Jurnal Manajemen Hutan Tropika, *28*(3), 201–211, December 2022
EISSN: 2089-2063
DOI: 10.7226/jtfm.28.3.201

Scientific Article
ISSN: 2087-0469

Polarization of Stakeholder Orientation Towards Geotourism Development in the Mount Slamet and Serayu Mountainous Areas, Central Java Province

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Received October 25, 2021/Accepted July 25, 2022

Abstract

The success of geotourism development is strongly influenced by the orientation (*perceptions, motivations and preferences*) *of the stakeholders. An aim of the study was to analyze the polarization of stakeholder orientation towards geotourism development in the Mount Slamet and Serayu Mountainous areas, Central Java Province. Research instrument used a closed-ended questionnaire following the scoring pattern of "One Score One Indicator Scoring System". The sample of respondents was 8 stakeholder groups with a total of 1,252 respondents. The characteristics of the stakeholder was analysed by quantitative descriptive, while the indication of the polarization of the stakeholder orientation was analyzed by using the one way Anova statistical test. Results indicated that the polarization of stakeholder orientation had a positive direction and scale of polarization was strong. This conditions showed that there is a gap in the value of stakeholder orientation which makes the performance of geotourism development less than optimal. It is necessary to improve the quality of collaboration and cooperation so that there is no polarization in the orientation between stakeholders to achieve the sustainable geotourism development.*

Keywords: *polarization, orientation, stakeholder, geotourism, collaboration*

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Introduction

Geotourism is part of nature-based tourism with a focus on the attractiveness of geological resources, geological-based natural phenomena, the beauty of landscapes and other natural resources that are abiotic/non-biological (Newsome & Dowling, 2006; Hose, 2012; Sungkar & Brahmantyo, 2013; Dowling, 2014; Dowling & Newsome, 2017). Geotourism products can be found outside and inside conservation areas (national parks, natural tourism parks, forest parks); earth parks (geoparks) as well as in biosphere reserves (Newsome et al., 2012). It is common that objects of attraction to natural phenomena such as waterfalls, craters, caves, rock sites, and other geological features will coexist with objects of forest (flora and fauna) in national parks, geoparks or other areas. The combination of geological/abiotic natural phenomenon objects and forest resources (flora and fauna) objects will be the main/major attraction for tourists to visit it. Based on this, the presence of geotourism products is able to enrich nature based tourism products that already exist in various types of areas and natural tourist destinations (Boley & Nickerson, 2013; Dowling & Pforr, 2021).

Furthermore, the presence of geotourism products can also be useful for educating tourists and the wider community about various potential of geological disasters. Earthquakes, tsunamis, ground movements, volcanic eruptions, liquefaction and drought are examples of many types of geological disasters which in the last two decades have increased their frequency of occurrence. With geotourism activities that are full of educational activities, it is hoped that tourists and the wider community will have additional knowledge about how to adapt and mitigate against these natural disasters (Newsome & Johnson, 2013; Farsani et al., 2018; Mokhtari et al., 2019).

Geotourism is a multi-sectoral field that involves many parties or stakeholders in its management. These stakeholders have different roles and influences according to the type and level of importance to tourism (Nyanjom et al., 2018; Graci & Van Vliet, 2020). An important issue in relation to stakeholder analysis is the realization of synergistic collaboration between stakeholders in tourism development from the planning, implementation to evaluation phases (Gordon, 2012; Waayers et al., 2012; Stone, 2015; Towner, 2018). Norrish et al. (2014) stated that the first step in a series of geotourism development planning processes is to identify the stakeholders involved in it. This effort is very important because various studies state that the success of tourism development including geotourism is

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largely determined by the quality of cooperation from all relevant stakeholders (Graci, 2013; Czernek & Czakon, 2016; Wondirad et al., 2020). Furthermore, Newsome et al. (2012) reported that stakeholder involvement in geotourism management is very important because it can affect the success and failure in realizing the geotourism development goals that have been formulated.

Several studies on stakeholders in the field of geotourism were generally carried out with a focus on identifying the attributes of stakeholders in terms of their strengths and interests (Gordon, 2012; Norrish et al., 2014; Dowling & Newsome, 2017). Research with the theme of stakeholders in the orientation aspect of geotourism management is still rarely done. On this basis, research on the polarization of stakeholder orientation in geotourism development is very important to do. This study aims to analyze the polarization of stakeholder orientation towards geotourism development in the Mount of Slamet and Serayu Mountainous areas, Central Java Province. The results of this study are expected to be used to build collaboration between stakeholders so that a more optimal and sustainable geotourism development can be realized. The novelty of this research is the scope of the study which is expanded not only to the attributes of the interests and strengths of stakeholders but also to the orientation attributes (directions or tendencies) of stakeholders to various functions, benefits and patterns of geotourism development (Norrish et al., 2014; Poudel et al., 2014; Graci & Van Vliet, 2020; Haribawa et al., 2020). The analytical method is also extended by adding an analysis of the direction of polarization and the intensity or scale of the orientation polarization. Based on this extended analytical method, the hypothesis is provided: 1) Ha1 = The direction of stakeholder orientation toward geotourism development is negative, and 2) Ha2 = The scale of of stakeholder orientation toward geotourism development is low.

Methods

This research was conducted from November 2020 to February 2021 in the geotourism destination of Mount Slamet and Serayu Mountainous in Central Java Province.. Administratively, this geotourism destination is located in five regencies, namely Banjarnegara, Purbalingga, Banyumas, Cilacap and Kebumen (BARLINGMAS-CAKEB agglomeration). This geotourism destinations have the main attraction in the form of natural phenomena such as caves, craters, geothermal, rock outcrops, natural monuments, geological sites and panoramas of karst landscapes. There are four types of geotourism destinations in the study area, namely: 1) volcanoes, 2) plateaus, 3) geological reserves, and 4) karst landscapes as shown in Figure 1.

This geotourism destinations are the forest areas and geopark areas. The forest areas included protected forest, production forests and conservation forest. Protected and production forest are managed by State-Owned Forestry Company/Perhutani, while conservation forest included Mount Selok Nature Tourism Park and Nusakambangan Island Nature Reserve are managed by Natural Resource Conservation Center, Ministry of Environment and Forestry Indonesia. Subsequently the geopark areas is the Karangsambung- Karangbolong geopark that is managed by the goverment of Kebumen Regency, Central Java Province.

Orientation is the view that underlies thoughts, concerns or tendencies. Stakeholder orientations are a set of attitudes

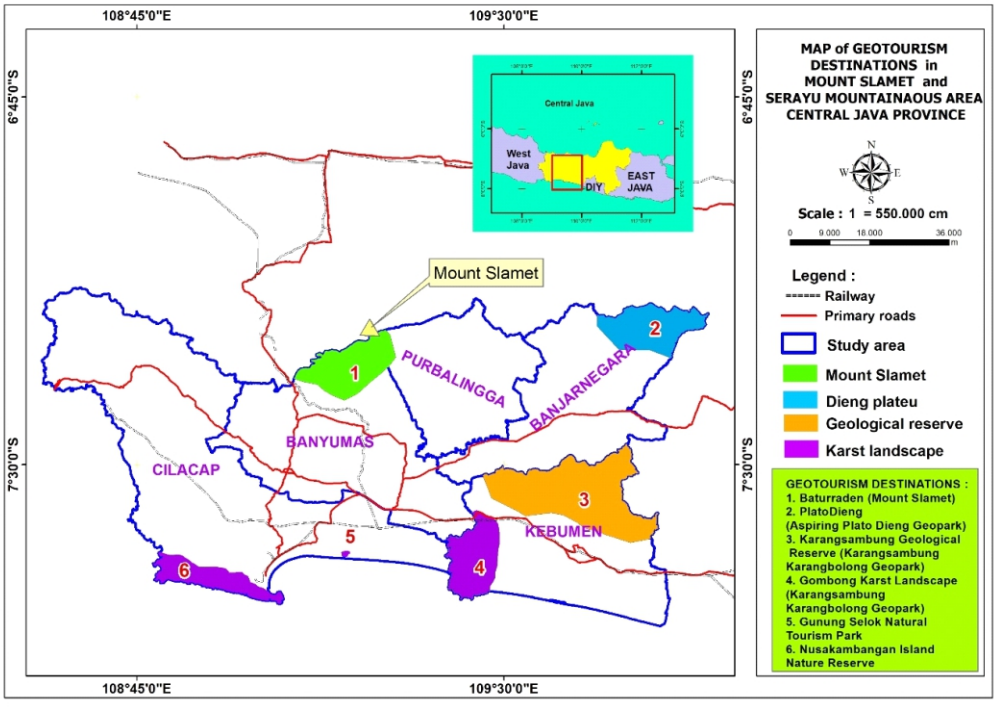

Figure 1 Study area in the geotourism destinations of Mount Slamet and Serayu Mountainous areas of Central Java Province (1 = Mount Slamet; 2 = Dieng plateau, 3 = geological reserve; 4–6 = karst landscape).

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given by stakeholders in the form of perceptions, motivations and preferences in geotourism development. Stakeholder perceptions include stakeholder knowledge and views on geotourism product and its impacts. While stakeholder motivations are related to the goals to be achieved in geotourism development. Furthermore stakeholder preferences are related to the choice of various matters related to geotourism management. Stakeholder perception consists of seven aspects, namely: 1) ecological perception, 2) economic perception, 3) socio-cultural perception, 4) satisfaction perception, 5) experience perception, 6) memories perception, and 7) education perception. Stakeholder motivation consists of three aspects, namely: 1) ecological motivation, 2) economic motivation, and 3) socio-cultural motivation. While the stakeholder preferences consist of: 1) preferences for institutional forms, 2) preferences for management themes, and 3) preferences for tourism products integration.

Stakeholder orientation data on geotourism development was obtained using a survey method with a research instrument in the form of a closed-ended questionnaire in order to obtain the correct value for each answer given by the respondent. The questions in the questionnaire were representations of various research variables (perceptions, motivations and preferences) which were measured by a scoring system following the pattern of "One Score One Indicator Scoring System" (Avenzora, 2008). The scoring for each indicator used a range of 1 to 7 with predicates on each score, namely: 1) very low, 2) low, 3) rather low, 4) normal, 5) rather high, 6) high, 7) very high. The sample of respondents consisted of 8 stakeholder groups with a total number of 1,252 respondents as shown in Table 1. The sampling method for the tourist respondents, rural community and urban community used the simple random sampling method, while for the other five groups of respondents used the purposive sampling method.

The position of stakeholders in geotourism development was mapped in the interest and power diagram. Analysis of stakeholder orientation (perceptions, motivations and preferences) in geotourism development was carried out using quantitative descriptive methods, while indications of stakeholder orientation polarization were analyzed by comparative method using One Way Anova statistical test (Untari et al., 2019). The polarization of stakeholder orientation was shown by the striking difference in the scores of aspects of perception, motivation and stakeholder preferences in geotourism development and the results of the different average score test indicated by the *p*-value or significance value. The polarization of stakeholder orientation is divided into two categories, namely the direction of polarization and scale polarization (Haribawa et al., 2020). The polarization of stakeholder orientation is positive if the average score was ≥ 4, while negative if the average score is < 4. Furthermore, the polarization scale can be seen from the calculated *F* value and its significance value (*p*-value). If the calculated *F* value ≥ *F* table or *p*-value ≤ α , then the polarization scale is strong. Meanwhile, if *F* value < from *F* table or *p*-value > α , then the polarization scale is low.

Results and Discussion

Validity and reliability research instrument test The results of the validity and reliability tests on the aspect of stakeholder orientation assessment are valid (*r* value > r table) and reliable (Cronbach's Alpha > 0.6) as shown in Table 2. This suggest that the aspect of stakeholder orientation survey can be analyzed further.

Stakeholder mapping Figure 2 shows that almost all stakeholders had a positive level of importance and power, except for the rural community and urban community stakeholders. For stakeholders who had high interests but low power, the empowerment of these groups must be further improved. Geotourism resources generally cover several areas that have a high risk of natural disasters and were prone to destructive disturbances. The stakeholder group that have the authority to manage various potential natural disasters and the safety of visitors in the geotourism destination area have been represented by the State-Owned Forestry Company (Perhutani) stakeholder and government agencies (Energy and Minerals Resources Service, Environment and Forestry Service and Tourism Office).

Several studies on tourism stakeholders reported that the stakeholder groups involved in tourism are: 1) tourists, 2) local communities, 3) tourism businesses, and 4) the government (Randle & Hoye, 2016; Waligo et al., 2013; Wei & Yang, 2013; Wondirad et al., 2020). Furthermore, (Graci & Van Vliet, 2020) stated that the stakeholders involved in tourism development can be divided into 8 groups, namely: 1) tourists, 2) local communities (residents), 3) local SMEs (local businesses), 4) national tourism entrepreneurs (national business chains), 5) government, 6) competitors,

Table 1 Number of stakeholder respondents in geotourism development

Stakeholder groups	Number of respondent (individu)
Tourist	400
Rural community	267
Urban community	204
Tourism entrepreneur	96
Tourism a wareness group	30
Rural goverment	165
Government agencies	60
State-owned forestry company (Perhutani)	30
Total	1,252

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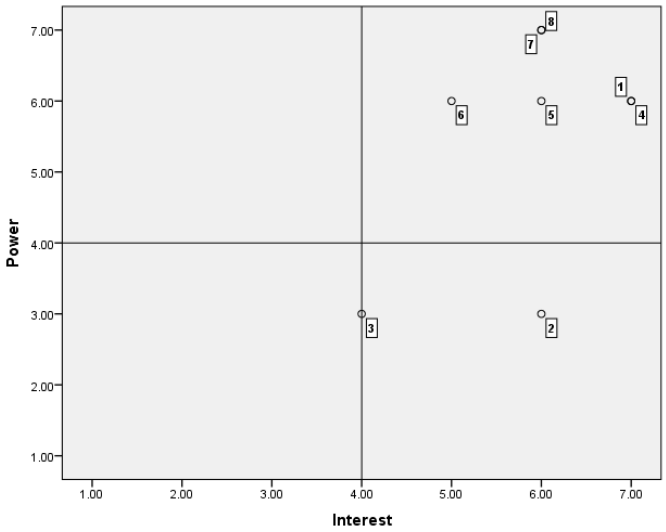
Table 2 Validity and reliability test on stakeholder orientations data

Aspect	Product moment correlation (*r*)	Cronbach's Alpha
Ecological perceptions	0.700 **	0.961
Economic perceptions	0.731 **	0.952
Socio -cultural perceptions	0.775 **	0.952
Satisfaction perceptions	0.777 **	0.918
Experience perceptions	0.751 **	0.891
Memories perceptions	0.777 **	0.902
Education perceptions	0.717 **	0.924
Ecological motivations	0.778 **	0.963
Economic motivations	0.730 **	0.948
Socio -cultural motivations	0.786 **	0.954
Preferences for institutional forms	0.580 **	0.882
Preferences for management themes	0.916 **	0.888
Preferences for tourism products	0.757 **	0.865

**) Sig. (2-tailed) = 0.000 and *p*-value < 0.05 = valid
Cronbach's Alpha > 0.65 = reliable



Note: 1) Tourist, 2) Rural community, 3) Urban community, 4) Tourism entrepreneur, 5) Tourism awareness group, 6) Rural goverment, 7) Government agencies, and 8) State-owned forestry company (Perhutani)

Figure 2 Stakeholder power and interests mapping.

7) workers (employees), and (8) activists/NGOs. In general, a stakeholder was defined as any group or individual who can influence or be influenced by the achievement of the organization's goals (Graci & Van Vliet, 2020; Manulang, 2017; Nyanjom et al., 2018; Vrontis et al., 2021). The types or categories of stakeholders in tourism development were based on the attributes of the interests and strengths (power) possessed by the stakeholders. The attribute of interest relates to the rights, needs, hopes, desires and aspirations of stakeholders. In the context of stakeholder relations, interests influence feelings of likes or dislikes and determine their position status whether as positive stakeholders (friends) or negative stakeholders (opponents). While the strength (power) attribute refers to the extent to which these stakeholders had the ability to impose their will in an activity or development project (Manulang, 2017).

Perceptions of geotourism development Stakeholder perceptions of geotourism development include various aspects related to the seven pillars or seven ecotourism principles that must be upheld in geotourism development. The enforcement of the seven pillars of ecotourism can make geotourism products and programs that are built to be referred to as "eco-geotourism". Ecological, economic and socio-cultural pillars were basically pillars of sustainable development that must be attached to all development sectors. The pillars of satisfaction, experience and memories are the pillars of the basic needs of traveling which are the rights of every tourist. These three pillars are very important and affect the number of visits and the desire to return to travel (willingness to revisit). The educational aspect of travel played a very important role for tourism development. Scientific information can be easily conveyed to the public through learning or educational activities that are packaged with travel activities. Figure 3 shows that the value of stakeholder perceptions of geotourism development was positive with a rather high/somewhat agree category (score above 4). The ecological, economic and socio-cultural pillars (sustainable development pillars) had an average score of 5.71 while the satisfaction, experience and memories pillars (travel needs pillars) had an average score of 4.91. Furthermore, the average score of the tourism education pillar was 4.67, which was the lowest score of all aspects.

The stakeholders thought that the development of geotourism was able to provide ecological, economic and socio-cultural impacts for the community and the

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surrounding environment. Their perception was uniform or polarized in a positive direction. This condition was in accordance with the results of research conducted by Norrish et al. (2014) on stakeholder perceptions of geotourism development in Perth Australia. The education aspect was a concern of stakeholders because geotourism products were rich in educational content, especially education about natural phenomena and geological/geological phenomena (Farsani et al., 2018; Mokhtari et al., 2019; Norrish et al., 2014; Walliss & Kok, 2014). The education aspect of travel should be a serious concern because the low interpretation and minimal number of tour guides can actually increase the negative impact on geotourism resources and the environment such as vandalism (doodles/graffiti), littering and other negative behaviors. Dowling and Newsome (2017) reported that geotourism objects and resources in various destinations were very vulnerable to damage and disturbance from tourist activities if there was no guiding and interpreting activity.

The quality of geotourism products was strongly influenced by the quality of the interpretation program and interpretation media such as brochures, information boards, and signs (Crawford & Black, 2012). The interactive delivery of information was also a concern of stakeholders and can be realized by the application of digital information technology applications. Another program that can be done was to hold a formal education program that is integrated with geotourism activities in the form of study tours. The student was a prospective consumer target for geotourism development (Damanik, 2013).

Avenzora (2018) suggested that in order to empower the community around geotourism destinations, it is better for the local community to be fully involved in tourist guiding activities by forming a guiding and interpreting service business unit. The competence of the surrounding community need to be improved optimally in terms of providing guiding and interpretation services so that there will be no degradation of social values and "economic leakage" due to the mastery of guiding and interpretation services by people from other regions. Furthermore, the process of activities and optimization of guiding services was also very useful for shaping public behavior that appreciates the importance of guiding and interpretation services in traveling to geotourism objects and destinations and other tourist destinations. Finnaly, with the activation of guiding and interpretation services at geotourism objects and destinations, it was hoped that a broad public awareness will be formed to implement a "full-guided system" in the implementation of natural tourism in geotourism objects and destinations.

Ecological motivation Ecological motivation is related to the interests of stakeholders in the use of natural resources for protection and conservation functions. The ecological motivations of geotourism development consist of: 1) to protect natural sites/geological sites (natural monuments), 2) to prevent excessive rock and mineral mining activities, 3) to preserve forest resources, 4) to preserve wildlife, 5) to maintain the quality of the landscape, 6) to maintain the quality and quantity of water resources, and 7) to maintain the local microclimate. Figure 4 shows that the score of ecological motivation on geotourism development was positive with a rather high category (mean score of 5.63).

Economic motivation Economic motivation is related to the interests of stakeholders in geotourism development for economic purposes. Economic motivation consists of: 1) to

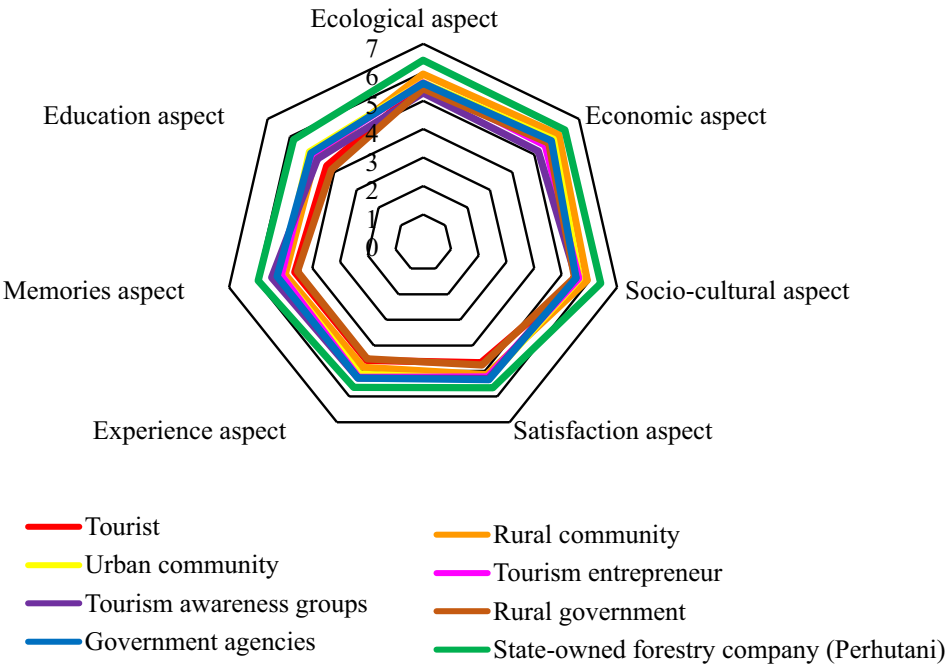

Figure 3 Perceptions of seven pillars ecotourism toward geotourism development.

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increase local community income, 2) to increase village government income, 3) to increase local revenue, 4) to increase tax and non-tax revenues, 5) to revive/dynamize business SMSE, 6) to revive productive business groups, Tourism Awareness Groups, cooperatives, and communal business associations, and 7) to increase tourism business investment in the regions. The economic motivation score for geotourism development was positive with a rather high category (average score of 5.69) as shown in Figure 4.

Socio-cultural motivation Socio-cultural motivation is related to the interests of stakeholders in geotourism development for educational purposes, increasing community participation and preserving local customs and culture. Socio-cultural motivation consists of: 1) to increase insight and knowledge, 2) to preserve the customs and culture of local communities, 3) to increase local community participation in development, 4) to improve community social relations, 5) to reduce urban development disparities and village, 6) to increase pride in regional identity, and 7) to preserve the values of local wisdom. Figure 4 shows that the score of socio-cultural motivation for geotourism development was positive with a rather high category (average score of 5.65).

A positive stakeholder motivation indicates that geotourism development can bring various benefits according to the type and level of interest of the stakeholders. Farsani et al. (2013) reported that the economic benefits of geotourism development included: 1) increasing local people's income, 2) driving the small and medium business sector, and 3) improving community skills in productive economic business. Norrish et al. (2014) reported that geotourism development was also able to increase local economic growth and create various business opportunities for the surrounding community and tourism business actors. In general, the benefits of geotourism development in socio-cultural aspects included: 1) preservation of regional identity, 2) increasing community participation in development, and 3) absorbing local workers (Farsani et al., 2012; 2013; 2018).

Preference for management institutional form The preference score for the institutional form of geotourism management was positive with a moderate category (average score of 4.92) as shown in Figure 5. Stakeholders had a high preference for the institutional form of local and communal geotourism management. This can be seen from the high preference scores on institutional forms such as: 1) communal business, 2) rural government enterprise, and 3) collaboration between all business actors and stakeholders involved. The tendency of stakeholders to choose institutional forms that were local and communal can be directed at the formation of one type of institution known as "communal business" (Avenzora, 2018). Practically, the concept of communal business was realized in the form of a geotourism business that was managed with joint capital between members of the local community with a forum similar to a cooperative or the like. Local community groups or indigenous peoples can form business associations which can be legalized by a notary deed or registered with the Ministry of Law and Human Rights Indonesia as a communal business institution.

In the implementation of communal business, (Avenzora, 2018) emphasized that a selected business did not only need to be jointly funded in the formation of share value units that can be paid by each Head of Family in the relevant area, but also needed to be ensured to be distributed regularly and

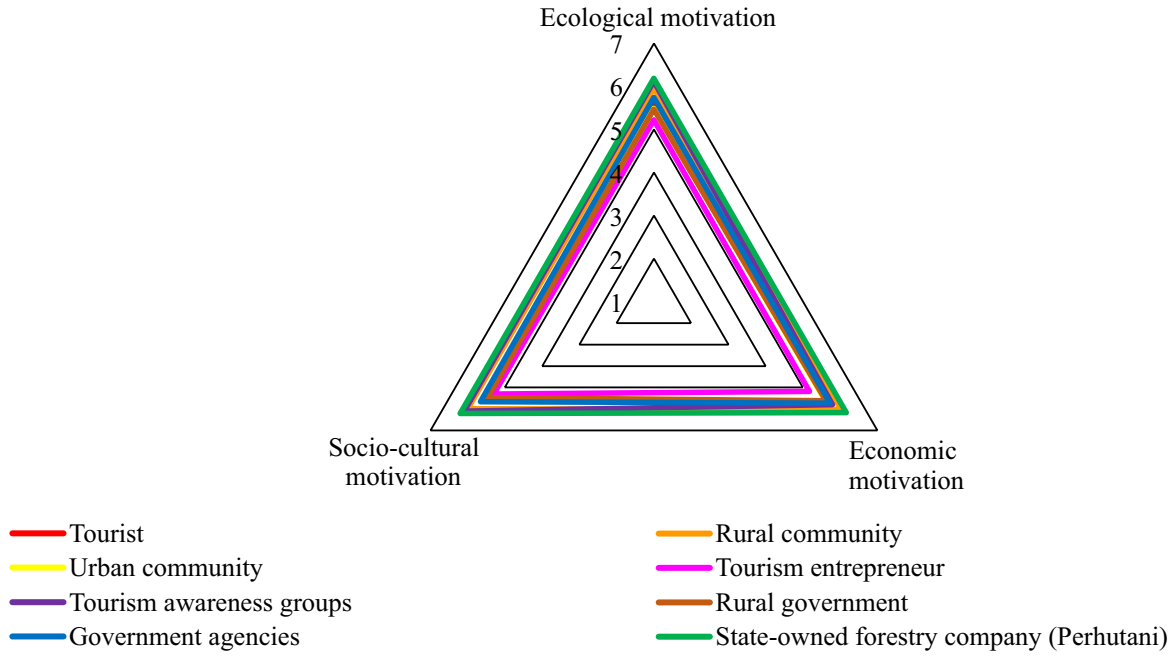

Figure 4 Stakeholder motivation on geotourism development.

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sustainably. Any Head of Family that have not been able to pay the unit value of the shares which were their rights may allow other Head of Family to hold them as "mortgage shares"; which at any time can be taken back at the same value by the original shareholder. As long as a share unit was still in a "pawned" position, then all existing financial benefits were the rights of the lien holder. All these rules can be stated in the form of Village Regulations from the relevant region, or can be stated in the form of the development of a Tourism Village Cooperative which was obliged to include all families in the area.

Preferences for management theme The preference score for the theme of geotourism management was positive with a rather high category (average score of 5.66) (Figure 6). This theme of geotourism management can be interpreted as labeling or branding that can be used to build competitiveness in the tourism business. The strength of the attraction of geotourism objects and destinations was the scientific value possessed by each natural phenomenon and geotourism resource. Scientific information from each object of this geotourism attraction must be delivered to tourists with fun educational activities. All stakeholders agreed that geotourism objects and destinations at the research site were used as a kind of "Edutourism Center" for tourists and the wider community. The theme of education was not only in the field of geology/earth science, but includes all relevant themes or fields of science including leadership, adventure, healthy lifestyle and environmental awareness education.

Preference for tourism product integration The preference score for the variety of tourism products integration in geotourism destinations was positive with a moderate category (average score of 5.05) (Figure 7). In order to improve the quality of meeting travel needs (satisfaction, experience and memories), these tourism products must be combined or integrated so that tourism products that were not monotonous will be realized. Stakeholder preferences regarding the integration of geotourism products were in line with stakeholder perceptions identified by Norrish et al. (2014) which stated that the development of geotourism objects and attractions must be integrated with other tourism products to make them more varied.

Polarization of stakeholder orientation In general, the direction of polarization of stakeholder orientation towards geotourism development was in a positive direction (score > 4). The polarization scale in each aspect shows that there were differences in scores in each group of respondents based on the significance value (p-value < 0.05 or F value > F table) as shown in Table 3.

The aspect of perception of the seven pillars of ecotourism the direction of polarization was positive (score > 4) with the meaning that stakeholders agree on the urgency of the enforcement of the objectives of the ecotourism pillar in geotourism development. The scale of perception polarization was quite strong with the results of significant score difference tests. It can be interpreted that stakeholders have different levels of knowledge about geotourism development. The aspect of ecological, economic and socio-cultural motivation the direction of polarization was positive (score > 4) with the meaning that stakeholders had a great interest or need for various benefits of geotourism development. The scale of motivation polarization was quite

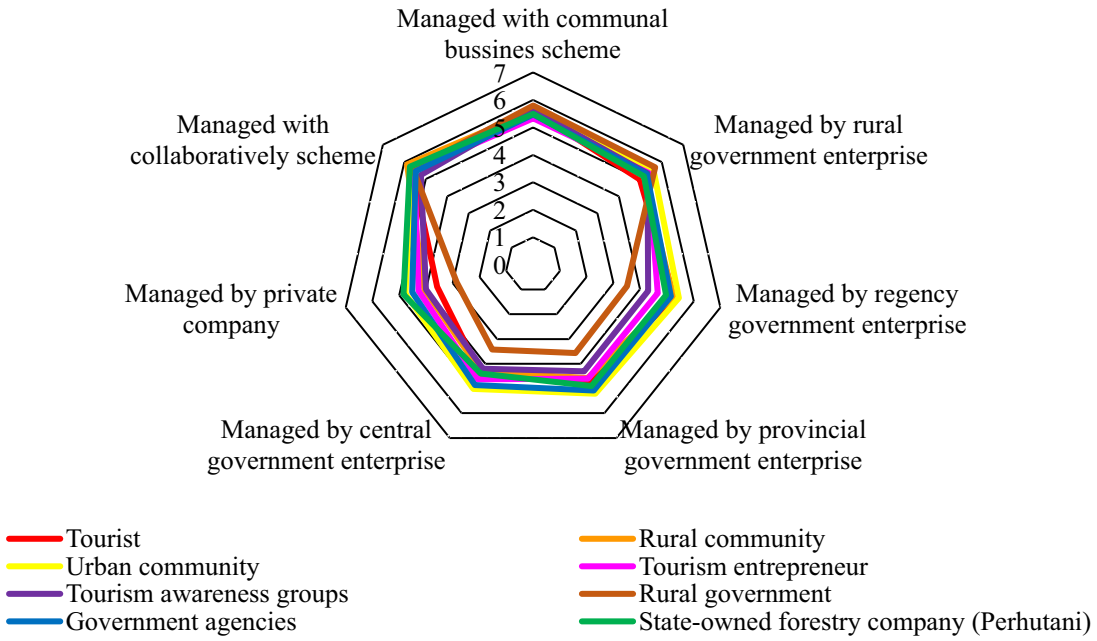

Figure 5 Preference for management institutional form.

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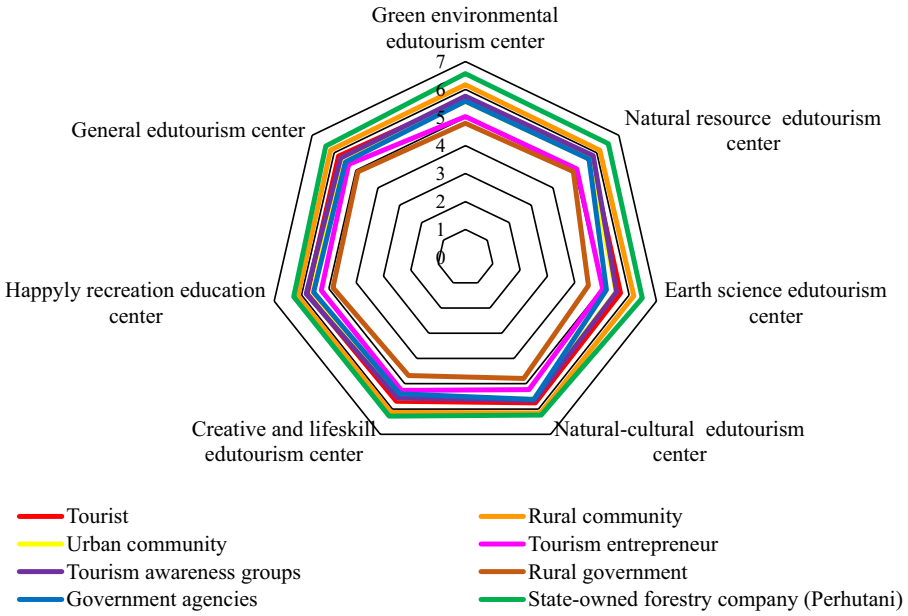

Figure 6 Preferences for management theme.

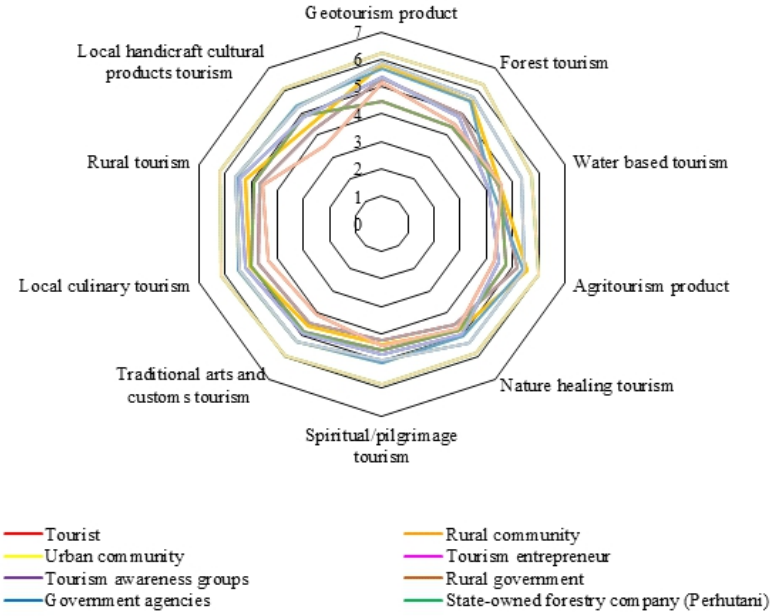

Figure 7 Preference of tourism product integration.

strong with the results of significant score difference tests. It was indicated that interpreted that stakeholders have different types of interests in geotourism development. Finally,the aspect of perference the direction of polarization was positive (score > 4) with the meaning that stakeholders had diverse choices on various aspects of management in geotourism development. The scale of preference polarization was quite strong with significant score difference test results. It can be suggested that stakeholders have different types of interests in geotourism development.

Efforts to identify the characteristics of stakeholders and their involvement (engagemnet) in tourism activities can be useful for realizing sustainable and optimal tourism development (Hose, 2012; Norrish et al., 2014). Information about the characteristics and attributes of stakeholders can be used to establish communication and strengthen

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Table 3 Compare mean test of stakeholder orientation scores on geotourism development

Aspect	Test parameters		
	Mean	*F* value	*p*-value
Ecological perception	5.65	5.603	0.000
Economic perception	5.80	6.665	0.000
Socio-cultural perception	5.68	4.942	0.000
Satisfaction perception	5.00	10.255	0.000
Experience perception	4.84	11.785	0.000
Memories perception	4.89	12.247	0.000
Education perception	4.67	15.121	0.000
Ecological motivation	5.63	9.046	0.000
Economic motivation	5.69	8.942	0.000
Socio-cultural motivation	5.65	10.044	0.000
Preferences for institutional forms	4.92	11.896	0.000
Preferences for management themes	5.66	20.507	0.000
Preferences for tourism products	4.86	16.297	0.000

Note: If *F* value ≥ *F* table or *p*-value ≤ 0.05 then there was a significant difference in the mean scores.
F table for $\alpha = 0.05$; df(7;1251) was 2.01

collaboration and reduce potential conflicts that may arise in the course of future geotourism development (Gordon, 2012; Norrish et al., 2014). An important issue in relation to stakeholder analysis was the realization of synergistic collaboration between stakeholders in tourism development from the planning, implementation to evaluation phases (Graci, 2013; Nyanjom et al., 2018; Stone, 2015; Wondirad et al., 2020). Collaboration between stakeholders was not an easy matter to realize because it requires a lot of resources and requires a long process. Therefore, an analysis of stakeholders was very important to do so that the collaboration process can be realized more quickly and potential conflicts of interest can be minimized. Various decisions and policies that were formulated become more legitimate(Graci & Van Vliet, 2020).

The objectives of geotourism development can basically be divided into three missions, namely: 1) realizing sustainable development in the tourism sector, 2) meeting the basic needs of tourists (satisfaction, experience and memories); and 3) provide enlightenment and insight about through fun educational programs. In order to achieve this goal, a systematic and integral management strategy concept is needed that is agreed upon by all stakeholders involved in geotourism development. The involvement of stakeholders in the management of geotourism starts from the development planning stage to the evaluation stage or it can be said that all phases of the development stages will certainly involve all stakeholders.

Conclusion

In general, the direction of polarization of stakeholder orientation towards geotourism development is positive. The polarization scale in each aspect shows that there are differences in perceptions, motivations, and preferences for each group of respondents towards geotourism development. This shows that there is a gap in the value of stakeholder orientation which makes the performance of geotourism development less than optimal. Base on this conditions, it is necessary to improve the quality of collaboration and cooperation so that there is no polarization in the orientation (perception, motivation and preferences) between stakeholders to achieve the sustainable geotourism development. Improving the quality of collaboration and cooperation in geotourism development is in accordance with the theory of stakeholder participation in realizing successful and sustainable development. The stakeholders have the same thoughts or perceptions on the enforcement of the seven pillars of ecotourism in geotourism development. From the aspect of motivation, stakeholders have a great motivation or interests for various ecological, economic and socio-cultural benefits from geotourism development. The stakeholders prefer local and communal institutional forms and integrating all existing tourism products. The theme "Edutourism center" was agreed to be chosen by the stakeholders as a mission in realizing sustainable geotourism development.

References

Avenzora, R. (2008). Assessment of tourism object potential: Aspects and indicators of assessment. In *Ecotourism: Theory and practice* (pp. 241–278). BRR NAD-Nias.

Avenzora, R. (2018). *Pengembangan pariwisata alam nasional di kawasan konservasi*. Bogor: Program Studi Manajemen Ekowisata dan Jasa Lingkungan.

Boley, B. B., & Nickerson, N. P. (2013). Profiling geotravelers: An a priori segmentation identifying and defining sustainable travelers using the Geotraveler Tendency Scale (GTS). *Journal of Sustainable Tourism*, *21*(2), 314–330. https://doi.org/10.1080/09669582.2012.692684

Crawford, K. R., & Black, R. (2012). Visitor understanding of the geodiversity and the geoconservation value of the

Giant's Causeway World Heritage Site, Northern Ireland. *Geoheritage*, *4*(1–2), 115–126. https://doi.org/10.1007/s12371-011-0049-6

Czernek, K., & Czakon, W. (2016). Trust-building processes in tourist coopetition: The case of a Polish region. *Tourism Management*, *52*, 380–394. https://doi.org/10.1016/j.tourman.2015.07.009

Damanik, J. (2013). *Pariwisata Indonesia: Antara peluang dan tantangan*. Yogyakarta: Pustaka Pelajar.

Dowling, R. K. (2014). Global geotourism-An emerging form of sustainable tourism. *Czech Journal of Tourism*, *2*(2), 59–79. https://doi.org/10.2478/cjot-2013-0004

Dowling, R. K., & Newsome, D. (2017). Geotourism destinations-Visitor impacts and site management considerations. *Czech Journal of Tourism*, *6*(2), 111–129. https://doi.org/10.1515/cjot-2017-0006

Dowling, R., & Pforr, C. (2021). Geotourism-A sustainable development option for Namibia. *Journal of Ecotourism*, *20*(4), 371–385. https://doi.org/10.1080/14724049.2021.1910699

Farsani, N. T., Carvalho, C. N., & Xu, K. (2018). Education as a key tenet of geotourism. In R. Dowling, & D. Newsome (Eds.), *Handbook of geotourism* (pp. 234–243). Elgar Press.

Farsani, N. T., Coelho, C., & Costa, C. (2012). Geotourism and geoparks as gateways to socio-cultural sustainability in Qeshm rural areas, Iran. *Asia Pacific Journal of Tourism Research*, *17*(1), 30–48. https://doi.org/10.1080/10941665.2011.610145

Farsani, N. T., Coelho, C. O. A., & Costa, C. M. M. (2013). Rural geotourism: A new tourism product. *Acta Geoturistica*, *4*(2), 1–10.

Gordon, J. E. (2012). Rediscovering a sense of wonder: Geoheritage, geotourism and cultural landscape experiences. *Geoheritage*, *4*(1–2), 65–77. https://doi.org/10.1007/s12371-011-0051-z

Graci, S. (2013). Collaboration and partnership development for sustainable tourism. *Tourism Geographies: An International Journal of Tourism Space, Place and Environment*, *15*(1), 25–42. https://doi.org/10.1080/14616688.2012.675513

Graci, S., & Van Vliet, L. (2020). Examining stakeholder perceptions towards sustainable tourism in an island destination. the case of Savusavu, Fiji. *Tourism Planning and Development*, *17*(1), 62–81. https://doi.org/10.1080/21568316.2019.1657933

Haribawa, P. A., Avenzora, R., & Arief, H. (2020). The polarization of orientation on cultural land utilization for ecotourism development amongst the local in Bali aga of Mount Lesung region. *Jurnal Manajemen Hutan Tropika*, *26*(1), 21–33. https://doi.org/10.7226/jtfm. 26.1.21

Hose, T. A. (2012). 3G's for modern geotourism. *Geoheritage*, *4*(1–2), 7–24. https://doi.org/10.1007/s12371-011-0052-y

Manulang, S. (2017). *Teori dan teknik analisis stakeholder*. Bogor: IPB Press.

Mokhtari, D., Roostaei, S., Khodadadi, M., Ahmadi, M., Ebrahimi, O., & Shahabi, H. (2019). Evaluation of the role of environmental education in Manesht and Ghelarang geotourism destination, Iran. *Journal of Quality Assurance in Hospitality and Tourism*, *20*(6), 681–708. https://doi.org/10.1080/1528008X.2019.1616039

Newsome, D., & Dowling, R. K. (2006). The scope and nature of geotourism. In R. K. Downling, & D. Newsome (Eds.), *Geotourism: Sustainability, impacts and management* (pp. 3–25). Oxford; Burlington, MA: Elsevier Butterworth-Heinemann. https://doi.org/10.1016/B978-0-7506-6215-4.50009-9

Newsome, D., Dowling, R., & Leung, Y. F. (2012). The nature and management of geotourism: A case study of two established iconic geotourism destinations. *Tourism Management Perspectives*, *2–3*, 19–27. https://doi.org/10.1016/j.tmp.2011.12.009

Newsome, D., & Johnson, C. P. (2013). Potential geotourism and the prospect of raising awareness about geoheritage and environment on Mauritius. *Geoheritage*, *5*(1), 1–9. https://doi.org/10.1007/s12371-012-0070-4

Norrish, L., Sanders, D., & Dowling, R. (2014). Geotourism product development and stakeholder perceptions: A case study of a proposed geotrail in Perth, Western Australia. *Journal of Ecotourism*, *13*(1), 52–63. https://doi.org/10.1080/14724049.2014.938654

Nyanjom, J., Boxall, K., & Slaven, J. (2018). Towards inclusive tourism? Stakeholder collaboration in the development of accessible tourism. *Tourism Geographies An International Journal of Tourism Space, Place and Environment*, *20*(4), 675–697. https://doi.org/10.1080/14616688. 2018.1477828

Poudel, S., Nyaupane, G. P., & Budruk, M. (2014). Stakeholders' perspectives of sustainable tourism development: A new approach to measuring outcomes. *Journal of Travel Research*, *55*(4), 1–16. https://doi.org/10.1177/0047287514563166

Randle, E. J., & Hoye, R. (2016). Stakeholder perception of regulating commercial tourism in Victorian National Parks, Australia. *Tourism Management*, *54*, 138–149. https://doi.org/10.1016/j.tourman.2015.11.002

Stone, M. T. (2015). Community-based ecotourism: A collaborative partnerships perspective. *Journal of Ecotourism*, *14*(2–3), 166–184. https://doi.org/10.1080/

14724049.2015.1023309

Sungkar, A., & Brahmantyo, B. (2013). Eco-geotourism in Indonesia. In F. Teguh, & R. Avenzora (Eds.), *Ecotourism and sustainable tourism development in Indonesia: Potential for learning and success* (pp. 184–230). Jakarta: Gramedia Pustaka Utama.

Towner, N. (2018). Surfing tourism and local stakeholder collaboration. *Journal of Ecotourism*, *17*(3), 268–286. https://doi.org/10.1080/14724049.2018.1503503

Untari, R., Avenzora, R., Darusman, D., & Sunarminto, T. (2019). Community responses to nature-based tourism promotion materials in Indonesia. *Jurnal Manajemen Hutan Tropika*, *25*(1), 17–27. https://doi.org/10.7226/jtfm.5.1.17

Vrontis, D., Christofi, M., Giacosa, E., & Serravalle, F. (2021). Sustainable development in tourism: A stakeholder analysis of the Langhe Region. *Journal of Hospitality and Tourism Research*, *10*(10), 1–33. https://doi.org/10.1177/1096348020982353

Waayers, D., Lee, D., & Newsome, D. (2012). Exploring the nature of stakeholder collaboration: A case study of marine turtle tourism in the Ningaloo region, Western Australia. *Current Issues in Tourism*, *15*(7), 673–692. https://doi.org/10.1080/13683500.2011.631697

Waligo, V. M., Clarke, J., & Hawkins, R. (2013). Implementing sustainable tourism: A multi-stakeholder involvement management framework. *Tourism Management*, *36*, 342–353. https://doi.org/10.1016/j.tourman.2012.10.008

Walliss, J., & Kok, K. (2014). New interpretative strategies for geotourism: an exploration of two Australian mining sites. *Journal of Tourism and Cultural Change*, *12*(1), 33–49. https://doi.org/10.1080/14766825.2013.868902

Wei, M., & Yang, R. (2013). A research on eco-tourism development models based on the stakeholder theory. *Applied Mechanics and Materials*, *291–294*, 1447–1450. https://doi.org/10.4028/www.scientific.net/AMM.291-294.1447

Wondirad, A., Tolkach, D., & King, B. (2020). Stakeholder collaboration as a major factor for sustainable ecotourism development in developing countries. *Tourism Management*, *78*, 104024. https://doi.org/10.1016/j.tourman.2019.104024