

GEOHERITAGE TOURISM IN LENGGONG VALLEY, PERAK, MALAYSIA: LOCAL COMMUNITY INVOLVEMENT

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Abstract: Academic studies in the Lenggong Valley area have facilitated the careful recording of primary data on the location and current condition of each geoarchaeological site. This research has facilitated the sustainable empowerment of the heritage tourism sector by emphasising the principles of the Sustainable Development Goals (SDG)—leaving no one behind. Stakeholders plan to help local communities by participating in tourism activities to achieve this goal. Therefore, they conducted this study to document the involvement of local communities in tourism initiatives at geoarchaeological sites, particularly in Lenggong Valley, Perak, Malaysia. The research method used to enable the primary data to be recorded is to focus on survey and participation activities related to organised tourism programmes involving local communities. The recording of field activities allows primary data related to the location of the site to be mapped into a 2-dimensional map as well as being able to record the latest conditions and tourism facilities available at the heritage sites. In addition, by participating in activities, it has enabled data related to tourism activities involving the participation of the local community to be systematically recorded. In fact, by conducting observations through the organisation of geoguide workshops, it also allows data related to the involvement of stakeholders and the local community at the same time to be recorded for the purpose of creating certified geoguides at heritage sites in the Lenggong Valley area, Perak, Malaysia. The results indicate that certain segments of the local community in the Lenggong Valley have received training and are now actively participating in the role of certified tour guides. Additionally, some local communities serve as traditional food operators and provide homestay accommodations. This study indicates that the local community has played an active role in empowering the heritage tourism sector in the Lenggong Valley area. The study unequivocally demonstrates the successful alignment of tourism activities in the Lenggong Valley with the SDG principles, thereby safeguarding heritage tourism locations. Thus, this study has clearly documented the best actions of stakeholders and local communities, which have so far succeeded in directly involving the community in geotourism activities, especially in the Lenggong Valley area.

Keywords: Lenggong Valley, guided tour, tourism packages, local community, sustainability tourism

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INTRODUCTION

Academic studies conducted in the Lenggong Valley area (Figure 1) until now have revealed a total of 27 geosites, eight biosites, 18 cultural and heritage sites, and nine geoarchaeological sites within an area of only 2,068 km² (Talib et al., 2022). Generally, all of these mapped tourist sites are located in Mukim Durian Pipit, Temelong, Lenggong, and Kenering in the Hulu Perak district, Malaysia. Geographically, all the sites fall within the coordinates of 4.97-5.52° N (latitude) and 100.87-101.45° E (longitude) (Anonymous, 2021). The site has demonstrated significant scientific value, making it a potential iconic tourism product in the Hulu Perak district. Furthermore, UNESCO has recognized Lenggong Valley as a World Heritage site since 2012 (Jing Hang & Arifin, 2021) and as a National Geopark in 2021 (Sufian Suri, 2021; Talib, 2022), highlighting the uniqueness of its tourism products. The Geopark Promotion and Development Committee is currently working on a research dossier to nominate the Lenggong Valley as a UNESCO World Heritage site for the global geopark (UGGp) category in 2025, a move that could further propel its growth as a top tourist destination in Malaysia.

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Globally, all UGGp sites serve as sustainable tourism destinations (Lee & Jayakumar, 2021; Herrera-Franco et al., 2022), thereby fostering the development of an area's economic system. This allows the local community to have the opportunity to play an active role in the empowerment of the tourism sector, which provides economic strengthening benefits for the community (Ruban et al., 2023; Nguyen et al., 2024). Exploiting the privileges of mapped tourist locations can transform an area into a tourist destination, ultimately benefiting local residents (Niemczewska, 2020).

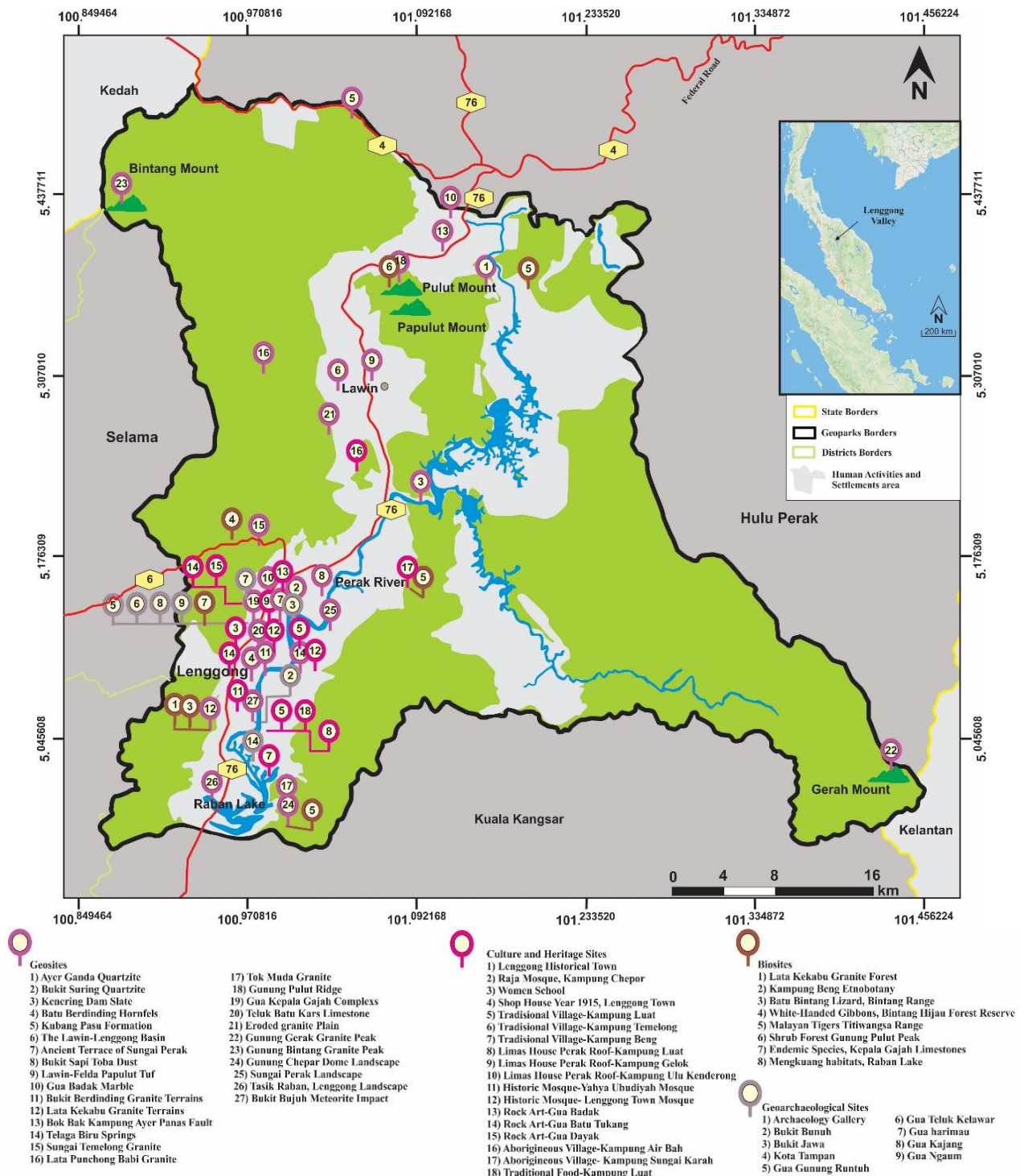


Figure 1. Location of geological, biological, geoarchaeological, cultural, and heritage tourism sites in Hulu Perak district (Source: authors based on data from Anonymous, 2021)

Studies in Malaysia's Sungai Batu Archaeological Complex (Abd Halim et al., 2023; Ali et al., 2023), Pelangi Cave (Abd Halim, 2022), Guar Kepah (Abd Halim et al., 2024), Tambun Cave (Goh et al., 2019), and Mount Mulu (Sanggin, 2009) show that the local community is involved in offering tourism packages. This shows that the heritage tourism sector has the potential to grow. Studies in the area have also found that the local community has played an important role in offering tourism packages and implementing them. The scenario has allowed the local community to capitalize by developing several heritage tourism packages that facilitate income generation.

HERITAGE TOURISM

In general, inheritance can be divided into two main groups: tangible and intangible heritage (Mohd Yusoff et al., 2011; Abd Halim et al., 2024a), and it can be inherited from generation to generation, consisting of cultural and natural forms found in a region, state, and country. So tangible heritage is a heritage that can be permanently seen and held, while intangible heritage is the opposite, namely that which is not real and cannot be seen as an object or held (Foo, 2019). Natural heritage encompasses the Earth's landscape and its fauna and flora.

All of these are national treasures that reflect the entire memory of the country and its inhabitants. This means that tangible cultural heritage covers cultural heritage sites, historical land sites, historical cities, monuments, cultural landscapes, sacred natural sites, mobile cultural heritage (artifacts), museums and galleries, handicrafts, documentary and digital heritage, cinematographic heritage, and underwater heritage. Intangible heritage includes oral traditions, language, festive events, rituals and beliefs, music and songs, performing arts, visual arts, traditional medical arts, literature, food and sports traditions, and traditional games. Natural heritage includes evidence of national parks, state parks, marine parks, forest reserves, wetlands, mangrove forests, wildlife reserves, mergastua reserves, aboriginal reserves, wildlife conservation centers, rivers, lakes, and seas (Foo, 2019).

Norhanim (2006), and Smith (2023), and assert that heritage tourism, while subjective and overly broad in its scope, typically concentrates on the remnants of a region's or nation's treasures. Therefore, many tourism terms are found to be related to heritage tourism, such as historical tourism, cultural tourism, and archaeological tourism for cultural tourism, while geological and ecological tourism are for nature tourism.

The tourism sector can expand and attract tourists from various regions and countries to heritage tourism sites for exciting visits, thanks to the diversity of heritage site classifications (Alister & Wall, 1982; Abdullah, 2014; Fletcher et al., 2017). Therefore, heritage tourism allows the movement of people to areas that have evidence of fascinating and unique cultural and natural heritage (Prentice, 1993; Bitusikova, 2021). The purpose of travel is to gain experience with the authenticity of places, artifacts, and activities that represent the stories and societies of the past and present in an area.

When tourism activities occur, they enable the recognition of a nation's heritage (Hyasat, 2023), serve as a catalyst for economic growth, and ultimately serve as a powerful force for its preservation under the World Heritage concept. The history of the tourism industry reveals that it has undergone a significant metamorphosis. The industrial revolution in the 19th century AD, initially perceived as a threat to the past, gave way to the 20th century AD, which gained prominence and profitability on a large scale (Walsh, 1992; Ali, 2022). In the 21st century, it has become a trend for tourists to engage with their surroundings, origins, and past. Tourists are willing to move across the borders of a country to get information about the greatness and credibility of a nation in the past through the evidence that still exists.

Based on this trend, Lowenthal (1985) stated that heritage tourism is not historical tourism but more than that. Heritage tourism can provide exposure to the past in the present, which is universal knowledge of natural phenomena and humanity. Because of its importance, Europe has taken advantage of this heritage tourism industry to the fullest and has become their countries' economic resource (Walsh, 1992; Ashworth & Larkham, 1994; Ali, 2022). UNESCO established the conservation and preservation of heritage sites in response to global needs. To achieve this goal, UNESCO introduced the World Heritage Sites program. UNESCO created several programs, including Man and Biosphere (MAB) and International Geoscience and Geoparks (IGGp) under the Natural Sciences division for natural heritage and the World Heritage Site Program (WHS) under the Culture division for cultural heritage (Du & Girault, 2018). These three programs facilitate the declaration of UNESCO World Heritage sites, including Cat Ba, Vietnam (MAB), Geopark Langkawi, Malaysia (IGGp), and Borobudur, Indonesia (WHS).

The declared sites, in addition to their conservation and preservation, are the result of a successful and sustainable heritage tourism industry that prioritizes community involvement in its tourism development.

Local communities in Malaysia actively participate in heritage sites, as evidenced by the Heritage Site at Gua Pelangi (Abd Halim et al., 2022), the Sungai Batu Archaeological Complex (Ali et al., 2023; Abd Halim et al., 2024b), and Guar Kepah (Abd Halim et al., 2024c). Local communities in Gua Pelangi (Abd Halim et al., 2022) and the Kuala Muda district, Kedah (Ali, 2022) are primarily involved as tourist guides, while they also play a role as homestay operators and traditional food providers. This shows that there is a need to involve the local community in the process of strengthening the heritage tourism sector in Malaysia. Prioritizing the community's role in tourism for sustainability purposes allows the community to feel less marginalized and more valued.

Globally, there is a pressing need for community involvement in the tourism sector to prevent marginalization of this group in the development process. Researchers White & Adu-Ampong (2024) conducted research in Crete, Greek Island; Panayidou et al. (2024) in Cyprus; Melly (2024) in Sligo, Ireland; Pangani, Tanzania (Chami & Mjema, 2024); Khadijah et al. (2024) in Garut Regency, West Java; Sutrisno et al. (2024) in Bantar Karet Village in Nanggung District, Bogor Regency; Sumarmi et al. (2024) in Bedul, Banyuwangi, Indonesia; Choosuk et al. (2024) in Libong Island, Thailand, Mekong Delta Region, Vietnam (Nguyen et al., 2024). This demonstrates that cannot ignore the role of communities in heritage sites and need a mechanism to ensure their active participation in the empowerment of the tourism sector.

ICONIC GEOTOURISM SITE

Society generally recognizes an iconic product for its factual authenticity (Woodside et al., 2007; Tang et al., 2009).

This product often provides a very positive image among tourists and the local community, as it is a symbol of local pride (Jenkins, 2003; Holt, 2004). According to Holt (2004), iconic products can be a major source of sales for a single locality that has them. According to Talib et al. (2022), scientific research in the Lenggong Valley area has established the

validity of its main iconic products, which include geological, biological, archaeological, cultural, and heritage evidence. Geology and biology are in the category of natural heritage tourism; archaeology is in the category of archaeological heritage tourism; and culture and heritage are in the category of cultural natural heritage.

This is because the Lenggong Valley itself consists of limestone forests, lowland dipterocarp forests, hill dipterocarp forests, mountain forests, dusk areas, and secondary forests (Figure 2). However, it is the limestone hills that contain a large number of rare and endemic species of flora. Additionally, researchers have recorded five [5] species of rare limestone flora in the Lenggong Valley. The microendemic land snails *Sinoennea lenggongensis* (Family: *Diapheridae*) and *Diplomatina lenggongensis* (Family: *LANDSNAILS-Diplommatinidae*) and the Lenggong Bent-toed Gecko (*Cyrtodactylus lenggongensis*, Fam. *Gekkonidae*) are some of the animals that live in this area (Foon et al., 2017; Talib et al., 2022).

Lenggong's mountain forests and limestone forests serve as one of the 50 primary habitats for the Sumatran serow (*Capricornis sumatraensis*, Fam. *Bovidae*), which is the only wild goat species in Malaysia (*subfamily Craprinae*). The lower-level mountain forests cover the Bintang and Titiwangsa ranges. The forests here are characterized by medium-tall trees and emergent trees, mainly of the *Dipterocarpaceae* family. Among the rare mountain animals are the wild goat and the mountain peacock-pheasant (*Polyplectron inopinatum*) (Talib et al., 2022).

Additionally, Paleolithic, Neolithic, and metal cultures have left evidence of prehistoric settlement in the Lenggong Valley area. The evidence of this culture can be traced back 1.83 million years (Figure 3) (Abdullah et al., 2020) to the open area surrounding the ancient Perak River terraces (Figure 4) and further back to the limestone caves (Figure 5) approximately 14,000 years ago (Goh, 2008; 2014). All of this evidence shows the paleoenvironmental uniqueness of the Lenggong Valley, which can be exploited to become a successful heritage tourism site. Nowadays, the concept of tourism emphasizes the principle of "leave no one behind" (Butcher et al., 2021; Mensah et al., 2022; Gupta & Vegelin, 2023), which emphasizes the involvement of the local community. Consequently, the heritage tourism sector development program in the Lenggong Valley also emphasizes the application of methodologies to preserve tourism.



Figure 2. The Lenggong Valley offers a stunning view of the biological evidence surrounding Pulut Mount (Source: authors)



Figure 3. Evidence of meteorite impact on Bukit Bunuh (Source: authors based on data from Kiu et al., 2013; Anonymous, 2021)



Figure 4. The presence of river gravel provides evidence of the existence of ancient Perak River terraces at Bukit Jawa Site in the Lenggong Valley (Source: authors)



Figure 5. Evidence of limestone cave environment occupancy conducted by archaeological studies (a) and early community cultures found at the site (b) (Source: Anonymous, 2021)

METHODOLOGY

The investigation was carried out using a variety of information-gathering techniques. The first approach involved surveying the position and accessibility of famous tourist destinations in the Lenggong Valley. The survey procedure will enable the implementation of tour packages by documenting the locations and current conditions of the tourist destinations.

To collect primary data on community involvement in the historical tourism industry in the Lenggong Valley, the second approach entails holding a workshop on tour guide empowerment and participating in community-organized tourist events (Figure 6).

RESULT

Survey activities

Survey activities conducted by Mat Stafa et al. (2018) have recorded that the heritage site is in excellent condition and has access routes to reach it. The most recent survey activity also confirms the heritage site's continued good condition, demonstrating that the process of enhancing heritage tourism in the Lenggong Valley has successfully preserved tourism areas (Figure 7). The path to the tourist destination is still well-maintained and accessible by motorcycle, four-wheel drive, or walking. In fact, the Heritage Site area's information panel is in excellent shape, clear and in good condition (Figure 8). This helps visitors learn about a place's benefits.

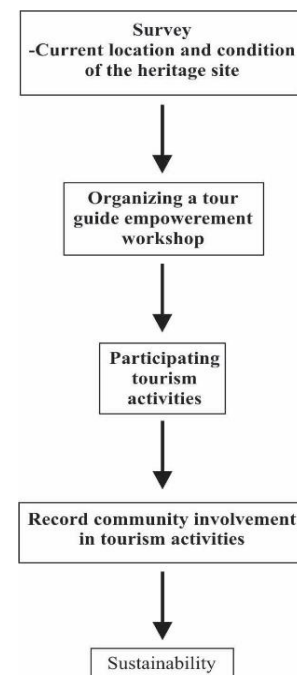


Figure 6. Methodology used to obtain primary data were used to complete the study (Source: authors)



Figure 7. A well-preserved heritage site in Gua Teluk Kelawar (a) dan Bukit Bunuh (b) in the Lenggong Valley (Source: authors)



Figure 8. The information panel at the heritage site (a,b,c, d) was found to be in good condition (Source: authors)

TOURISM ACTIVITIES: LOCAL COMMUNITY INVOLVEMENT

Nowadays, the tourist sector has drastically transformed from solely providing satisfaction and pleasure during travel to becoming a profitable and income-generating sector (Nagarjuna, 2015). The current situation has incited numerous parties to become involved. The development of tourism activities, in particular, can have a positive impact on changing community practices and lifestyles (Ashley & Roe, 1998) if the local community is able to exploit the opportunities available to engage in tourism activities either as a tour guide (Bayram, 2020; Malelak et al., 2022) or provide facilities for the empowerment of the tourism sector (Giampiccoli & Mnguni, 2016; Ismail et al., 2016; Kimiaga & Kihima, 2018; Mulley et al., 2018; Pilis et al., 2022).

The Ministry of Energy and Natural Resources and the Department of Minerals and Geosciences Malaysia organize the Reskill & Upskill program for the basic and advanced course of Jurupandu@Geoguide Lenggong Geopark 2022 (Figure 9), aiming to prepare the local community as tour guides and equip them with knowledge in the heritage tourism sector in the Lenggong Valley. After that, the Lenggong Tourism Unit, a division of the Lenggong District Council, oversees all geoguides to ensure constant performance monitoring and the provision of necessary advice.



Figure 9. Organization of geoguide workshop (a) attended by the local community (b) aimed at strengthening the heritage tourism sector in the area (Source: authors)

As a result, the organization of such a program allows the local community to play an active role in the tourism sector. This will enable the implementation of the Community-Based Tourism Entrepreneurship (CBTE) program. The program serves as a proactive measure to foster local community businesses by transforming the socio-economic lifestyle of the community (Hassan et al., 2021). Through the program, the community in Lenggong Valley has produced and marketed traditional food products of Lenggong Valley, highlighting traditional foods and empowering heritage tourism in the area. Thus, the community in Lenggong Valley has produced and marketed traditional food products like Kebebe, Sambal Serai, and Ikan Pindang Lenggong under the brand name 'Lenggong Delicious,' demonstrating the success of this organized program (Hassan et al., 2021). In addition, Indigenous communities in Kampung Air Bah are also involved in ecotourism activities in the forests around their villages. Despite the limited involvement of the Kampung Air Bah community in tourism at present, several plans are in place to expand their role in the future. This involves enhancing the local community's role as tour guides, gallery administrators, handicraft shops, and homestay operators, thereby bolstering the local economy in the villages (Mohamed, 2020).

TOURISM PACKAGES AND ITINERARY

To boost the heritage tourism sector in the Lenggong Valley Area, Tourism Malaysia also plays a major role in producing daily tour packages-up to 3-day, 2-night tour packages in this area (Figure 10) (Tourism Malaysia, 2023). The aim is to promote archaeological heritage as well as Lenggong Geopark, which is recognized as the second national geopark in Perak after Kinta Valley Geopark. This means that until now there have been a total of 48 tour packages in the Lenggong Valley that offer the experience of visiting archaeological sites, hill climbing, cave exploration, boat cruises, fishing, and camping (Anonymous, 2023). According to Anonymous (2023), the tour packages offered by Tourism Malaysia include the Lenggong Geopark and Ecotourism package, Deer Grill & Fun Trip @ Lenggong package, Scientific Tour Package @ Lenggong, Lenggong Heritage Tour Package, Discover Historical & Cultural Geo Lenggong package, Lenggong "Cave Tour & Durian Meal" package, and Amazon Paddling @ Lenggong Mini package. This enables tourists to tailor their tour experience to their personal tastes and requirements. The most significant aspect of Tourism Malaysia's tour package is the inclusion of local community members as tour guides and tourism industry players.



Figure 10. Tourism Malaysia has launched tour packages in the Lenggong Valley, involving the local community (Source: authors based on data from Anonymous, 2023)



Figure 11. Guided tour to Bukit Bunuh to see evidence of meteorite impact (Source: authors)

In addition to Tourism Malaysia, the local community, which is now under the auspices of the Geoguide Lenggong Geopark, also offers tour packages directly to tourists. The package offers a daily tour lasting up to 3 days and 2 nights, focusing on a visit to the archaeological sites of Bukit Bunuh (Figure 11) and Bukit Jawa (Figure 12) to explore the meteorite impact area and stone tool-making workshop from the Paleolithic era. In addition, the local community also held a visit program to Bukit Sapi to see evidence of the remains of the eruption of volcanic dust in Lake Toba (Figure 13), Kajang Cave, Teluk Kelawar Cave, Ngaum Cave, Harimau Cave, and Badak Cave (Figure 14), which revealed evidence of settlements and burial areas dating from the Paleolithic to Neolithic periods in the Valley of Lenggong. To maximize the experience of visiting the Lenggong Valley area, a visit to the Lenggong Valley Archaeological Museum is also carried out (Figure 15).



Figure 12. Guided tours are also conducted to the Bukit Jawa site to see evidence of *in situ* stone tool making workshops (Source: authors)

Figure 13. A visit tour to Bukit Sapi to see evidence of the eruption of Lake Toba volcano dust (Source: authors)



Figure 14. Tourists also visit the cave area to learn about the evidence of settlements and burials from the Paleolithic to Neolithic periods (Source: authors)



Figure 15. The visit program to the Lenggong Valley Archaeological Museum is also carried out to expose tourists to archaeological studies in this area (Source: authors)

A visit to the museum area will concentrate on the archaeological evidence discovered and researched in this area, which includes human skeletons, stone tools, burial materials, pottery, and iron tools. A visit to this particular museum can enhance tourists' understanding and help formulate the historiography of this area. Additionally, the program engaged in activities such as making stone tools (Figure 16) and searching for snails in the Temelong River, specifically *Brotia costula* and *Brotia spinosa* (Figure 17). Participating in such activities undoubtedly contributes to the addition of information and knowledge about the early history of the area. Such a program can stimulate the heritage tourism industry in the Lenggong Valley area and ensure its sustainable preservation.



Figure 16. Stone tool making experiments using river stone as a raw material are also organized for interested tourists



Figure 17. River snail hunting activities are carried out to maximize the experience of tourist visits to the Lenggong Valley (Source: authors)



DISCUSSION

Recent trends in tourism around the world have found reconstructing nature to be among the elements that are focused on tourism development. This is because aspects that include geographical features such as national parks, protected areas, waterfalls, lakes, dams, beaches, caves and formations, interesting panoramas, and areas with natural beauty, as well as areas that have evidence of the culture of past communities, have been used as the main capital in the empowerment of the tourism sector (Ahmad et al., 2013). This is due to the fact that tourism, which is rooted in natural and cultural heritage assets, not only aids in the preservation and conservation of a sustainable environment but also fosters the strengthening of individual identity through the positive values found in these tourist areas.

By focusing on this matter, Malaysia began to strengthen its heritage tourism sector, and the local community in the Lenggong Valley also seized the opportunity to fully participate in tourism activities. This is because studies on UNESCO World Heritage sites, including those that are world heritage sites (WHS), UNESCO Global Geoparks (UGGp), or Man and Biosphere (MAB), have shown that they have helped the tourism industry grow (Hosseini et al., 2021; Zeng & Wang, 2022; Bertacchini et al., 2024), and they can also help local communities strengthen their economies (Agarwal et al., 2023; Alamineh et al., 2023; Riyanto et al., 2023). Therefore, the Lenggong Valley area developed several tour packages that featured visits to unique geological, biological, and geoarcheological natural heritage tourism sites, which have become iconic products.

Based on the successful management of UNESCO World Heritage sites in the heritage tourism sector, the local community, stakeholders, and NGOs have collaborated to develop the heritage tourism sector by offering a variety of special tourism packages. The heritage tourism package offerings in the Lenggong Valley prioritize sharing the wealth of natural and cultural heritage treasures with a diverse range of tourists while also highlighting the sustainability of tourism locations.

Furthermore, the sustainable success of knowledge heritage tourism hinges on the full involvement of the community, as demonstrated by the experience and management of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) on the UNESCO Global Geopark (UGGp), World Heritage Site (WHS), and Man and Biosphere (MAB) sites. This aligns with the country's community policy, which prioritizes eight main thrusts, including the values of entrepreneurship, social business, and social services (Ali, 2022). These thrusts necessitate direct community involvement in the tourism sector. The policy has facilitated social entrepreneurship and strengthened social services that have a direct connection to tourism. This enables the community to actively participate in roles such as tour guide, craft entrepreneur, or homestay, in addition to their involvement in the traditional food industry, which in turn shapes the opinions of the local community (Ali, 2022).

Even in the Lenggong Valley itself, there is also a group of local communities that play an active role as traditional food entrepreneurs (Hassan et al., 2021; Daeng Jamal et al., 2023; Abdul Raji et al., 2024) capable of promoting heritage tourism in the Lenggong Valley at its best. Even the survey activities carried out also revealed that in the Lenggong Valley area, there are also accommodation services such as Taek Raban Resort and Lenggong Rest House, as well as homestays such as Luat Homestay, D'Tasek Lenggong Homestay, KTC Homestay Lenggong, and many others that are close to heritage sites, which shows that the community is ready to receive visits from tourists. Additionally, this area boasts robust health facilities capable of handling any disaster or accident that may arise during tourism activities. This demonstrates that the Lenggong Valley and its communities are in a phase of sustainable development, enabling the effective empowerment of the heritage tourism sector.

CONCLUSION

The Lenggong Valley area's academic studies have made it possible to systematically record a number of geological, biological, geoarchaeological, and cultural heritage tourism sites. Collaboration with stakeholders has resulted in the creation of several heritage tourism packages. So far, there have been 48 tour packages offered under Tourism Malaysia (2023) in addition to side packages undertaken by the local community. This bolsters the heritage tourism sector, drawing tourists to the Hulu Perak region and fostering the economic growth of the local population.

Limitations of the study for future study

The Lenggong Valley area's heritage tourism study does not prioritize the involvement of stakeholders, NGOs, and the local community in the implementation of heritage tourism. This needs to be carried out as a comprehensive study along with accurate data related to the success of its implementation to measure the success of heritage tourism promotion offered.

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