 2018; Gunara et al., 2019; Mavhura & Mushure, 2019; Stoffle et al., 2020). This will also help introduce the richness of biodiversity found in the national park area which is not widely known by the wider community (Vanermen et al., 2020).

Interpreter qualification is an important aspect in the interpretation program of ecotourism products in national parks. Quality interpreters are essential to provide travelers with a worthwhile journey (Wang et al., 2015; Xiang et al., 2020). In contrast to scouting, interpretation is oriented to the cognitive and emotional state of visitors so as to increase understanding, awareness, and clarify the perspectives and attitudes of tourists (Wearing & Neil, 1999; Cosco et al., 2010; Rivera et al., 2019; Xiang et al., 2020; Bowan & Dallam, 2020; Ballantyne et al., 2021) as well as to complement the experience enhance the quality of the experience and facilitate a deeper connection with nature (Powell et al., 2009; Tarver et al., 2019). Interpretive guidance does not appear to have been done much although it is very important in providing understanding and predicting psychological and cognitive outcomes (Powell et al., 2009; Cooley et al., 2020), and is a key factor for travel satisfaction (Dybsand & Fredman 2021; Rivera et al., 2019). Many interpreters carry out their duties without prior training or experience, and are unsure how to approach their role as communicators. In the national park management document, the TNGHS manager targets 12 community groups that can be fostered to increase public understanding regarding natural resource management (BTNGHS, 2017). This community groups have a non-tourism professional background. Therefore training related to interpretation methods and communication techniques is necessary to improve the quality of interpretation programs (Lane & Stoltman 2017; Ababneh, 2018; Xiang et al., 2020; Ballantyne et al., 2021). Community capacity and motivation to participate must continue to be improved, so that conservation missions are more easily communicated to the wider community (Orams, 1996; Alikodra, 2012; Rasoolimanesh et al., 2017; Mayaka et al., 2018; Meilani et al., 2019; Murti, 2019; Dileep Kumar et al., 2020; Elwell et al., 2020; Stoffle et al., 2020; Xiang et al., 2020; Djatmiko et al., 2021).

The interpretation method used must be one that makes it easier for the public to convey the message of interpretation, and is easily accepted by tourists as program users (Marschall et al., 2017; Ababneh, 2018; Tung et al., 2018; Tiberghien & Lennon, 2019; Sinaga et al., 2020; Ballantyne et al., 2021; Lennon & Tiberghien, 2021; Mutiara et al., 2021). The method of traveling around and telling stories is an appropriate method of involving the community. This method is a better approach for gaining emotional engagement with the landscape and its culture (Moscardo, 2017; Qi et al., 2017; Gao et al., 2018; Tatarusanu et al.,

2021). In addition, this method can absorb a larger number of people to accompany tourists during the holiday seasons.

Another way that can be used to involve the community in interpreting management in the national park area is to use the surrounding community as gatekeepers, equipment manufacturers and retailers, accommodation service providers, environmental organizations, and conservation support groups (Vitasurya, 2016). The development of strong partnerships with stakeholders is expected to form mutually beneficial collaborations and expand the reach of national park management (Manning & Anderson 2012; Elwell et al., 2020).

## Conclusion

The stakeholder's perception of the subject of interpretation is on the subject of nature-culture. Natural subjects that are considered important by stakeholders are abiotic components, flora and fauna, while cultural subjects that are considered important by stakeholders are more diverse (language, life equipment, arts religious system, knowledge system, and social systems). The strongest polarization occurs in tourist stakeholders. The tendency of tourists on natural subjects is in accordance with the conditions of the area which is a natural tourist destination. The results show that the greatest polarization among stakeholders is on cultural subjects. In addition, cultural subjects show a negative direction of polarization which indicates the weak attractiveness of this subject to stakeholders. Greater similarity of perception between the community and managers is a good capital to develop cultural subjects in the TNGHS interpretation program. This can provide benefits for both the community and the manager. The development of cultural subjects will bridge the interrelationship of community's social and cultural needs with the TNGHS area, as well as provide stronger support for the management of national park area. Cultural subjects are an important point in increasing community participation in and around the TNGHS area in supporting conservation efforts. Although basically stakeholders have an interest in cultural subjects, more efforts are needed to increase the value of cultural subjects for the development of interpretation programs. Several things need attention related to the implementation of the TNGHS interpretation program, namely increasing the community's readiness to engage in interpretation programs and increasing the attractiveness of cultural subjects of the community around the TNGHS area.

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