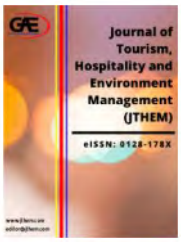
Journal of Tourism, Hospitality and Environment Management
JTHEM
EISSN: 0128-178X
Volume 9 Issue 37 (September 2024) PP. 86-93
DOI 10/35631/JTHEM.937007



JOURNAL OF TOURISM, HOSPITALITY AND ENVIRONMENT MANAGEMENT (JTHEM)
www.jthem.com

EXPLORING THE BARRIERS AND CHALLENGES IN DEVELOPING GEOPARK HERITAGE DESTINATION: THE CASE OF GUNUNG STONG AND LOJING HIGHLANDS, MALAYSIA

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Article Info:

Article history:
Received date: 17.07.2024
Revised date: 31.07.2024
Accepted date: 20.08.2024
Published date: 26.09.2024

To cite this document:

Rizal, A. F. A., Aziz. R. C. A & Alwi, M. K. (2024). Exploring the barriers and challenges in developing Geopark Heritage destinations: The case of Gunung Stong and Lojing Highlands, Malaysia. *Journal of Tourism Hospitality and Environment Management, 9* (37), 86-93.

DOI: 10.35631/JTHEM.937007.

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Abstract:

The present study investigates the obstacles and difficulties of developing Geopark heritage sites in Kelantan, Malaysia, specifically emphasizing Gunung Stong and the Lojing Highlands. Within the worldwide UNESCO Geopark initiative framework, these locations possess considerable capacity to advance sustainable tourism, conservation, and socio-economic development. Furthermore, we must resolve some barriers that impede progress to achieve maximum capacity. The present study employed a qualitative research approach to undertake a systematic content analysis of secondary data sources, encompassing local development plans, national policies, and pertinent literature. The investigation revealed five primary obstacles: insufficient infrastructure, financial limitations, environmental deterioration, weak community involvement, and poor marketing and promotion. These issues are interrelated, as financial and infrastructure constraints worsen environmental and social problems. The report emphasizes the need for a coordinated, multi-stakeholder strategy to address these obstacles, including government agencies, local communities, corporate investors, and conservation organizations. By effectively tackling these obstacles, the Kelantan Geopark project can contribute substantially to preserving natural and cultural heritage, promoting sustainable tourism, and improving local livelihoods. The results of this evaluation have wider ramifications for comparable Geopark initiatives in different areas, providing valuable knowledge on optimal methods and tactics for effective execution.

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Journal of Tourism, Hospitality and Environment Management
JTHEM
EISSN: 0128-178X
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DOI 10/35631/JTHEM.937007

Keywords:

Geopark, Kelantan, Sustainable Tourism, Conservation, Community Engagement, Environmental Management

Introduction

Geoparks, as defined by UNESCO, are unique territories that combine the preservation of geological heritage with sustainable tourism and education. The global network of Geoparks is critical in promoting awareness of geodiversity, fostering local pride, and driving socio-economic development through sustainable tourism (Buckley, 2012). The concept of Geoparks, as promoted by UNESCO, plays a crucial role in supporting conservation, sustainable tourism, and educational initiatives. UNESCO defines Geoparks as single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education, and sustainable development (UNESCO, 2024). Integrating these elements is essential in ensuring that Geoparks preserve geological heritage and contribute to local communities' economic and social well-being. One of the most significant impacts of Geoparks is their ability to generate economic and social benefits for local communities. The designation of an area as a Geopark can attract national and international tourists, boosting local economies through increased demand for accommodations, guided tours, local products, and other services (Komoo & Patzak, 2008). In many cases, Geoparks have revitalized rural areas by creating jobs, promoting local entrepreneurship, and encouraging the development of infrastructure and services that benefit both tourists and residents (UNESCO, 2016).

In this context, the Kelantan government's focus on developing Gunung Stong and the Lojing Highlands as potential Geopark sites reflects a growing recognition of the value of geological conservation in promoting sustainable development. Kelantan, located in the northeastern region of Peninsular Malaysia, is celebrated for its rich cultural heritage and pristine natural landscapes. Among its notable regions are Gunung Stong and the Lojing Highlands, which have garnered attention for their potential as Geopark heritage sites. Gunung Stong, a prominent mountain within the expansive Stong State Park, spans approximately 21,950 hectares near Dabong. The park is renowned for its diverse flora and fauna, with some species endemic to the region, and features rugged terrain, extensive rainforests, and breathtaking views, making it a haven for nature enthusiasts and adventurers (Hassin Hizami et al., 2019). One of the park's most notable geological features is the Jelawang Waterfall, one of the tallest waterfalls in Southeast Asia, which plunges over 300 meters, offering a dramatic visual and a significant site for geological study. The Lojing Highlands, situated in the Gua Musang District, approximately 1,500 meters above sea level, form part of the Cameron Highlands' ecosystem. This area is characterized by its serene, green, cool climate, diverse flora and fauna, and verdant montane forests. The highlands are home to numerous high-altitude species, including the world's largest flower, the Rafflesia, and various endemic bird species, making it an important site for biodiversity conservation and ecotourism (Fiffy et al., 2021).

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JTHEM
EISSN: 0128-178X
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DOI 10/35631/JTHEM.937007

Gunung Stong and the Lojing Highlands being designated as Geoparks could address existing gaps in infrastructure and management, leveraging their unique geological and ecological features to attract tourists and foster community engagement. This paper explores the barriers and challenges of Gunung Stong and Lojing Highlands to be recognized as Geopark heritage destinations. By examining the geological, ecological, and cultural attributes of these areas, as well as the challenges or barriers associated with their development, the study aims to provide insights into how Geopark designation can contribute to the conservation of natural and cultural heritage while fostering sustainable tourism and socio-economic development in the region. The findings of this study have broader implications for the preservation of natural heritage in Malaysia and for the role of Geoparks in promoting sustainable development. As the global Geopark movement grows, the experiences and lessons learned from developing new Geoparks in regions like Kelantan can offer valuable contributions to the ongoing discourse on sustainable tourism, conservation, and community development.

Literature Review

Barriers and Challenges in Developing Geo-Heritage Parks

Developing geo-heritage parks, such as UNESCO Global Geoparks, has been recognized as an effective strategy for conserving geological heritage while promoting sustainable tourism and socio-economic development. However, establishing and managing these parks often face numerous barriers and challenges that can hinder their success. This literature review synthesizes findings from previous studies on the common difficulties encountered in developing geo-heritage parks, focusing on financial, environmental, social, and regulatory aspects.

Financial Constraints

One of the most pervasive challenges in developing geo-heritage parks is the significant financial investment required for infrastructure, conservation, and management. Farsani, Coelho, and Costa (2011) highlight that the initial costs of developing facilities, maintaining geological sites, and providing visitor services can be prohibitive, especially in regions with limited financial resources. The long gestation period before the park becomes financially self-sustaining through tourism revenues exacerbates this financial burden. Moreover, financial constraints can limit the ability to conduct necessary scientific research, which is crucial for understanding and preserving geological features (Dowling & Newsome, 2018). Without adequate funding, it is challenging to establish the necessary infrastructure for tourism, such as roads, visitor centers, and accommodations, which are essential for attracting and managing visitors. The reliance on external funding, such as government grants or international aid, can also be unpredictable, leading to inconsistent development and maintenance efforts.

Environmental Degradation and Sustainability Challenges

Environmental degradation poses a significant challenge to the development of geo-heritage parks. The presence of tourism, if not properly managed, can lead to the deterioration of the natural landscapes these parks are designed to protect. Buckley (2012) discusses how uncontrolled tourism activities can lead to habitat destruction, pollution, and the erosion of geological features, compromising geo-heritage parks' conservation objectives. Studies have shown that over-tourism can be particularly detrimental in sensitive areas where the environment's carrying capacity is exceeded. The influx of tourists can result in littering, soil erosion, and damage to fragile ecosystems, often home to rare and endemic species (Weaver,

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JTHEM
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DOI 10/35631/JTHEM.937007

2006). Additionally, illegal activities such as logging, mining, and poaching can threaten the integrity of these sites, particularly in regions where enforcement of environmental regulations is weak (Farsani et al., 2011). Effective environmental management strategies are therefore critical for mitigating these risks. This includes implementing sustainable tourism practices, strict regulation of visitor activities, and ongoing environmental monitoring. However, such strategies require financial resources, technical expertise, and strong institutional frameworks, which may be lacking in many regions.

Community Engagement and Socio-Cultural Barriers

The success of geo-heritage parks heavily depends on the engagement and participation of local communities. Hose (2016) emphasizes that without the support and involvement of residents, geo-heritage parks are unlikely to achieve their conservation and development goals. However, engaging local communities presents several challenges, including socio-cultural barriers, lack of awareness, and limited economic incentives. Local communities may resist the establishment of geo-heritage parks if they perceive that their traditional land rights or livelihoods are threatened. This resistance can be extreme in areas where communities rely on agriculture, logging, or mining, which may be restricted under park regulations (Farsani et al., 2011). Additionally, a lack of awareness about the potential benefits of geo-heritage parks can lead to skepticism or opposition from local populations. The literature suggests that effective community engagement requires a participatory approach, where residents are actively involved in the park's planning, management, and benefit-sharing. This can be achieved through community-based tourism models, capacity-building programs, and the inclusion of indigenous knowledge and practices in park management (Dowling & Newsome, 2018). However, implementing such approaches requires significant effort and resources and may be hindered by cultural differences, power dynamics, and historical tensions.

Regulatory and Bureaucratic Challenges

Regulatory and bureaucratic challenges are another significant barrier to developing geo-heritage parks. Designating a geo-heritage site involves navigating complex regulatory frameworks, which can be slow and cumbersome. Komoo and Patzak (2008) note that in many countries, establishing geo-heritage parks requires coordination among multiple government agencies, each with its own set of regulations and priorities. This can lead to delays, conflicts, and inefficiencies in the development process. Additionally, enforcing environmental and tourism regulations within geo-heritage parks is often inconsistent, particularly in regions with weak governance structures. This can result in inadequate protection of geological sites, illegal exploitation of resources, and unsustainable tourism practices. Buckley (2012) highlights that in some cases, bureaucratic inefficiencies can also lead to corruption, where permits and licenses are granted without proper environmental assessments. Streamlining regulatory processes and strengthening institutional frameworks to address these challenges is essential. This includes establishing clear guidelines for the designation and management of geo-heritage parks, improving coordination among government agencies, and enhancing the capacity of local authorities to enforce regulations (Kunjuraman, Aziz, & Bakar, (2021). However, such reforms can be challenging, particularly in regions with limited institutional capacity or political will.

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Marketing and Promotion Barriers

Marketing and promotion are critical for attracting visitors to geo-heritage parks, yet they are often overlooked or underfunded. Dowling and Newsome (2018) argue that effective marketing strategies are essential for raising awareness about the unique geological features of the parks and positioning them as desirable tourist destinations. However, many geo-heritage parks, particularly those in developing regions, lack the resources and expertise to conduct effective marketing campaigns. Insufficient branding, limited online presence, and lack of collaboration between stakeholders can result in low visibility of the park domestically and internationally. This can lead to underutilization of the park's tourism potential, reducing the economic benefits for local communities and limiting the funds available for conservation and management. Weaver (2006) emphasizes the importance of developing a solid brand identity and leveraging digital marketing tools to reach a global audience. Professional marketing and promotion efforts must invest in geo-heritage parks to overcome this issue. This includes developing a coherent brand that highlights the park's unique geological and cultural attributes and engaging travel agencies, educational institutions, and conservation organizations in partnerships (Kunjuraman, Hussin, Aziz, 2022).

Methodology

The qualitative research methodology employed in this study involved a systematic content analysis of secondary data sources, including local development plans, national policies, and media articles. This approach efficiently analyzes and evaluates written material within specific contexts, providing in-depth insights and a comprehensive understanding of real-world issues. The goal is to delve into people's experiences, perceptions, behaviors, and processes and the meanings they attach to them (Moser & Korstjens, 2022). Researchers selected this approach for its ability to provide rich, contextual insights into the challenges or barriers of Gunung Stong and Lojing Highlands as Geoparks. They coded the data thematically to identify recurring patterns and gaps. However, the study is limited by its reliance on secondary data, which may not fully capture on-the-ground realities. Future research could incorporate primary data collection, such as interviews with local stakeholders, to enhance the findings. The study draws on a variety of secondary data sources, including:

1. Media Articles: Relevant news articles and reports on Gunung Stong and the Lojing Highlands.
2. Local Development Plans: Documents such as the *Rancangan Tempatan Jajahan* Gua Musang.
3. National Government Policies: Policies related to ecotourism, conservation, and sustainable development.

Researchers systematically acquire all relevant documents and articles from these sources. They meticulously review each document to extract pertinent information. The extracted excerpts are then coded based on themes and categories related to the research objectives. The coding process involves identifying recurring patterns and themes, which are then categorized to facilitate analysis. This systematic approach ensures that the study captures various perspectives and insights, contributing to a comprehensive understanding of the potential for Geopark development in Gunung Stong and the Lojing Highlands.

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Findings and Discussions

Developing a Geopark destination in Kelantan, particularly in Gunung Stong and the Lojing Highlands, offers immense conservation, tourism, and socio-economic development potential. However, there are several barriers and challenges that local communities and tourism stakeholders must address to realize this potential. These challenges range from infrastructural and financial constraints to environmental and socio-cultural issues.

Inadequate Infrastructure

One of the most significant challenges in developing a Geopark in Kelantan is the lack of adequate infrastructure. The existing infrastructure, such as roads, transportation, and accommodation facilities, is often insufficient to support the needs of a growing tourism industry. Poor road conditions and limited public transportation options can deter tourists from visiting the region. Additionally, the lack of eco-friendly accommodations and visitor facilities may prevent the state from fully capitalizing on its ecotourism potential. Inadequate infrastructure not only hampers tourist accessibility but also limits the ability of local communities to benefit from tourism (Aziz, Zainuddin, Patwary, Nawi, Khan, 2024b). Without proper roads, transportation, and facilities, the tourist flow remains low, reducing the economic benefits that could be derived from tourism.

Financial Constraints

Developing a Geopark requires substantial financial investment in infrastructure and conservation efforts, community engagement programs, and marketing initiatives. Kelantan's local communities and tourism stakeholders may face difficulties securing the necessary funding for these initiatives. Additionally, the financial returns from tourism might take time to materialize, making it challenging to sustain long-term investments. Financial constraints can slow the development process, limit the scope of conservation efforts, and reduce the quality of tourist services (Patwary, Aziz, Hashim, 2023). Without adequate funding, it isn't easy to implement comprehensive conservation strategies, build the necessary infrastructure, or promote the Geopark effectively to attract visitors.

Environmental Degradation

The natural environments of Gunung Stong and the Lojing Highlands are fragile and can be easily degraded by uncontrolled tourism activities. Over-tourism, improper waste management, and unsustainable land use practices threaten the region's biodiversity and geological heritage. Additionally, illegal logging and land clearing for agriculture are ongoing issues that threaten the integrity of the natural landscape. Environmental degradation not only diminishes the ecological value of the region but also undermines the very assets that attract tourists. If not appropriately managed, tourism could lead to the destruction of critical habitats, loss of biodiversity, and irreversible damage to geological sites, thereby compromising the long-term sustainability of the Geopark.

Limited Community Engagement

While local communities play a crucial role in the success of a Geopark, there is often a lack of meaningful engagement and participation from these communities in the development process. This can stem from a lack of awareness about the potential benefits of a Geopark, limited capacity to participate in tourism activities, or cultural and social barriers that prevent effective collaboration (Aziz, Zainuddin, Patwary, Nawi, Khan, 2024a). Without local communities' active involvement, the Geopark development may face resistance or fail to

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deliver equitable benefits. Communities that do not feel included in the decision-making process may not support conservation efforts, and the socio-economic benefits of tourism may not be distributed fairly, leading to dissatisfaction and potential conflict.

Insufficient Marketing and Promotion

Effective marketing and promotion are critical for attracting visitors to a Geopark. However, there is often a lack of coordinated marketing efforts to promote Kelantan's unique geological and cultural attractions. Insufficient branding, limited online presence, and lack of collaboration between tourism stakeholders can result in Geopark's low visibility on national and international platforms. Without effective marketing, Geopark may struggle to attract visitors, limiting its potential as a tourist destination (Aziz, 2023). This, in turn, reduces the economic benefits for local communities and the funds available for conservation efforts. Additionally, insufficient promotion may lead to a lack of awareness and appreciation for the region's geological and cultural heritage. These barriers and challenges highlight the complexities of developing a Geopark in Kelantan. Addressing these issues requires a multi-faceted approach that involves all stakeholders, including government agencies, local communities, private investors, and conservation organizations (Patwary, Sharif, Aziz, Najmi, Rahman, 2023). By working together, these challenges can be overcome, paving the way for a successful and sustainable Geopark that benefits both the environment and the local population.

Conclusion

Geo-heritage parks offer a unique opportunity to conserve geological heritage while promoting sustainable tourism and socio-economic development. However, the literature highlights that stakeholders must address numerous challenges to ensure the success of these initiatives. Financial constraints, environmental degradation, community engagement issues, regulatory hurdles, and marketing barriers pose significant challenges to developing and managing geo-heritage parks. Addressing these challenges requires a coordinated and multi-faceted approach involving government agencies, local communities, private investors, and international organizations. By learning from the experiences of existing geo-heritage parks and implementing best practices, it is possible to overcome these barriers and achieve the goals of conservation and sustainable development.

Acknowledgments

This study has been funded by the Ministry of Higher Education, Malaysia, through the Fundamental Research Grant Scheme (FRGS), with code UMK: R/FRGS/A1100/00219A/003/2023/01190 & DP KPT: FRGS/1/2023/SS10/UMK/02/1.

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Journal of Tourism, Hospitality and Environment Management
JTHEM
EISSN: 0128-178X
Volume 9 Issue 37 (September 2024) PP. 86-93
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