JITODE Journal of Indonesian Tourism and Development Studies
Journal of Indonesian Tourism and Development Studies
OPEN ACCESS
p-ISSN: 2355-3979
e-ISSN: 2338-1647

RESEARCH ARTICLE

Geopark Development Analysis in Acquiring UNESCO Global Geopark Status

Supriono[1]*, Edriana Pangestuti[1], Rahmat Putra Allolinggi[1]

[1]Department of Business Administration, Faculty of Administrative Sciences, Universitas Brawijaya, Malang, 65145, Indonesia

Correspondence:
Supriono
Email : supriono_fia @jurnal.ub.ac.id
Address : Fakultas Ilmu Administrasi Universitas Brawijaya. Jl. MT.Haryono 163 Malang 65145

Article History:
Submitted: 2022-11-21
Revised: 2023-08-07
Accepted: 2025-10-07
Available online: 2025-10-13

DOI: 10.21776/ub.jitode.2024.012.02.02

Abstract
The Maros-Pangkep Geopark is one of the geoparks in Indonesia. Designated as part of the national Geopark in 2018, Maros-Pangkep Geopark is currently selected as one of the candidates to become part of the UNESCO Global Geopark. This study aims to determine the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status along with the supporting and inhibiting factors. This study uses qualitative methods with data collection through interviews, observation, and documentation. The results of this study indicate that (1) The development carried out by the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status is quite good but needs to be improved, especially in the condition of existing public facilities, (2) The supporting factors in the development of the Maros-Pangkep Geopark are natural resources, accessibility, public facilities, community resources and policies, managers, completeness of documents, and support, (3) Inhibiting factors in the development of the Maros-Pangkep Geopark due to the COVID-19 pandemic, lack of funds, lack of human resources, and low levels of education and understanding public.

Keywords: COVID-19 Pandemic; Inhibiting Factors; Maros-Pangkep Geopark; Tourism Development; and UNESCO Global Geopark

INTRODUCTION

As a country with the potential for natural wealth and cultural diversity, Indonesia offers a range of tourist attractions that have been developed, including nature-based tourism [1], culture-based tourism, culinary-based tourism, and special interest tourism. Wen [2] states that special interest tourism is a type of tourism that provides recreational experiences tailored to the unique interests of individuals or groups, distinct from those of others. Special interest tourism is one of the strategies implemented by the Ministry of Tourism and Creative Economy to increase repeat tourist arrivals [3].

Geotourism is a form of special interest tourism activities that are being intensively developed in Indonesia. According to Stoffelen [4], Geotourism is a form of special interest tourism that focuses on the geological wealth on the earth's surface and the wealth contained therein, to add knowledge and understanding related to the environment, culture, and nature. Geotourism is also a form of conservation activity, appreciation, and concern for the sustainability and preservation of local wisdom [5]. Geotourism, which is tourism and recreation based on geology and landscapes, has developed into an important industry; this is evidenced by the development of geoparks at the global, national, and even regional levels [6]. One form of geotourism is a geopark, also known as an Earth Park.

A geopark is an area comprising outstanding geological elements, including archaeological, ecological, and cultural values, where local communities are invited to participate in protecting and enhancing the natural heritage [7]. Geoparks encourage local companies to invest and contribute to local economic development, demonstrating the role of companies engaged in several sectors, such as restaurants, lodging, or outdoor activities, inspired by local geodiversity [8]. Indonesia currently has 13 National Geoparks and 24 areas being developed to become geoparks, spread throughout the country [9]. For example, this can be achieved by collaborating with various parties, improving infrastructure, and implementing community-focused programs that combine the concepts of conservation, education, and

How to Cite: Supriono, S., E. Pangestuti, Rahmat P. Allolinggi. 2025. Geopark Development Analysis in Acquiring UNESCO Global Geopark Status. Journal of Indonesian Tourism and Development Studies 13(1), 12-19. DOI: 10.21776/ub.jitode.2024.012.02.02.

This is an open access article distributed under the Creative Commons Attribution-ShareAlike 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original works is properly cited. ©202X The Author(s).

sustainable economic development [10]. One of the existing Geoparks in Indonesia is located in Maros and Pangkep Regencies.

The Maros-Pangkep Geopark encompasses two regencies in South Sulawesi Province: Maros Regency and Pangkajene Islands Regency (Pangkep), which have a combined land area of approximately 223,629 hectares, and the Spermonde Islands, with an area of 88,965 hectares [11]. The Maros-Pangkep Geopark area is an area of international significance, boasting karst formations of diverse beauty, unique flora and fauna, as well as high scientific and socio-cultural value. Within the Maros-Pangkep Geopark area, there are 31 tourist destinations that visitors can explore. These 31 tourist attractions are divided into 4 different types of attractions, including 21 Geosites (GS), 4 Biosites (BS), 5 Cultural Sites (CS), and 1 Intangible Site (IS).

Through the Maros Pangkep Aspiring UNESCO Global Geopark (MPAUGGp) program, the Maros-Pangkep Geopark, which was previously designated as part of the national Geopark in 2018, is attempting to gain recognition from UNESCO as a UNESCO Global Geopark through the Global Geopark Network program in 2022. Currently (2025), this effort has been realized with the recognition of the Maros-Pangkep Geopark, which UNESCO has officially recognized as one of the world's Global Geoparks. In Indonesia, 6 Geoparks have been identified as UNESCO Global Geoparks. Although it has only 6 UNESCO Global Geoparks, Indonesia ranks 1st in the Southeast Asian region and 3rd among all of Asia as the country with the most UNESCO Global Geoparks [7].

Obtaining International Geopark status from UNESCO lends significant meaning to the Maros-Pangkep Geopark. This recognition from UNESCO has numerous impacts on the sustainability of preserving the geological elements contained in the Maros Pangkep Geopark area. Additionally, it can serve as a form of promotion and introduction to the broader community, thereby attracting tourists to visit. According to Lee et al. [12], UNESCO Global Geopark also contributes to the local economy by encouraging sustainable geotourism.

The Maros-Pangkep Geopark requires an appropriate development strategy to achieve its status as part of the UNESCO Global Geopark. The development strategy employed is to maximize existing potential and overcome problems and challenges encountered during the development and improvement process.

MATERIAL AND METHOD

Study Area

This study uses a descriptive research method with a qualitative approach. According to Siyoto and Sodik [13], a Qualitative Approach is a process and set of steps in research and understanding based on a methodology that investigates social phenomena and human problems.

The research was conducted from early May to late October 2022, and a literature study using secondary data was conducted in early 2025. The research was conducted in South Sulawesi Province, specifically in Maros and Pangkajene Islands Regencies. The selected research site is the Maros-Pangkep Geopark. This research site was chosen because the Maros-Pangkep Geopark is currently in the process of submitting its application to become a UNESCO Global Geopark. As such, it is undergoing development.

The focus of this research is:

a) The developments carried out by the Maros-Pangkep Geopark are in accordance with UNESCO Global Geopark standards.
b) Supporting factors and inhibiting factors for the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status.

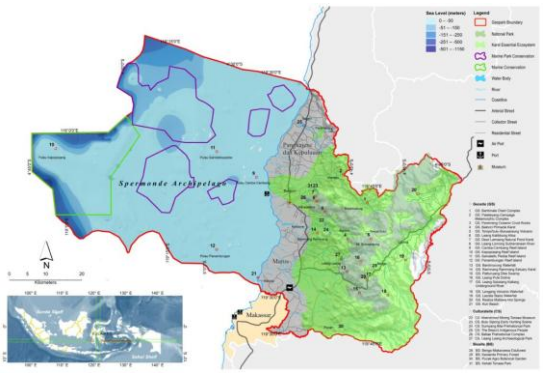

Figure 1. Marros-Pangkep Geopark Map.
Sources: Geopark Maros Pangkep [11].

Data Collection

This study utilizes primary and secondary data sources, including journals, books, and websites. Data collection techniques include interviews, observation, and documentation studies. Interviews were conducted with the General Manager of the Maros-Pangkep Geopark Management Agency, the Development Sector of

the Maros-Pangkep Geopark Management Agency, the Head of the Destinations and Tourism Development Division at the South Sulawesi Regional Agency for Tourism, the Head of the History and Cultural Heritage Division at the Regional Office of South Sulawesi Regional Office, tourists, and local communities. One respondent represents each section. Observations were made by examining the situation in the field through visits to several geosites in the Maros-Pangkep Geopark area. Documentation is done by recording or copying documents and data obtained from sources related to the problem under study.

The data analysis technique employed in this study is an interactive model analysis, as described by Miles and Huberman [14]. This analysis model uses 4 stages in processing data, namely (1) data collection, (2) data condensation, (3) data presentation, and (4) concluding.

RESULT AND DISCUSSION

Development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status

The development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status is carried out by taking into account the three main components, namely, (1) protection and conservation, (2) tourism-related infrastructure development, and (3) socio-economic development using sustainable regional development strategies. This can be explained as follows:

Protection and Conservation

The development of the Maros-Pangkep Geopark is very concerned about the protection and conservation aspects of its geodiversity, biodiversity, and cultural diversity. Several efforts have been made to protect and maintain the quality of the environment and infrastructure within the Maros-Pangkep Geopark area, among others: 1) Encouraging the establishment of supporting regulations for protected areas, especially in terms of geology. 2) Affirmation of the precise boundaries of the Geopark area, so that the responsibilities and authorities between agencies are clear. 3) Prohibit the illegal removal, destruction, and transfer of rock materials, cave ornaments, or parts of geological heritage around the geosite area. 4) Regulate and limit the number of visitors in some cave geosites to ensure the safety of visitors because the cave area is relatively limited, and build fences to protect sites of high geological/archaeological importance, etc, to maintain the preservation of the heritage.

Additionally, residents of the Maros-Pangkep Geopark area also participate in environmental protection and conservation activities. The community has begun to raise awareness that protecting the environment is essential because local communities play a crucial role in Geopark conservation, as no one knows the area better than the local community. The community also received education and awareness about the importance of maintaining and preserving the surrounding environment from the government and the manager of the Maros-Pangkep Geopark, aiming to increase public understanding and awareness.

The government of South Sulawesi has issued various policies to support the conservation, protection, and preservation of its natural wealth, as well as the development of existing tourism. One of these policies can be seen in the Regional Regulation of South Sulawesi Province No. 9 of 2009 concerning the South Sulawesi regional spatial plan 2009-2029, in particular article 97 which contains the zoning regulations for the uniqueness of rocks and fossils developed by taking into account: 1) the use of tourism without changing the landscape, 2) provisions prohibiting the use of rocks and 3) limited excavation activities. With the policy implemented by the government, it is hoped that it will have a positive impact on tourism development, as well as protection and conservation efforts carried out within the Maros-Pangkep Geopark area.

Development of tourism infrastructure

The development of the Maros-Pangkep Geopark is carried out by taking into account the main components known as 4A, namely a) attractions, b) amenities (public facilities to support tourism activities), c) access (ease of accessibility), and d) ancillary services (tourism services). These four components are described as follows:

1) Attractions

The development is carried out in the Maros-Pangkep Geopark area, where the potential for geodiversity is in the form of geological wealth, prehistoric rocks and caves, biodiversity in the form of flora and fauna diversity, and Cultural Heritage in the form of habits and customs carried out by local communities (Fig. 2-6). These three things are tourism capital owned by the Maros-Pangkep Geopark. This tourism capital is

then developed into a destination or tourist attraction that offers uniqueness and high quality, allowing it to attract both local and foreign tourists.



Figure 2. Pucak Agro Botanical Garden.
Source: Geopark Maros Pangkep [15].



Figure 3. Lengang Waterfall
Source: Geopark Maros Pangkep [16].



Figure 4. Leang Salukang Kallang Cave
Source: Geopark Maros Pangkep [17].

2) Amenities (Public Facilities)

Amenities are all the supporting facilities that can meet the needs and desires of tourists while they are in a destination. The Maros-Pangkep Geopark has been equipped with various types of public facilities. These facilities include public toilets, mosques, gas stations, parking areas, souvenir and gift shops, restaurants, lodging options, homestays, trash cans, and information centers. All of these facilities are in reasonably good condition and are suitable for use by tourists; however, the manager needs to pay special attention to some of the public toilets.



Figure 5. Panambungan Island
Source: Geopark Maros Pangkep [18].

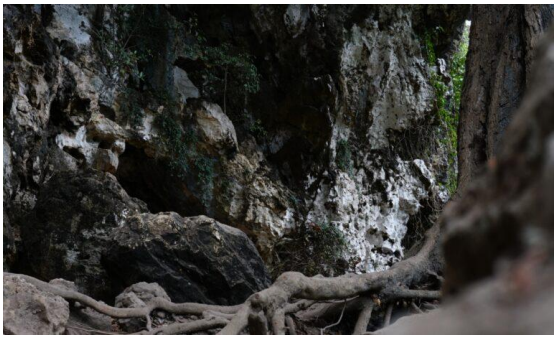

Figure 6. Belae Prehistoric Village
Source: Geopark Maros Pangkep [19].

3) Accessibility (access)

Accessibility refers to the means and infrastructure required to reach a destination. The main road access to the Maros-Pangkep Geopark area is in reasonably good condition and has been paved. However, for some alternative and small-sized roads, there are still some points that are damaged, such as potholes and unpaved sections. From the management of the Maros-Pangkep Geopark and assisted by the provincial government itself, currently working on repairing the road leading to the Maros-Pangkep Geopark, this repair is being carried out little by little, so that the quality of the road condition is getting better.

4) Ancillary services (Tourism Services)

Ancillary or services related to the availability of an organization or people in charge of managing the destination. The Maros-Pangkep Geopark area has also been equipped with local guides who are ready to help and guide visiting tourists. This guide is tasked with providing services to tourists by explaining everything about the sites visited, from their history and

characteristics to the advantages that other tourist destinations do not offer.

Socio-economic development using a sustainable regional development strategy.

The development of the Maros-Pangkep Geopark aims to involve the local community in various forms of tourism activities. The development of the Maros-Pangkep Geopark is carried out on a Community-Based Tourism (CBT) basis, involving sustainable tourism development that engages the role and participation of local communities [20]. With the community's participation, it is hoped that the social and economic status of people living in the Maros-Pangkep Geopark area will improve.

The development of the Maros-Pangkep Geopark has had a positive impact on the social and economic community, increasing the number of tourists, which in turn has led to a significant rise in income from the tourism sector. The development of tourism activities within the Maros-Pangkep Geopark area creates new job opportunities for the surrounding community. People who initially worked only as farmers now have additional jobs in the tourism sector, such as selling, being boat drivers, and serving as tour guides. This has a positive impact on improving people's welfare in both social and economic fields.

One of the methods employed by the Maros-Pangkep Geopark Management Agency to improve the economy and welfare of the community is by providing training and workshops aimed at enhancing the community's tourism capabilities. Some of the training provided includes guide training, covering both geotourism guides and cave guides, as well as English-speaking training, training on creating souvenirs from natural resources, waste recycling, and several other training sessions. The provision of training to the community is expected to improve economic and social welfare in the tourism sector [21,22].

The development of the Maros-Pangkep Geopark is also carried out with consideration for the concept of sustainable development, ensuring that all components are maintained and sustainable, thereby avoiding damage. One of the efforts made by the Maros-Pangkep Geopark in creating sustainable development is to realize the Sustainable Development Goals (SDGs) set by the United Nations. Currently, the Maros-Pangkep Geopark contributes to 9 of the 17 SDGs set by the United Nations.

Supporting Factors

There are several supporting factors for the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status, including:

1) Natural Destination

The Maros-Pangkep Geopark offers a range of natural tourism destinations. The management leverages this natural and geological wealth to establish itself as a tourist destination, attracting visitors, while still maintaining due regard for the preservation and conservation of nature. The natural uniqueness of the Maros-Pangkep Geopark makes it different from other Geoparks in Indonesia. This is the main selling point in increasing tourist interest in visiting the Maros-Pangkep Geopark.

2) Accessibility

Accessibility to the Maros-Pangkep Geopark is quite good; most of the roads are already paved and have been repaired. Additionally, tourists only need to travel 24 km, approximately 30-45 minutes from Sultan Hasanuddin International Airport. This easy accessibility is one of the main selling points of the Maros-Pangkep Geopark to bring in tourists.

3) Public Facilities and Supporting Facilities

Public facilities in the Maros-Pangkep Geopark area are fairly comprehensive, including information boards, signposts, restaurants, homestays, toilets, gas stations, mosques, trash cans, information centers, and drilled wells. The condition of the facilities is quite good, but they need to be improved, especially in the public toilets.

4) Funding and Policy

The government has implemented various policies to develop the Maros-Pangkep Geopark. The policies implemented are not only focused on tourism development but also encompass protection and conservation policies. In addition to policies, the government also provides financial assistance for the development of the Maros-Pangkep Geopark. This financial assistance will be used for the improvement and repair of infrastructure and facilities, as well as for protection and conservation activities, and will also be used to provide training to communities to enhance their abilities [23].

5) Manager

The Maros-Pangkep Geopark has its own management agency, known as the Maros-Pangkep Geopark Management Agency. Since its inauguration in 2018, this management agency has worked diligently to develop the Maros-

Pangkep Geopark. The results of the management body's hard work are evident in the fact that the Maros-Pangkep Geopark has become a candidate for UNESCO Global Geopark within two years since its designation as a national Geopark.

6) Documents

The completeness of the documents owned by the Maros-Pangkep Geopark is in complete condition to be submitted to UNESCO Global Geopark. Therefore, it is natural that UNESCO awards it as part of the UNESCO Global Geopark.

7) Society

Communities in the Maros-Pangkep Geopark area consistently provide full support for the development of the Maros-Pangkep Geopark. To achieve sustainable tourism development, community participation is crucial, particularly since the Maros-Pangkep Geopark was developed with Community-Based Tourism (CBT), allowing the community to actively participate in tourism activities within the Park. Through community participation in tourism activities, the community generates additional income and has a positive impact on its economy.

Inhibiting Factor

Some of the inhibiting factors in the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status are as follows:

1) The COVID-19 Pandemic

The COVID-19 pandemic has forced the closure of almost all sites in the Maros-Pangkep Geopark to prevent the spread of the virus. This closure has an impact on local people's income, which has decreased due to the absence of tourism activities. The pandemic has also contributed to the decline in the quality of public facilities in the Maros-Pangkep Geopark area, as they are often left unused and abandoned without adequate maintenance. The pandemic also hindered the assessment process for becoming a UNESCO Global Geopark, as the scheduled 2021 assessment had to be pushed back to 2022.

2) Funding

The management of the Maros-Pangkep Geopark is currently funded by the government budget. However, the budget funds provided are relatively small to be used throughout the Maros-Pangkep Geopark area, which is quite extensive. To address the government's lack of funding, the Maros-Pangkep Geopark has several sources of income, including tourist tickets, payments for environmental services, and Corporate Social Responsibility (CSR) initiatives.

3) Lack of Human Resources

Currently, the Maros-Pangkep Geopark Management Body still lacks sufficient human resources to develop the Maros-Pangkep Geopark. Moreover, the nature of the management body is quite different, as it consists of people with diverse backgrounds, who are brought together to develop the Maros-Pangkep Geopark. To overcome these problems, the managing body is currently still trying to complete the sections that lack human resources, aiming to make work easier in the future.

4) Low Community Understanding

The Maros-Pangkep Geopark community generally still has a fairly low level of education, especially coupled with different backgrounds and jobs that are mostly farming, not from environmental or tourism practitioners, making people's understanding still lacking. The community must know more about the Maros-Pangkep Geopark because they live in it. To minimize and overcome these problems, the government and managers need to provide more outreach to increase public knowledge.

Maros-Pangkep Geopark's alternative strategy for Inhibiting Factors.

Alternative strategies that Maros-Pangkep Geopark managers can consider include:

1. Optimizing digital resources: to improve Geopark promotion and marketing online and Virtual tourism [24];
2. Finding alternative funding sources, such as grants, sponsorship, or cooperation with investors, and developing tourism packages [25,26];
3. Optimizing the role of local communities: by involving them in Geopark development. Of course, by providing knowledge and training in advance regarding geopark management. Knowledge and training can be acquired by collaborating with educational institutions or certification institutions related to tourism [5, 10, 24].

CONCLUSION

Based on the results of research and analysis of discussions conducted on the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status, the conclusions obtained include the following:

a) The development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark

status is quite good by taking into account 3 main components, namely (1) protection and conservation, (2) tourism-related infrastructure development, and (3) socio-economic development using a sustainable regional development strategy. However, it needs improvement, especially in the facilities, such as public toilets.

b) Supporting factors for the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status, namely natural wealth, accessibility, public and supporting facilities, financing and policies, managers, completeness of documents, and local communities.
c) The inhibiting factors for the development of the Maros-Pangkep Geopark in obtaining UNESCO Global Geopark status, namely the COVID-19 pandemic, funding, lack of human resources, and lack of

Author Contribution: Conceptualization, Supriono.; Data curation, Supriono and Rahmat; Formal analysis, Supriono, Rahmat, and Edriana.; Investigation, Supriono and Rahmat. Writing—original draft, Supriono. Writing—review & editing, Supriono, Rahmat, and Edriana. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the BPPM Faculty of Administrative Sciences, Brawijaya University.

Acknowledgement: This journal is compiled as an output from the research of the Faculty of Administrative Sciences, Universitas Brawijaya

Ethical Statement: If the study involves animals or humans, you will need to mention the ethical clearance certificate number.

Conflict of Interest: There are no conflicts of interest.

REFERENCES

[1]. Sari, A. N., C. Bhaskara, and A. Bimantara. 2020. The Suitability of Mangrove Ecotourism Based on Its Biophysical Condition in Hamadi Beach, Jayapura City. *Journal of Indonesian Tourism and Development Studies*. 8(3), 131-137. DOI: 10.21776/ub.jitode.2020.008.03.02.
[2]. Wen, J., and Mao-Ying Wu. 2020. How special is special interest tourism - and how special are special interest tourists? A perspective article in a Chinese context. *Current Issues in Tourism*. 23(16), 1968–1972. DOI: 10.1080/13683500.2020.1750575.
[3]. Rittichainuwat, B. 2018. Special Interest Tourism. Third Edition. Encyclopedia of Tourism, Cambridge UK.
[4]. Stoffelen, A., and D. Vanneste. 2015 An integrative geotourism approach: bridging conflicts in tourism landscape research. *Tourism Geographies*. 17(4), 544-560. DOI: 10.1080/14616688.2015.1053973.
[5]. Sulistyadi, Y., R. H. Demolingo, B. S. Latif, T. Indrajaya, P. P. Adnyana, and K. Wiweka. 2024. The Implementation of Integrated Coastal Management in the Development of Sustainability-Based Geotourism: A Case Study of Olele, Indonesia. *Sustainability*. 16(3), 1-25. DOI: 10.3390/su16031272.
[6]. Wang, L., M. Tian, and L. Wang. 2015. Geodiversity, Geoconservation and Geotourism in Hong Kong Global Geopark of China. Proceeding of the Geologists' Association, Vol. 126(3), 426-437. DOI: 10.1016/j.pgeola.2015.02.006
[7]. Geoparks Secretariat. 2006. Guidelines and criteria for national geoparks seeking UNESCO's assistance to join the Global Geoparks Network. *Episodes Journal of Internasional Geoscience*. 29(2), 115-118.
[8]. Rodrigues, J., C. N. de Carvalho, M. Ramos, R. Ramos, A. Vinagre, & H. Vinagre. 2021. Geoproducts - innovative development strategies in UNESCO geoparks: concept, implementation methodology, and case studies from naturejo global geopark, portugal. *International Journal of Geoheritage and Parks*. 9(1), 108-128. DOI: 10.1016/j.ijgeop.2020.12.003
[9]. Agfianto, T., D. A. Wijaya, N. Wijayanto, N. Wulandari, C. Baker-Beall, and A. Chapman. 2025. reparedness of geotourism facilities in disaster mitigation based on the global South viewpoint: case study of East Java, Indonesia. *Worldwide Hospitality and Tourism Themes*, 17(3), 354–366. DOI: 10.1108/WHATT-01-2025-0039
[10]. Setyowati, R.I.A. and Ahdiyana M. 2024. Strategi Pengembangan Geopark Nasional Karangsambung-Karangbolong Menuju Global UNESCO di Kabupaten Kebumen. *Journal of Public Policy and Administration Research*. 2(4), 1-10.
[11]. Geopark Maros Pangkep. 2021. *About Us*. Geopark Maros Pangkep. Available at:

https://geoparkmarospangkep.id/about-us/. Accessed on 7 October 2025.

[12]. Lee, Yujin, and R. Jayakumar. 2021. Economic impact of UNESCO Global Geoparks on local communities: Comparative analysis of three UNESCO Global Geoparks in Asia. International Journal of Geoheritage and Parks, 9(2), 198-198. DOI: 10.1016/j.ijgeop.2021.02.002.

[13]. Siyoto, S., and A. Sodik. 2015. Dasar Metodologi Penelitian. Literasi Media Publishing, Yogyakarta Indonesia.

[14]. Miles, Matthew B., A. M. Huberman, and J. Saldana. 2014. Qualitative Data Analysis: A Methods Sourcebook. Sage Publications, London UK.

[15]. Geopark Maros Pangkep. 2025. *Pucak Agro Botanical Garden*. Geopark Maros Pangkep. Available at: https://geoparkmarospangkep.id/pucak-agro-botanical-garden/. Accessed on 7 October 2025.

[16]. Geopark Maros Pangkep. 2025. *Lengang Waterfall*. Geopark Maros Pangkep. Available at: https://geoparkmarospangkep.id/lengang-waterfall/. Accessed on 7 October 2025.

[17]. Geopark Maros Pangkep. 2025. *Leang Salukang Kallang Cave*. Geopark Maros Pangkep. Available at: https://geoparkmarospangkep.id/leang-salukang-kallang-cave/. Accessed on 7 October 2025.

[18]. Geopark Maros Pangkep. 2025. *Panambungan Island*. Geopark Maros Pangkep. Available at: https://geoparkmarospangkep.id/panambungan-island/. Accessed on 7 October 2025.

[19]. Geopark Maros Pangkep. 2025. *Bellae*. Geopark Maros Pangkep. Available at: https://geoparkmarospangkep.id/bellae/. Accessed on 7 October 2025.

[20]. Iqbal, Z., and S. Ahmed. 2022. Antecedents and consequences of community-based tourism in border district of Jammu and Kashmir. *International Journal of Tourism Cities*. 8(3), 569-587. DOI: 10.1108/IJTC-05-2020-0108.

[21]. Mathew, P.V., and Nimmi P. M.. 2022. Sustainable tourism development: discerning the impact of responsible tourism on community well-being. *Journal of Hospitality and Tourism Insights*. 5(5), 987-1001. DOI: 10.1108/JHTI-02-2021-0052.

[22]. Janjua, Zain ul A., G. Krishnapillai, and M. Rehman. 2023. Importance of the sustainability tourism marketing practices: an insight from rural community-based homestays in Malaysia. *Journal of Hospitality and Tourism Insights*. 6(2), 575-594. DOI: 10.1108/JHTI-10-2021-0274.

[23]. Buhalis, D., X. Y. Leung, D. Fan, S. Darcy, G. Chen, F. Xu, G. Wei-Han Tan, R. Nunkoo, and A. Farmaki. 2023. Editorial: Tourism 2030 and the contribution to the sustainable development goals: the tourism review viewpoint. *Tourism Review*. 78(2), 293-313. DOI: 10.1108/TR-04-2023-620.

[24]. Ferdowsi, S., & S. D. Ilkhechi. 2025. Gamification and Marketing of Geotourism Destinations: Aras UNESCO Global Geopark in Iran. *Geoconservation Research*. 8(1), 1-23. DOI: 10.57647/j.gcr.2025.0801.03.

[25]. McGuckin, M. 2023. Exploring literary festivals in Ireland. *International Journal of Event and Festival Management*. 14(4), 523-536. DOI: 10.1108/IJEFM-01-2023-0009.

[26]. Nie, K., & X. Tang. 2022. Study on Ecological Value Co-Creation of Tourism Enterprises in Protected Areas: Scale Development and Test. *Sustainability*. 14(16), 10151. DOI: 10.3390/su141610151.