



Enhancing social cooperation through hiking tourism: A case study of the Selo route in Mount Merbabu National Park

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ABSTRACT

Background: Mount Merbabu is one of the leading natural tourist destinations in Central Java that attracts local and foreign tourists, primarily through the Selo Trail, which is famous for trekking activities. The number of visitors along the Selo Trekking Trail has increased significantly yearly. Tourism activities on this trail have a significant social and economic impact on the surrounding community, directly and indirectly. Therefore, it is essential to identify the social impact and estimate the economic impact of tourism in the area around the Selo Trekking Trail. **Method:** This research method uses a qualitative descriptive analysis method with a Likert scale to highlight tourism activities' social and economic impacts. This analysis involves collecting data through interviews, questionnaires, and observations to gain in-depth insight into the impact of tourism on local communities and their contribution to their economy. **Findings:** The study results indicate that tourism activities along the Selo Trekking Trail significantly influence community cooperation and social values. Tourism activities also contribute to community livelihoods, including actively managing tourism and forming volunteer groups. The interaction between tourists and local communities changes culture and social values and has a positive impact by rapidly diversifying residents' jobs. **Conclusion:** From the results of the study, it can be concluded that tourism on the Selo Trekking Trail has significant social and economic impacts on the surrounding community. This activity strengthens community cooperation, influences social values, and improves livelihoods and job diversification. Active community involvement in tourism management and forming volunteer groups are critical factors in optimally utilizing tourism opportunities. **Novelty:** This study provides new insights into how tourism on the Selo Trekking Trail affects the social and economic dynamics of local communities. The findings highlight positive changes in community cooperation, social values, and job diversification, which have yet to be widely explored in previous studies on the impact of tourism in the area. This study also underlines the importance of active community involvement in tourism management to maximize economic and social benefits.

KEYWORDS: impact of tourism, mount merbabu, selo trekking route

1. Introduction

Mount Merbabu National Park/*Taman Nasional Gunung Merbabu* (TNGMb) was redesignated from a protected forest area on the slopes of Mount Merbabu and the Tuk Songo Kopeng Nature Tourism Park to a national park. This park was established in 2004 based on the Decree of the Minister of Forestry Number: 135/Menhut-II/2004 dated May 4, 2004, concerning the Change of Function of Protected Forest and Nature Tourism Park in the Mount Merbabu Forest Group, encompassing an area of approximately 5,725 hectares

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(BTNGMb, 2010). TNGMb serves to protect and utilize natural resources. According to the Mount Merbabu National Park Management Plan (RPTN), TNGMb holds significant value in terms of biodiversity, hydrological function protection, tourism potential, and community empowerment (BKSDA JATENG 2006). The utilization of resources through tourism activities in the National Park, particularly in the utilization zone, is a form of protection for biological natural resources and their ecosystems (Nahriya, 2015).

TNGMb serves to protect biodiversity, hydrological functions, tourism potential, and community empowerment, including mountain climbing tourism. Climbing mountains is a popular activity among adventurous young people. One of the climbing destinations is Mount Merbabu in Central Java. Climbing at Merbabu can be done through several routes, one of which is the Selo TNGMb Route. Mountain climbing tourism provides economic benefits to the local community through tourist visits, as well as social impacts on the surrounding community.

Each hiking trail on Merbabu Mountain has its own unique characteristics and attractions. The Cuntel and Thekelan trails are located on the northern side of Mount Merbabu, specifically in Kopeng Village, Semarang Regency. The Wekas and Suwanging trails are on the western side, in Kenalan Village and Banyuroto Village, Magelang Regency. The Selo trail is the only trail on the southern side, in Tarubatang Village, Boyolali Regency. The Selo Hiking Trail is the most frequently visited by hikers. According to Satyatama's research (2008), the Selo Hiking Trail is favored because it is easily accessible, offers beautiful scenery, and provides a comfortable hiking experience.

The interest of tourists in climbing Mount Merbabu, especially via the Selo Hiking Trail, has significantly increased year by year. This is evident from the 800% increase in the number of tourists on the Selo Hiking Trail from 2014 to 2018 (BTNGMb 2018). Statistics from the Mount Merbabu National Park Office show that the total number of hikers on the Selo Trail in 2014 was 10,000 people, which exponentially rose to 80,000 people in 2018 (BTNGMb 2018). The majority of hikers at Merbabu are students aged 15-24 years, mostly from Central Java and Yogyakarta (Purtanto et al., 2020).

The existence of TNGMb is closely related to the surrounding community. Tarubatang Village has a population of 2,730 people, most of whom work as farmers. Besides farming, many residents of Tarubatang Village, especially in Genting Hamlet, engage in tourism by opening food stalls, managing basecamps, and providing transportation services. Tourism activities on the Selo Hiking Trail have both direct and indirect impacts on the social and economic aspects of the local community. According to Ismail et al. (2017), tourism activities directly create jobs and indirectly offer business opportunities in the sale of goods and services. However, the development of tourism also brings negative impacts on the community and the area (Yulia, 2017). Therefore, an analysis of the social and economic impacts of hiking tourism activities on the Selo Hiking Trail of TNGMb is necessary to make policies that benefit the local economy and mitigate their negative impacts on the community.

2. Methods

This research focuses on the Selo hiking trail tourist attraction in TNGMb. The study encompasses three villages: Tarubatang, Selo, and Senden. These villages are located within the administrative area of Selo District, Boyolali Regency, Central Java, Indonesia. Data collection was carried out using writing tools, a digital camera, a recording device, and maps related to the Selo Hiking Trail tourist attraction in Mount Merbabu National Park (TNGMb). The instruments used were interview questionnaires.

2.1 Data collection

The data used in this research is categorized into primary and secondary data. Primary data includes social impacts collected through interviews. Secondary data is gathered through literature reviews and field observations, covering the general conditions of the

research area and other relevant literature. The data collected focuses on two research variables: social variables and economic variables. Social variables include criteria such as the level of community cooperation, social values, and livelihoods. More detailed information regarding the types and methods of data collection is presented in Table 1.

Table 1. Matrix of types, data collection methods, and data analysis.

Variabel	Indicator	Data source	Data collection method	Data analysis method
Level of cooperation	Intensity of community interaction	Community members	Interviews, observations, and literature review	Descriptive analysis using Likert scale
Social values	Community behavior change			
Livelihoods	Livelihood structure			

2.2 Interviews

Interviews were conducted using two methods: direct (offline) and indirect (online). Direct interviews were conducted face-to-face with respondents, while online interviews used a questionnaire (Google Forms) distributed via the WhatsApp application. This semi-structured interview was conducted with a guide consisting of several multiple-choice and open questions. Although it has a basic structure, this interview remains flexible and is limited according to the theme and flow of the conversation.

Respondents to obtain data on social variables consisted of the community of Ginting Hamlet, Tarubatang Village, Selo District, Boyolali Regency. The number of respondents to be interviewed was 30 people. The community's respondents were selected using the purposive sampling technique, which is a sample selection technique based on specific criteria according to the research objectives. The respondents selected met one or more of the following criteria: having lived in Ginting Hamlet for at least ten years, being involved in tourism activities, or being community leaders.

2.3 Data analysis

Descriptive analysis was obtained from respondents' perceptions of the social conditions in the community. To analyze the social impact of tourism on the Selo Climbing Trail in the Gunung Merbabu National Park, descriptive analysis using a Likert scale was employed. The Likert scale method measures individuals' attitudes, opinions, and perceptions towards social events or phenomena (Riduwan, 2010). Data were analyzed quantitatively and presented in tables and graphs. Qualitative analysis was conducted to complement the quantitative data collected through in-depth interviews. The Likert scale method provides values that reflect individuals' perceptions and responses to a phenomenon. Respondents' statements were scored on a scale of 1 to 5, with indicators ranging from very low to very high. The upper and lower limits are detailed in Table 2.

Table 2. Upper and lower limits of values

Criteria	Score	Minimum and maximum values (number of respondents x score)
Very low	1	30
Low	2	60
Medium	3	90
High	4	120
Very High	5	150

The interval range is used to obtain the range of values for each criterion. The determination of the interval range uses the following Equation 1.

$$\text{Interval range} = \frac{(\text{highest value} - \text{lowest value})}{\text{number of criteria}} \quad (\text{Eq. 1})$$

$$\text{Interval range} = \frac{150 - 30}{5}$$

$$\text{Interval range} = 24$$

The interval is used to determine the range of values for each criterion. This range of values is obtained from the conclusion of the Likert scale. The selection of criteria can be inferred from the results of the Likert scale based on respondents' statements. The value intervals for each criterion are detailed in Table 3.

Table 3. Range of values for each criterion

Criteria	Value range
Very low	30-54
Low	55-78
Moderate	79-102
High	103-126
Very High	127-150

3. Results and Discussion

Tourism development involves an essential element, namely, society. According to Faizun (2009), tourism development can positively or negatively impact society. However, the use of positive or negative labels in assessing the impact of tourism on social change in society is very subjective and requires a more in-depth sociological study. Therefore, this study uses the Likert scale analysis method to present data on the magnitude of the impact of several social indicators on the community around the Selo Hiking Trail tourist attraction. Based on the study's results, there are three main criteria for the social impact of society due to the development of a tourist attraction, namely the level of cooperation, social values, and livelihoods.

3.1. Social impact on cooperation levels

The local community around the Selo Climbing Route tourism site generally maintains a strong sense of communal cooperation in its daily life. According to findings in Table 10, tourism development has a moderate impact on community cooperation efforts. Hijriati (2013) asserts that ecotourism can enhance community interaction and foster collaboration in tourism management. Cooperation among local communities related to the Selo Climbing Route tourist site occurs between residents and the management of the Mount Merbabu National Park (TNGMb), particularly Resort Selo. However, increased interaction among communities can also escalate potential conflicts due to communication challenges.

The table highlights that tourism along the Selo Climbing Route has enhanced community cooperation. These rural communities highly uphold social norms such as cooperation and mutual support in all aspects of communal life, not limited to tourism alone. Nevertheless, tourism growth encourages more intensive interaction and collaboration among community members within the tourism sector. Efforts for cooperation among community members are organized through various local organizations to maintain focus on their specific interests and prevent unrelated agendas. Established groups include the Selo Volunteer Group, Mount Merbabu Fire Care Community, as well as Guide and Porter Groups. This collaboration extends beyond these groups to involve broader community engagement, consistent with Cohen's (1984) theory on tourism impacts regarding local community involvement and wider societal interaction.

Before the establishment of the Selo Climbing Route tourism, the local community had already collaborated with the management of TNGMB in various fields, such as land and water resource utilization, firewood collection, and forest fire prevention. The Selo Climbing Route is officially managed by TNGMB and falls under the responsibility of Resort Selo. Staff limitations at Resort Selo necessitate cooperation with the community in managing activities along the route. This assessment reflects active community involvement in tourism planning, management, and supervision. However, this involvement remains limited, with only a few community representatives engaged through volunteer groups or employed as formal workers at Resort Selo, while most community members participate passively through the informal sector or local tourism companies.

Table 4. Social impact of cooperation levels

Indicator of Cooperation Level	Score	Score Criteria
Cooperation among community members	111	High
Cooperation between the community and National Park management	94	Medium
Formation of joint ventures	96	Medium
Community activities	93	Medium
Average	98.5	Medium

Based on Table 4, tourism in the Selo Hiking Trail significantly influences the formation of joint ventures. Generally, the development of tourism motivates the local community around the area to establish businesses independently or collaboratively (Prasetyo & Suryoko, 2018; Teguh & Avenzora, 2023). Typically, businesses on the Selo Hiking Trail are individually owned but often involve family members in their operations. However, some collective enterprises have emerged, particularly in souvenir sales and car rentals. No collective enterprises are seen for the operation of base camps, food stalls, or equipment rentals, mainly due to the limited capital of residents, especially those from Genting Hamlet at the entrance of the trail.

Before tourism developed in the Selo Hiking Trail, the local community already engaged in various cultural and religious activities, such as village clean-ups, traditional ceremonies (*merti desa*), mountain charity events (*sedekah gunung*), communal prayers (*sadranan*), traditional music performances (*suronan*), and harvest offerings (*sedekah hasil panen*). These activities are deeply rooted in local customs and are consistently practiced by the community. The presence of tourism in the Selo Hiking Trail has had a positive impact on community activities as seen in Table 10. This impact is indirect but beneficial, with some residents using income from tourism to support larger community events. Despite the development of tourism, the community continues to maintain its traditional activities, as indicated by Putri (2017) findings that most Selo residents still actively participate in these cultural and religious practices.

3.2 The social impact of social values

Social values are principles agreed upon by a society regarding what is right and wrong in social interactions. The development of tourism activities on the Selo Hiking Trail has significantly impacted changes in some social values of the surrounding community (Table 5). This can be attributed to the interaction between local residents and tourists, creating opportunities for cultural exchange in attitudes, behaviors, and etiquette (Tafalas, 2010). Several indicators of social impact based on social value criteria can be seen in Table 5.

Generally, the local community around the Selo Hiking Trail are native speakers of the Javanese language in their daily lives. Tourism activities on the trail have significantly influenced changes in the linguistic style of the surrounding community (Table 5). The noticeable change is that more residents are proficient in Indonesian, and some even master foreign languages such as English. Thelisa et al. (2018) relate this to the increased awareness of the local community about the importance of language skills in serving

tourists. The improvement in language proficiency among the community is due to interactions with tourists from various regions, including abroad, necessitating the use of Indonesian and sometimes foreign languages like English. Martono (2014) notes in his book that the development of a society can be seen from its intrinsic motivation to progress and achieve. This motivation is evident from the efforts of the community around the Selo Hiking Trail to improve their language skills.

In addition to language changes, the increased development of tourism on the Selo Hiking Trail has also significantly impacted changes in the dressing style of the surrounding community (Table 5). The most noticeable change is among those who work as guides or porters. This is due to their high level of interaction with tourists, facilitating the transfer of information regarding tourists' lifestyles or clothing, especially for hiking. Another reason for this change is the awareness among guides and porters about the established hiking standards. This change extends to the wider community through interactions among community members themselves. Overall, the community's knowledge of more comfortable clothing options for cold weather has increased, encouraging residents to make appropriate choices regarding clothing quality.

Table 5. Social Impact of Social Values

Indicators of Social Values	Score	Criteria score
Language style	112	High
Clothing style	110	High
Criminal actions	44	Very Low
Violent actions	64	Low
Average	82.5	Medium

Based on Table 5, the majority of respondents stated that the impact of tourism on criminal activities around the Selo Climbing Trail area is very low. Incidents such as theft and discreet alcohol consumption have occurred at the Selo Climbing Trail tourist location. According to interview findings, there was only one reported case of motorcycle theft and three cases of tourists losing their helmets, suspected to involve other tourists. Additionally, there have been several cases of tourists consuming alcohol discreetly in the Selo Climbing Trail area. However, these cases were peacefully resolved through community intervention and warnings to the perpetrators. As a result, in recent years, there have been no police reports regarding criminal activities at the Selo Climbing Trail tourist location. Crime remains a fundamental issue in tourism, affecting the tourism site's image. Both local residents and national park authorities have taken preventive measures to deter criminal activities, including night patrols and advising tourists to adhere to regulations.

During the development of the Selo Climbing Trail tourism, local residents have perceived minimal impact regarding violent incidents (Table 5). Cases of violence primarily involve disputes among tourists due to misunderstandings and are rare. There have been no reports of violence involving local residents. Preventing violence remains a major concern for both site managers and the community, as the smooth operation of tourism heavily relies on visitor safety. According to Mahagangga (2008), the frequency of violent incidents can affect tourists' safety and comfort. The low incidence of violence is attributed to the community's awareness in creating a comfortable environment and minimal interference from external parties outside the community and national park authorities. Additionally, the majority of tourists are over 20 years old and have at least a high school education, which somewhat influences the emotional maturity level of tourists.

3.3 The social impact of livelihoods

According to Table 6, it is evident that tourism activities along the Selo Climbing Trail have a significant impact on the livelihoods of the surrounding community. The development of tourism provides opportunities for local residents to gain employment,

increase income, and create new job opportunities. Typically, the community around the Selo Climbing Trail tourist site consists of farmers (BPS Boyolali Regency, 2021). These residents cultivate horticultural crops such as cabbage, potatoes, shallots, garlic, chili, and mustard greens on their farmland. With the growth of tourism, the community generally continues farming while also engaging in wage labor or entrepreneurial activities in tourism to enhance their income. The social impact based on livelihood criteria can be observed in Table 6.

The Selo Climbing Trail tourist location has a very high impact on the increase in the number of new livelihood types (Table 6). According to Hermawan (2016), tourism development can create various new job opportunities and business prospects in tourism that were previously nonexistent. Before the development of the Selo Climbing Trail tourist site, the community had only two types of livelihoods: farming and trading at the market. However, with the development of tourism, there are now recorded to be 10 types of jobs in the tourism sector, both business-based and volunteer-based. The growth and increase in tourist visits to the Selo Climbing Trail are closely related to the diversification of tourist characteristics and needs. This creates opportunities for local residents to establish new businesses or livelihoods that meet various tourist needs.

This phenomenon also explains why the Selo Climbing Trail tourist location has a very high impact on changing the livelihoods of the local community (Table 6). The shift in the livelihoods of local residents towards opening businesses or working in the climbing tourism sector has occurred rapidly. Based on research respondent data from business units, only 3 business units managed basecamps and restaurants out of 15 units established before 2014. Data from Resort Selo in 2017 shows that there are now 19 business units managing basecamps and dining facilities. This increase also applies to car rental services, souvenir sales, and equipment rentals. The roles of porters and climbing guides, initially performed by only 10 local residents in 2014, have now become the most widely performed part-time jobs by local residents, especially men aged 20-50 years, with 70 individuals registered with TNGMB.

Table 6. Social impact on livelihoods

Employment Indicators	Score	Criteria Score
Number of livelihood types	148	Very high
Changes in community livelihoods	149	Very high
Employment absorption and income improvement	150	Very high
Work time allocation	145	Very high
Average	148	Very high

Based on the data presented in Table 6, the social impact of the Selo Climbing Trail tourist site most felt by local communities is the increase in employment opportunities and income absorption. The high impact of job absorption for local residents is evident from almost all employees in tourism businesses being locals, especially from the Selo District. This provides additional income for the community, as previously they relied mainly on agricultural yields as their primary source of income. According to research data, many residents with side jobs in tourism actually earn higher supplementary incomes compared to their main earnings.

The development of the Selo Climbing Trail tourist site has a significant impact on the amount of time local residents spend working in the tourism sector (Table 6). The allocation of work time reflects the intensity of workers' attention to their tasks, thereby influencing management success and economic value (Fauziyah et al., 2014). The intensity of community involvement in managing the Selo Climbing Trail tourism businesses is relatively high. This is evident from the weekly working hours dedicated by residents to tourism-related activities, often exceeding non-tourism-related working hours. This indicates that the development of the Selo Climbing Trail tourist site has increased the amount of time local residents dedicate to tourism-related work or activities. The high

allocation of work time to tourism-related or supporting jobs is due to the significant number of tourists visiting the Selo Climbing Trail not only on weekends but also on weekdays.

4. Conclusions

The development of the Selo Hiking Trail tourism has significant social and economic impacts on the community around the area. Tourism activities have a social impact with moderate score criteria for the level of cooperation and social values of the community, and they have a very high impact on the community's livelihoods. Increased cooperation occurs because the community is actively involved in tourism management and forming volunteer groups in the tourism sector.

Changes in social values in the community occur due to interactions between tourists and local communities, which allows for the exchange of information and culture. In addition, changes in community livelihoods occur massively and quickly, influenced by the increase in the number of tourists and the popularity of the Selo Hiking Trail tourist attraction. The high intensity of interaction in tourist attractions, both between communities, between communities and managers, and between communities and tourists, needs to be managed and appropriately controlled by the management of Mount Merbabu National Park to minimize the potential for conflict and negative changes in social conditions. This management can be done through an informal approach or by making a joint agreement between the parties involved. Further research is needed to evaluate the positive or negative social impacts in the community around the Selo Hiking Trail tourist attraction from various sociological perspectives or theories.

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References

- BPS Kabupaten Boyolali (Badan Pusat Statistik Kabupaten Boyolali). (2021). *Kabupaten Boyolali dalam Angka [Boyolali Regency in Figures]*. Boyolali: BPS Kabupaten Boyolali. <https://boyolalikab.bps.go.id/id/publication/2021/02/26/e6f91c6c91f03cb27d516218/kabupaten-boyolali-dalam-angka-2021.html>
- BKSDA Jateng (Balai Konservasi Sumber Daya Alam Jawa Tengah). (2006). *Rencana Pengelolaan Taman Nasional Gunung Merbabu [Management Plan of Gunung Merbabu National Park]*. BKSDA Jawa Tengah.
- BTNGMb (Balai Taman Nasional Gunung Merbabu). (2010). *Zonasi Taman Nasional Gunung Merbabu [Zoning of Gunung Merbabu National Park]*. Balai TNGMb.
- BTNGMb (Balai Taman Nasional Gunung Merbabu). (2014). *Zonasi Taman Nasional Gunung Merbabu [Zoning of Gunung Merbabu National Park]*. Balai TNGMb.
- BTNGMb (Balai Taman Nasional Gunung Merbabu). (2018). *Statistik Balai Taman Nasional Gunung Merbabu 2018 [Statistics of Gunung Merbabu National Park 2018]*. Balai TNGMb.
- Cohen, E. (1984). The sociology of tourism: Approaches, issues, and findings. *Annual Review of Sociology*, 10(1), 373–392. <https://doi.org/10.1146/annurev.so.10.080184.002105>
- Faizun, M. (2009). *Dampak perkembangan kawasan wisata Pantai Kartini terhadap masyarakat setempat di Kabupaten Jepara [The impact of tourism development in Kartini Beach on the local community in Jepara Regency] [Undergraduate thesis]*. Universitas Diponegoro. http://eprints.undip.ac.id/18208/1/MOH_FAIZUN.pdf
- Fauziyah, E., Diniyati, D., & Widyaningsih, T. S. (2014). Curahan waktu kerja sebagai indikator keberhasilan pengelolaan hutan rakyat "Wanafarma" di Kecamatan Majenang Kabupaten Cilacap [Work time allocation as an indicator of the success of community forest management "Wanafarma" in Majenang Subdistrict, Cilacap Regency]. *Jurnal Penelitian Hutan Tanaman*, 11(1), 53–64. <https://doi.org/10.20886/jpht.2014.11.1.53-63>
- Hermawan, H. (2016). Dampak pengembangan desa wisata Nglanggeran terhadap ekonomi masyarakat lokal [The impact of Nglanggeran tourist village development on the local economy]. *Jurnal Pariwisata*, 3(2), 105–117. <https://doi.org/10.31294/par.v3i2.1383>
- Hijriati, E. (2013). *Pengaruh ekowisata berbasis masyarakat terhadap kondisi ekologi, sosial dan ekonomi di Kampung Batusuhunan, Sukabumi [The influence of community-based ecotourism on the ecological, social, and economic conditions in Batusuhunan Village, Sukabumi] [Thesis]*. Institut Pertanian Bogor. <https://repository.ipb.ac.id/handle/123456789/66783>
- Ismail, M. K. J., Mawardi, M. K., & Iqbal, M. (2017). Analisis dampak sosial ekonomi pengembangan pariwisata Kota Batu bagi kawasan sekitar [Analysis of the socio-economic impact of tourism development in Batu City on the surrounding area]. *Jurnal Administrasi Bisnis*, 51(1), 1–7. <https://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/2099>
- Mahagangga, I. G. A. O. (2008). Premanisme dan pariwisata: Suatu perspektif kajian budaya [Premanism and tourism: A cultural studies perspective]. *Analisis Pariwisata*, 8(2), 7–16.
- Martono, N. (2014). *Sosiologi Perubahan Sosial: Perspektif Klasik, Modern, Postmodern, dan Poskolonial [Sociology of Social Change: Classical, Modern, Postmodern, and Postcolonial Perspectives]*. Rajawali Pers.
- Nahriya, D. A. (2015). *Pengembangan ekowisata Umbul Songo di Taman Nasional Gunung Merbabu Jawa Tengah [Development of ecotourism at Umbul Songo in Gunung Merbabu*

- National Park, Central Java*] [Thesis]. Institut Pertanian Bogor. <https://repository.ipb.ac.id/handle/123456789/78014>
- Prasetyo, B., & Suryoko, S. (2018). Dampak pengembangan pariwisata terhadap perkembangan UMKM pada Kawasan Wisata Dieng [Impact of tourism development on the growth of micro, small, and medium enterprises in the Dieng Tourism Area]. *Diponegoro Journal of Social and Politics*, 1(1), 1–11. <https://doi.org/10.14710/jiab.2018.22034>
- Purtanto, D. R., Hariyanto, & Benardi, A. I. (2020). Perilaku pendaki gunung dalam mengurangi kerusakan lingkungan yang terjadi di Taman Nasional Gunung Merbabu [Behavior of mountain climbers in reducing environmental damage in Gunung Merbabu National Park]. *Jurnal Edu Geo*, 8(2), 121–129. <https://journal.unnes.ac.id/sju/edugeo/article/view/41170>
- Putri, I. R. (2017). Tradisi masyarakat Selo dan pariwisata di Taman Nasional Gunung Merbabu, Boyolali Jawa Tengah [Traditions of the Selo community and tourism in Gunung Merbabu National Park, Boyolali, Central Java]. *Sasdaya Journal*, 1(2), 199–218. <https://doi.org/10.22146/sasdayajournal.27782>
- Riduwan. (2010). *Metode dan Teknik Menyusun Proposal Penelitian (Untuk Mahasiswa S-1, S-2, dan S-3) [Methods and techniques for writing research proposals (for undergraduate, master's, and doctoral students)]*. Alfabeta.
- Satyatama, T. (2008). *Perencanaan beberapa jalur interpretasi alam di Taman Nasional Gunung Merbabu Jawa Tengah dengan menggunakan sistem informasi geografis [Planning of several nature interpretation trails in Gunung Merbabu National Park, Central Java, using geographic information systems]* [Thesis]. Institut Pertanian Bogor. <https://repository.ipb.ac.id/handle/123456789/11094>
- Tafalas, M. (2010). *Dampak pengembangan ekowisata terhadap kehidupan sosial dan ekonomi masyarakat lokal studi kasus ekowisata bahari Pulau Mansuar Kabupaten Raja Ampat [The impact of ecotourism development on the social and economic life of local communities: A case study of marine ecotourism on Mansuar Island, Raja Ampat Regency]* [Thesis]. Institut Pertanian Bogor. <https://repository.ipb.ac.id/handle/123456789/41156?show=full>
- Teguh, F., & Avenzora, R. (2013). *Ekowisata dan Pembangunan Pariwisata Berkelanjutan di Indonesia: Potensi, Pembelajaran, dan Kesuksesan [Ecotourism and Sustainable Tourism Development in Indonesia: Potential, Learning, and Success]*. Kementerian Pariwisata dan Ekonomi Kreatif.
- Thelisa, Budiarsa, M., & Widiastuti. (2018). Pengaruh pariwisata terhadap kondisi sosial budaya masyarakat Karimunjawa, Jawa Tengah [The impact of tourism on the socio-cultural conditions of the Karimunjawa community, Central Java]. *JUMPA*, 4(2), 228–239. <https://ojs.unud.ac.id/index.php/jumpa/article/download/36680/22183>
- Yulia, Y. (2017). *Analisis dampak ekonomi dan lingkungan kegiatan wisata di Objek Wisata Pantai Alam Indah, Kota Tegal, Provinsi Jawa Tengah [Economic and environmental impact analysis of tourism activities at Pantai Alam Indah Tourist Site, Tegal City, Central Java Province]* [Undergraduate thesis]. Bogor Agricultural University. <http://repository.ipb.ac.id/handle/123456789/90246>

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