

Tourist Perceptions of Environmental Quality And Tourism In Bendung Lepen, Giwangan, Yogyakarta

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Abstract. This study examines tourists' perceptions of the environmental quality and tourism services at Bendung Lepen, an ecotourism destination in Yogyakarta, initiated by local communities. Bendung Lepen offers scenic views of the Gajah Wong River and irrigation canals filled with tilapia and goldfish, in addition to providing environmental services such as irrigation, fish cultivation, and water flow management. Understanding tourists' perceptions of environmental quality and the destination's services is critical for sustainable tourism development. This research aims to assess how tourists perceive the environmental conditions and tourism offerings at Bendung Lepen. Data were collected through a purposive sampling method, surveying 60 tourists using a questionnaire. Descriptive analysis was applied to evaluate the perceptions. The findings reveal that tourists consider the environmental quality at Bendung Lepen to be good, with indicators such as cleanliness, waste disposal facilities, water clarity, air quality, and natural beauty being well-regarded. From a tourism perspective, tourists also perceive the destination as safe, with satisfactory cleanliness, accessible recreational and information facilities, and good service quality. These findings highlight the importance of maintaining environmental quality and improving tourism facilities to enhance the sustainability of the destination. Further research could focus on improving tourist behavior to minimize the environmental impact of tourism activities. **Keywords:** ecotourism, environmental quality, sustainability, tourist perceptions

1 Introduction

Tourism development in urban areas based on local communities is currently widely spreading, especially in the Special Region of Yogyakarta. Known as a destination for local and foreign tourists, Yogyakarta is increasingly promoting various choices of tourist

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attractions. Not only rural areas, tourist destinations are also available in urban areas with the added value of being close to the city center and various culinary delights that can be visited. Based on the tourist [1] it was found that almost all tourists who came to Yogyakarta expressed their desire to come again in the future. One of the attractions of tourist attractions in the area which is considered to influence tourists' intentions to return is its originality and strong cultural atmosphere.

Environmental quality, on the other hand, is one aspect of assessment that will shape the image of a tourist destination. Furthermore, environmental quality tends to influence tourists' intentions to return to visit the same location. As a form of effort to increase the number of visitors, visitor satisfaction with the environmental quality of tourist locations needs attention. In their research, [2] showed that visitors to hotels as accommodation service providers showed dissatisfaction with hotel facilities, cleanliness and maintenance. After the pandemic, the tourism sector experienced quite drastic shocks. However, in the process of reopening the doors to tourist destinations, environmental quality aspects have become a major concern for visitors. This has been expressed by [3] who found that several factors were confirmed to have a significant influence on domestic tourists' decisions in choosing tourist destinations, namely health and cleanliness were the main factors in choosing a destination.

Expectations in this case play an important role in shaping a person's perception regarding their visit to a tourist destination. Researchers believe that previous experience will have an influence on the way a person interprets something. The expectations of tourists who travel with the aim of utilizing leisure and relaxation time should meet environmental quality standards and tourist destinations that meet them can have an impact on a good image, positive perception and even intentions to return to visit ([4] On the other hand, tourist behavior is an important thing to observe because currently, the issue of damage to natural tourism due to the behavior of visiting tourists is increasing to the point of being disturbing [5]Based on this point of view, this research aims to look at tourists' perceptions of the environmental quality and tourism of Bendung Lepen. Bendung Lepen is a tourist destination that offers attractions in the form of views on the banks of the Gajah Wong River and irrigation canals filled with goldfish cultivation. As a pioneering tourist destination, one way of developing tourist locations can be done by looking at tourists' perceptions of the quality of the environment and Bendung Lepen tourism.

2 Methods

The location of this research took place in the Bendung Lepen tourist area in Giwangan District, Yogyakarta City. The existence of Bendung Lepen itself has changed quite a lot in the Mrican Village area which was previously slum with irrigation which was used as a place to dispose of household waste into a clean and orderly family-friendly tourist location. Bendung Lepen was inaugurated in 2019 and was initiated by local residents with an awareness of the importance of protecting the environment and a desire to make changes. A total of 60 respondents who were visitors to the Bendung Lepen tourist location were interviewed using a structured questionnaire. Respondents were determined using purposive sampling, where visitors were interviewed regarding their perceptions of the quality of the environment and tourism, which were obtained from their experience of visiting the Bendung Lepen tourist attraction. Aspects asked about environmental quality include environmental cleanliness, the condition of irrigation channels, air conditioning, and natural beauty. Meanwhile, the Bendung Lepen tourism perception indicators that were asked about included

aspects of security, cleanliness, availability of facilities, management services, information facility providers, and accessibility.

3 Result and Discussion

3.1 Visitor Perceptions of Bendung Lepen Tourism

Visitors perceptions of Bendung Lepen tourism were analyzed to understand visitors' views, experiences and satisfaction while touring Bendung Lepen. Managers can use the research results to determine factors that need improvement in managing the Bendung Lepen tourist attraction. The assessments include security, cleanliness, provision of recreational facilities, services to visitors, availability of information, and ease of access to tourist locations.

Security is a state of security or peace of mind against the risk of danger due to environmental factors. The safety factor of tourist attractions is an added value and an opportunity for tourists to visit [6] In this research, safety is ensured from accidents due to the location of Bendung Lepen on the edge of the Gajah Wong River and the existence of barriers and warning signs. Apart from that, it is safe from a material perspective, such as theft of valuables. Based on Table 1, it is known that 36.67% of respondents said Bendung Lepen was very safe, another 58.88% said Lepen Weir was safe, and another 5% said Lepen Weir was less safe. Most respondents stated that Bendung Lepen is safe, which means CCTV monitors 24 hours, security officers, and parking attendants guard vehicles. Respondents stated that it was less safe due to the lack of guardrails at the edge of the irrigation canal, which could pose a risk of physical accidents for children. The security factor guarantees that everyone will have safety, whether property, soul or life. The security factor in a tourism area is an added value and increases the opportunity for tourists to visit [6], [7]

Table 1. Assessment of Bendung Lepen Visitors regarding security (N=60)

Visitor Perception	Percentage (%)
Very safe	36,67
Safe	58,33
Less safe	5,00

Cleanliness is one aspect that supports the continuity of the tourism business. Environmental cleanliness provides comfort to visitors and is a form of environmental conservation. A good level of cleanliness will influence the intensity of visits. Clean environmental conditions will encourage visitors to return to visit these tourist attractions. This aligns with research by [7] that cleanliness and orderliness of natural tourist attractions can create a safe and comfortable atmosphere for visitors. Table 2 shows that 56.67% of respondents stated that the cleanliness level of Bendung Lepen was in the good category, another 43.33% stated that the cleanliness level of Bendung Lepen was in the moderate category, and no respondents stated that the cleanliness level of Bendung Lepen was in the bad category. The majority of respondents stated that the cleanliness level of Lepen Bendung was in the good category, meaning that the environmental area was free from scattered rubbish because lots of rubbish bins had been provided, but in practice there were still many piles of rubbish that had not been adequately processed and had accumulated in the environment around Lepen Bend.

Cleanliness must also be applied to the infrastructure in Bendung Lepen, such as toilets, places to eat, and places of worship. Regular maintenance is required to maintain cleanliness and ensure visitor comfort. The cleanliness of Bendung Lepen can also be seen in the fish pond, which is free from rubbish. Fish ponds have no plastic waste, but fish carcasses are often found in fish ponds. Overall, the management has carried out regular cleaning of the pool. The cleanliness of Bendung Lepen is the collective responsibility of all parties involved, including visitors, tourism managers, and traders selling at the location. This aligns with research by [8] that shows that tourist cleanliness is essential in developing tourist attractions and is the responsibility of all parties concerned at that location.

Table 2. Assessment of Bendung Lepen Visitors regarding cleanliness (N=60)

Visitor Perception	Percentage (%)
Good	56,67
Moderate	43,33
Bad	0,00

Tourist facilities are a complementary tool for staying temporarily while visiting a tourist attraction. The development of tourist facilities must be balanced with the needs and desires of tourists. Providing tourist facilities is one of the important things and can be a special attraction for tourists at a tourist attraction (Rosa and Pradini, 2023). Tourist facilities in Bendung Lepen include toilet facilities, parking lots, places of worship, places to eat, food stalls and children's recreation areas. Tourists' perceptions of tourist facilities are presented in Table 3. Based on these tourist facilities, 68.33% of respondents stated that tourist facilities in Bendung Lepen were adequate. This is in line with research by [9] that indicates that adequate conditions can influence tourists, and providing adequate facilities can create comfort and satisfaction for tourists and make it easier for them to travel. As many as 30% of respondents stated that tourist facilities in Bendung Lepen were very adequate and the remaining 1.67% stated that they were inadequate. The presence of respondents who stated that the facilities were still inadequate indicated the need for additional facilities to attract more visitors and maintain the level of visits. This is in line with research by [10] that the quality of its facilities determines the success of tourism in attracting visitors. The better and more facilities you have, the more consumers will visit again, this is because consumers feel satisfied and cared for.

Table 3. Assessment of Bendung Lepen Visitors regarding tourist facilities (N=60)

Visitor Perception	Percentage (%)
Very adequate	30,00
Adequate	68,33
Inadequate	1,67

Service includes various activities carried out by the company to meet customer expectations. Service here refers to services provided by service providers, in this case tourism managers, which include aspects such as convenience, speed, relationships, abilities and friendliness demonstrated through attitudes and behavior in providing services to visitors. This service quality has a significant impact on the level of customer satisfaction [11]. Based on Table 4, 53.33% of visitors they are stated that the services of managers and traders in the tourist area in receiving visits and serving visitors at the Bendung Lepen tourist attraction were in the good category and the remaining 46.67% of visitors stated that the tourist services at

Bendung Lepen were good. Very good. Based on this, it can be interpreted that the tourism services in Bendung Lepen are in the good category, where the managers and traders in the Bendung Lepen tourist area have a high sense of social responsibility and always apply 5S (smile, greet, greet, polite, courteous) towards visitors. tourism, so visitors will feel comfortable and interested in returning. This is in line with research by [12] which states that service quality has a very important role in improving tourists' experience and satisfaction during their visit, so that tourists will feel comfortable and desire to return.

Table 4. Assessment of Bendung Lepen Visitors regarding tourist facilities (N=60)

Visitor Perception	Percentage (%)
Very good	46,67
Good	53,33
Not good	0,00

Information facilities are complete for a tourist attraction to support the quality of the visiting experience, maintain safety, and support operations and accessibility while at or to the tourist location. The means of information in this research are the availability of maps at tourist locations, as well as directions and guidebooks. Visitors' perceptions of information facilities are presented in Table 5. As many as 35% of respondents stated that the information facilities in Bendung Lepen were very adequate, 58.33% stated that the information facilities in Bendung Lepen were adequate, and another 6.67% stated that they were inadequate. This is because the only information available is in the form of an information board containing a map of the location of tourist attractions, the history of the founding of Lepen Weir, and an information board that prohibits taking fish from the pond. Tourist attractions are not only visited because of their natural beauty, but also related to accommodation, facilities, rates, cleanliness and clear visitor information. Tourism-supporting facilities and infrastructure are important elements in tourism development, one of which is tourist destination information boards [13].

Table 5. Assessment of Bendung Lepen Visitors regarding information facilities (N=60)

Visitor Perception	Percentage (%)
Very adequate	35,00
Adequate	58,33
Inadequate	6,67

Accessibility is an important facility that a tourist destination must have as a connecting network to get to a tourist destination. Accessibility includes everything that can make it easy for tourists to visit a tourist destination [14]. On the other hand, this access is identified with transferability, namely the ease of moving from one area to another [15]. The accessibility referred to in this research includes the condition of the road and whether or not the path traversed by respondents is easy or not to reach Bendung Lepen. The assessment of Bendung Lepen visitors regarding accessibility is shown in Table 6.

Table 6. Assessment of Bendung Lepen Visitors regarding accessibility (N=60)

Visitor Perception	Percentage (%)
Very easy	61,67
Pretty easy	36,67
Difficult	1,67

Table 6, shows that 61.67% of respondents stated that accessibility to Bendung Lepen was very easy, another 36.67% stated that accessibility to Bendung Lepen was quite easy, and another 1.67% stated that accessibility to Bendung Lepen was difficult. Most respondents stated that accessibility to Bendung Lepen is very easy, this is because Bendung Lepen is already on Google Maps, making it easier for visitors to get to the location. Apart from that, the condition of the road to Bendung Lepen is good, equipped with directions to the location, and can be passed by four-wheeled vehicles. However, several respondents stated that road accessibility was difficult because steep slopes could be dangerous if you were not careful and parking for four-wheeled vehicles was limited. Therefore, there needs to be cooperation between tourist attraction managers and the local government to widen the road to the tourist area to increase visitor comfort. This is in line with research by [15] which states that accessibility or ease of visiting really supports the progress of tourism. The better the accessibility of a tourist attraction, the more comfortable visitors will feel visiting a tourist attraction.

3.2 Visitors' Perceptions of the Environmental Quality of Bendung Lepen

The environmental quality of a tourist attraction is related to tourism sustainability and environmental sustainability. Analysis of visitor perceptions of environmental quality has an important role in supporting a better tourism management system to improve tourism quality. The purpose of collecting this data is so that managers can understand the factors that need to be improved in the environmental management of the tourist attraction. The environmental quality assessment includes several indicators: the condition of rubbish piles, availability of rubbish bins, ease of disposing of rubbish, clarity of pool water, condition of rubbish in irrigation channels, air condition and natural beauty. Visitors' perceptions of environmental quality in Bendung Lepen are presented in Figure 1

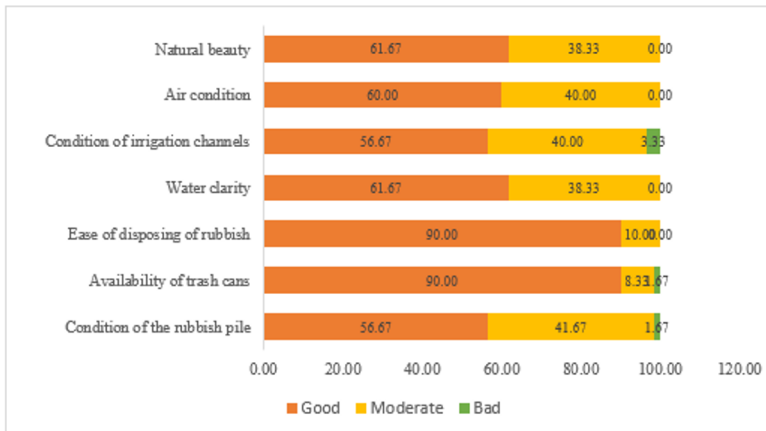


Fig 1. Visitors's perception of the Environmental Quality of Bendung Lepen (N=60)

Tourism businesses produce organic waste that can rot and inorganic waste that cannot rot [16]. Consumption and production activities carried out by economic actors in tourist

attractions are one of the contributors to piles of rubbish. Based on Figure 1, the research results show that 56.67% of tourists stated that the condition of the rubbish pile at Bendung Lepen was good, 41.67% said it was fair, and the rest thought that the condition of the rubbish pile at Lepen Bend was bad. This is because there is only some rubbish in the Bendung Lepen tourist area and the environmental conditions are still comfortable and odorless. In the tourism industry, cleanliness is one of the factors that influences the attractiveness of tourist destinations [17]. This opinion is in line with research by [18] that visitors will be interested in visiting when the tourist environment is clean from rubbish so that they will feel that the tourist attraction is suitable for releasing their burdens from their daily routine by enjoying the natural atmosphere and views presented.

The availability of rubbish bins supports the environmental cleanliness of tourist attractions. The availability of sufficient rubbish bins for all economic actors at tourist attractions will reduce the amount of rubbish thrown carelessly. The survey results showed that as many as 90% of respondents stated that the availability of rubbish bins was in the good category and as many as 8.33% stated that the availability of rubbish bins was in the medium category. This shows that the availability of rubbish bins at the Bendung Lepen tourist attraction is adequate, as there are many rubbish bins at strategic points, such as around gazebos, seating areas, and vendor stalls. However, the remaining 1.6% of respondents believed that the availability of rubbish bins at the Bendung Lepen tourist attraction was in bad condition, this was because there were still points where rubbish bins were not yet available, such as at the end of the irrigation canal, and there were still rubbish bins that had not been separated from organic waste. and organic, therefore managers need to pay attention to these things to improve, so that visitors will feel more comfortable and prevent the behavior of littering which will have a direct impact on the cleanliness of the tourist environment. For this reason, the availability of rubbish bins is one of the efforts to deal with waste from the source, rubbish bins also give the impression of their own attraction so that they do not throw rubbish carelessly [19].

The ease of rubbish disposal shows the accessibility of rubbish bins around visitors, traders and other communities. The ease of throwing away rubbish is related to the availability of rubbish bins, the more rubbish bins available, the easier it will be for everyone at a tourist spot to throw away rubbish. The research results showed that 90% of respondents stated that the ease of disposing of waste in the Bendung Lepen area was good and another 10% stated that the ease of disposing of waste in the Bendung Lepen area was moderate. This shows that many rubbish bins in the tourist attraction area are easy to reach on each side of the Bendung Lepen tourist location. The ease of disposing of rubbish is supported by the availability of adequate rubbish in the Bendung Lepen area which is shown by rubbish bins in every corner of the area such as near the gazebo and many visitors sitting on and on the edge of the irrigation canal. According to research conducted by [20] one of the factors that encourages the behavior of throwing rubbish in rubbish bins is the availability of adequate hygiene facilities and infrastructure.

Clarity is a measure of water quality, where when the water has a dull color, the level of cleanliness or clarity is very low. The research results showed that 61.67% of respondents stated that the clarity of the fish pond water in Lepen Bend was in good condition and another 38.33% stated that the water clarity in the fish pond in Lepen Bend was in fair condition. This shows that most of the fish pond water is quite clear, especially in the tertiary irrigation canals which are the tilapia breeding ponds. On the other hand, the pond used for fishing seems poorly maintained, so the pond water is quite murky. In murky ponds fish

carcasses are often found, this is in line with research by [20] namely that water that is too murky can make fish susceptible to disease and the quality of the fish will decrease.

Household waste or waste significantly impacts water and soil quality around the disposal site. When household waste is not managed properly and disposed of carelessly, various hazardous substances contained in the waste can pollute water and soil, threatening environmental sustainability and human health. Water pollution is one of the main impacts of household waste/garbage on water quality. Household wastewater that is not properly treated and discharged directly into waters can contain dangerous chemicals, heavy metals and organic substances that can pollute water sources. This pollution results in a decrease in water quality and can threaten the life of aquatic organisms, including fish, other aquatic animals and microorganisms [22]. The research results showed that 56.67% of the waste in the irrigation canals in Bendung Lepen was in good condition. As many as 40% stated that the condition of rubbish in the irrigation canals at the tourist attraction was moderate. The remaining 3.33% thought that the condition of waste in the irrigation canals in Bendung Lepen was bad. This is because in this tourist attraction, the irrigation channels are clean and there is no rubbish it can support the sustainability of fish farming. One of the problems often encountered in fish farming and can disrupt fish cultivation in cages is water pollution, both physical and chemical[23] This opinion is in line with research by [24] that undesirable changes to the water quality of dam lakes could pose serious risks to the natural spawning grounds of fish and the river's self-purifying capacity. Variations in quality can also result in polluted aquatic products, reduced vital elements due to sediment deposition behind dams, and reduced plankton growth, which plays an important role in fish nutrition. As a result, the economic benefits of the aquaculture industry and the quality of their products are at serious risk.

Air condition is an important indicator in assessing environmental quality. The high number of visits can affect air pollution from vehicle fumes and piles of rubbish. The results of the research show that 60% of visitors' assessment of the air conditions in the Bendung Lepen tourist area think that the air conditions in the tourist area are in the good category and the remaining 40% are of the opinion that the air conditions in the tourist area are in fair condition. It can be concluded that the air condition in the Bendung Lepen tourist area is good, characterized by the air feeling fresh, very clean and odorless, this is because the Bendung Lepen tourist area is an open area which is still quite beautiful, characterized by lots of trees and close proximity to with the Gajah Wong River. Good air conditions will increase visitor comfort, because poor air quality not only impacts the health and well-being of visitors, but also has a negative impact on effectiveness and productivity [25].

Natural beauty is one of the attractions of tourist attractions. The research results showed that 61.67% of respondents stated that the natural beauty in Lepen Bendung was good and another 38.33% stated that the natural beauty in Lepen Bendung was in fair condition. This shows that the natural conditions in the Bendung Lepen tourist area are in good condition, meaning that the natural beauty available is beautiful because the natural resources are maintained, such as views of the flowing river Gajah Wong, and the quality of the water in the irrigation canals is clear, so that visitors can enjoy the natural beauty and are interested in visiting it. visit again. This is in line with research by [26], which states that destinations with beauty and unique natural attractions certainly have opportunities for every tourist enthusiast to visit a tourist attraction. Apart from that, the attraction of natural beauty can also be a valuable asset if used effectively, so it can increase the competitiveness of tourism with the characteristics of natural beauty [27].

4 Conclusion

Visitors' perceptions of Bendung Lepen tourism in terms of cleanliness are good, in terms of security, including safe, adequate recreational facilities, good management services, provision of adequate information facilities, and easy accessibility. The majority of visitors' assessments of the environmental quality in Bendung Lepen are good, both in terms of the condition of rubbish piles, availability of rubbish bins, ease of disposing of rubbish, water clarity, condition of irrigation channels, air condition and natural beauty. This condition shows that the management of Bendung Lepen tourism is relatively good because it supports environmental sustainability, ultimately providing comfort for visitors. To increase visitors' assessment regarding tourism and environmental quality, it is recommended that managers add security signs, several crucial public facilities, and provide information facilities.

References

- [1] D. P. K. Yogyakarta, *Kajian Belanja Wisatawan Kota Yogyakarta Tahun 2020*. Yogyakarta: Dinas Pariwisata Kota Yogyakarta, 2020. [Online]. Available: <https://pariwisata.jogjakota.go.id/resources/download/laporan-analisis-belanja-wisatawan-kota-jogja-2020-75.pdf>
- [2] F. Zhang, K. Seshadri, V. P. D. Pattupogula, C. Badrinath, and S. Liu, "Visitors' satisfaction towards indoor environmental quality in Australian hotels and serviced apartments," *Build Environ*, vol. 244, no. June, p. 110819, 2023, doi: 10.1016/j.buildenv.2023.110819.
- [3] B. A. Utari et al., "Tourist destination choice on five priority destinations of Indonesia during health crisis," *Journal of Destination Marketing and Management*, vol. 32, no. June 2023, p. 100880, 2024, doi: 10.1016/j.jdmm.2024.100880.
- [4] L. J. Yin, N. Zhang, and Z. Y. Chang, "Study on the impact of tourism quality perception on tourists' environmentally responsible behaviour in rural tourism areas," *IOP Conf Ser Earth Environ Sci*, vol. 626, no. 1, 2021, doi: 10.1088/1755-1315/626/1/012015.
- [5] C. Chandran and P. Bhattacharya, "Perception of Visitors on Ecotourism Environmental impact: A Study of Munnar, Kerala, India," *World Journal of Environmental Biosciences*, vol. 10, no. 2, pp. 1–8, 2021, doi: 10.51847/abgia4pzsbs.
- [6] S. A. Junensih and Ratnawili, "Pengaruh Fasilitas Wisata, Harga dan Keamanan Terhadap Keputusan Berkunjung Wisatawan Pada Wisata Suban Air Panas Curup," *Jurnal Manajemen Modal Insani dan Bisnis (JMMIB)*, vol. 2, no. 2, pp. 138–145, 2021.
- [7] Y. Yurike, W. Wiryono, and A. Lestari, "Persepsi Pengunjung Dalam Pengembangan Wisata Alam Bukit Kandis Kabupaten Bengkulu Tengah," *Makila*, vol. 18, no. 1, pp. 24–33, 2024, doi: 10.30598/makila.v18i1.12250.
- [8] D. T. Monik, S. P. Harianto, and A. Setiawan, "Analisis Persepsi Pengunjung Dan Masyarakat Dalam Pengembangan Objek Wisata Alam Air Terjun Way Lalaan," *Jurnal Hutan Tropis*, vol. 9, no. 2, p. 311, 2021, doi: 10.20527/jht.v9i2.11279.
- [9] P. D. Rosa and G. Pradini, "Persepsi Wisatawan Terhadap Fasilitas Wisata Religi Masjid Istiqlal di Jakarta," *Peran Kepuasan Nasabah Dalam Memediasi Pengaruh Customer Relationship Marketing Terhadap Loyalitas Nasabah*, vol. 2, no. 3, pp.

- 1161–1176324, 2023, [Online]. Available: <https://bnr.bg/post/101787017/bsp-za-bulgaria-e-pod-nomer-1-v-buletinata-za-vota-gerb-s-nomer-2-pp-db-s-nomer-12>
- [10] F. Masykur, W. Widiartanto, and S. Saryadi, “Pengaruh Destination Image dan Fasilitas Wisata terhadap Revisit Intention (Studi pada Pengunjung Wisata Alam Seroja di Kabupaten Wonosobo),” *Jurnal Ilmu Administrasi Bisnis*, vol. 11, no. 2, pp. 170–179, 2022, doi: 10.14710/jiab.2022.34251.
- [11] A. Caruana, “Service loyalty: The effects of service quality and the mediating role of customer satisfaction,” *Eur J Mark*, vol. 36, no. 7–8, pp. 811–828, 2002, doi: 10.1108/03090560210430818.
- [12] Q. Guo, X. Yang, and H. Xie, “The impacts of mountain campsite attributes on tourists’ satisfaction and behavioral intentions: The mediating role of experience quality,” *Journal of Destination Marketing and Management*, vol. 32, no. 52, 2024, doi: 10.1016/j.jdmm.2024.100873.
- [13] A. Jupri, D. Syirojulmunir, A. Firmansyah, E. S. Prasedya, and T. Rozi, “Rancang Bangun Papan Informasi Destinasi Wisata sebagai Penunjuk Lokasi Wisatawan di Desa Tetebatu Selatan Kecamatan Sikur Kabupaten Lombok Timur,” *Jurnal Pengabdian Magister Pendidikan IPA*, vol. 5, no. 1, pp. 380–385, 2021, doi: 10.29303/jpmpi.v5i1.1578.
- [14] E. G. Rokhayah and Ana Noor Andriana, “Pengaruh Daya Tarik Wisata, Fasilitas, dan Aksesibilitas terhadap Keputusan Berkunjung Wisatawan di Pantai Istana Amal Kabupaten Penajam Paser Utara,” *Jurnal Kajian dan Terapan Pariwisata*, vol. 2, no. 1, pp. 10–18, 2021, doi: 10.53356/diparojs.v2i1.43.
- [15] I. Ardiansyah and R. G. Maulida, “Kajian Atraksi, Amenitas, dan Aksesibilitas Untuk Pengembangan Kepariwisata di Taman Wisata Alam Gunung Pancar Kabupaten Bogor,” *Jurnal Inovasi Penelitian*, vol. 1, no. 3, pp. 266–267, 2020.
- [16] J. M. Masjhoer, “Partisipasi Pelaku Usaha Pariwisata dalam Pengelolaan Sampah di Pantai Pulang Sawal, Kabupaten Gunungkidul, Yogyakarta,” *Jurnal Pariwisata Terapan*, vol. 2, no. 2, p. 122, 2018, doi: 10.22146/jpt.43179.
- [17] R. P. Dewi, “Perancangan Sistem Pengelolaan Sampah Untuk Mendukung Perkembangan Industri Kreatif Di Daerah Pariwisata,” *Prosiding Seminar Nasional Multi Disiplin Ilmu & Papers Unisbank Ke-3*, vol. 3, no. Sendi_U 3, pp. 217–221, 2017.
- [18] E. Torres-Moraga, C. Rodriguez-Sanchez, M. Alonso-Dos-Santos, and A. Vidal, “Tourscape role in tourist destination sustainability: A path towards revisit,” *Journal of Destination Marketing and Management*, vol. 31, no. December 2023, p. 100863, 2024, doi: 10.1016/j.jdmm.2024.100863.
- [19] R. Fitri, H. F. Siregar, and A. S. P. Tarigan, “Peduli Lingkungan bagi Anak Berkebutuhan Khusus (ABK) dengan Penerapan Tong Sampah Ceria,” *Prosiding Konferensi Nasional Pengabdian Kepada Masyarakat dan Corporate Social Responsibility (PKM-CSR)*, vol. 2, pp. 591–596, 2019, doi: 10.37695/pkmcsr.v2i0.451.
- [20] D. Wahy and U. Muhamad Bahrul, “Rancang Bangun Sistem monitoring. Kualitasairpada Budidaya.Ikan.Hias.Air.Tawar.Berbasis.Iot(Internet.of Things),” *Jurnal Komputasi*, vol. Vol 9, no. 2, pp. 67–75, 2021.
- [21] L. L. Wati and S. Sudarti, “Analisis Perilaku Wisatawan Dalam Membuang Sampah Di Kawasan Wisata Pantai Watu Ulo Kecamatan Ambulu Kabupaten Jember,” *Jurnal Teknologi Lingkungan UNMUL*, vol. 5, no. 2, p. 1, 2022, doi: 10.30872/jtlunmul.v5i2.6747.

- [22] G. Z. Kautzar, Y. Sumantri, and R. Yuniarti, “Analisis Dampak Lingkungan Pada Aktivitas Supply Chain Produk Kulit Menggunakan Metode LCA dan ANP,” *Rekayasa, Jurnal Manajemen, dan Sistem Industri*, vol. 3, no. 1, pp. 200–211, 2015.
- [23] K. Indartono, B. A. Kusuma, and A. P. Putra, “Perancangan Sistem Pemantau Kualitas Air Pada Budidaya Ikan Air Tawar,” *Journal of Information System Management (JOISM)*, vol. 1, no. 2, pp. 11–17, 2020, doi: 10.24076/joism.2020v1i2.23.
- [24] H. Amiri, B. Hadizadeh, M. G. Mooselu, S. Azadi, and A. H. Sayyahzadeh, “Evaluating the water quality index in dam lake for cold water fish farming,” *Environmental Challenges*, vol. 5, no. November, p. 100378, 2021, doi: 10.1016/j.envc.2021.100378.
- [25] A. Ratnasari and I. S. Asharhani, “Aspek Kualitas Udara, Kenyamanan Termal Dan Ventilasi Sebagai Acuan Adaptasi Hunian Pada Masa Pandemi,” *Arsir*, p. 24, 2021, doi: 10.32502/arsir.v0i0.3646.
- [26] Y. Latupapua, “Faktor Faktor Yang Mempengaruhi Minat Kunjungan Ulang Ke Daya Tarik Objek Siwang Paradise Kota Ambon,” *Jurnal Hutan Pulau-Pulau Kecil*, vol. 5, no. 2, pp. 175–188, 2021, doi: 10.30598/jhppk.2021.5.2.175.
- [27] X. Wang, J. Kim, J. Kim, and Y. Koh, “Application of Natural-Resource-Based View to Nature-Based Tourism Destinations,” *Sustainability (Switzerland)*, vol. 16, no. 6, pp. 1–16, 2024, doi: 10.3390/su16062375.