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Destination Management Organization Implementation, Community Empowerment, and Tourism Life Cycle in Eco-Geotourism Development: Evidence from the Merangin Jambi Geopark, Indonesia

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Abstract

This study examines the implementation of Destination Management Organization (DMO) functions, community empowerment, and community involvement within the tourism life cycle in the development of eco-geotourism in Merangin Jambi Geopark, Indonesia. A descriptive qualitative approach was employed using in-depth interviews, field observations, documentation, and data triangulation. Data were obtained from seven purposively selected informants representing the Geopark Management Board, Technical Implementation Unit (UPT), tourism business actors, and local communities, and were analyzed using thematic coding supported by NVivo 12. The findings indicate that DMO functions have developed through collaborative and community-based destination management involving local government, Pokdarwis, Karang Taruna, BUMDes, tourism businesses, and local communities. Community empowerment has generated opportunities across tourism value chains, including homestays, culinary businesses, rafting services, tourism equipment rental, souvenirs, and geoheritage-based products. Community involvement has also contributed to local economic capacity, tourism business development, and destination competitiveness. However, the governance arrangement has not yet evolved into a formally integrated DMO. The diversification of tourism-related activities also indicates characteristics associated with the growth stage of the Tourism Area Life Cycle (TALC), although the stage cannot be confirmed definitively due to the absence of longitudinal data. The study contributes by integrating DMO implementation, community empowerment, and the tourism life cycle as complementary perspectives for examining eco-geotourism destination governance. Practically, the findings highlight the need to establish a clear DMO regulatory framework, strengthen institutional coordination, build community capacity, develop integrated destination promotion, and implement conservation-oriented governance to support sustainable eco-geotourism and geoheritage conservation.

KEYWORDS

destination management organization (dmo); eco-geotourism; geopark; community empowerment; sustainable tourism.

Introduction

The global tourism development paradigm has shifted significantly over the last two decades from an economic growth-oriented approach toward a model emphasizing sustainability, inclusivity, and collaborative governance (UNWTO, 2021; Higgins-Desbiolles, 2020). This transformation became increasingly evident following the COVID-19 pandemic, which compelled tourism destinations worldwide to develop more resilient, adaptive, and community-oriented management systems

(Hall et al., 2020; Sharma et al., 2021). In this context, tourism destinations are no longer perceived merely as spaces of tourist consumption, but rather as socio-ecological systems requiring the integration of environmental conservation, community welfare, and sustainable institutional management (Bramwell & Lane, 2011; Dredge & Jamal, 2015).

One of the approaches increasingly adopted within sustainable tourism development is the establishment of geoparks and eco-geotourism destinations (Dowling, 2011; Newsome & Dowling, 2018). UNESCO Global Geoparks are developed as territorial management models integrating geoheritage protection, biodiversity conservation, environmental education, cultural preservation, and community economic empowerment through participatory approaches (UNESCO, 2021). From a sustainable development perspective, geoparks function not only as conservation areas but also as instruments for community-based regional development capable of balancing environmental preservation with local economic growth (Farsani et al., 2012; Dowling & Newsome, 2018).

The development of eco-geotourism requires integrated destination governance because geopark destinations involve multiple stakeholders with diverse interests, including government institutions, local communities, private sectors, academics, and civil society organizations (Baggio & Cooper, 2010; Eagles et al., 2002). Within this framework, the *Destination Management Organization* (DMO) is regarded as a strategic institutional mechanism for coordinating stakeholders and fostering synergies in sustainable destination management (Pike & Page, 2014). Contemporary DMOs no longer function solely as destination marketing institutions; they also play critical roles in visitor experience management, collaborative networking, community capacity building, conflict management, and the mitigation of tourism's socio-ecological impacts (Morrison, 2018; Volgger & Pechlaner, 2014).

Numerous studies have demonstrated that the success of sustainable destination management is strongly influenced by effective collaborative governance and local community participation in tourism development processes (Jamal & Getz, 1995; Byrd, 2007). Community participation is essential because local residents are the stakeholders most directly affected by tourism activities economically, socially, culturally, and environmentally (Tosun, 2006; Nunkoo & Ramkissoon, 2011). Within the *community-based tourism* approach, local communities are positioned not merely as beneficiaries of development but as key actors in tourism planning, management, and monitoring processes (Murphy, 1985; Goodwin & Santilli, 2009).

In addition to governance aspects, destination dynamics are also shaped by community involvement throughout the stages of the *tourism life cycle* (Butler, 1980). Butler (1980) explains that tourism destinations evolve through several stages, including *exploration*, *involvement*, *development*, *consolidation*, *stagnation*, and eventually either *decline* or *rejuvenation*. At each stage, institutional capacity and the level of community participation become critical determinants of destination sustainability (Getz, 1992; Haywood, 1986). Destinations that fail to foster meaningful community participation and collaborative governance tend to experience social conflicts, environmental degradation, weakened destination competitiveness, and declining tourist experiences (Bramwell, 2011; Saarinen, 2006).

Merangin Jambi is a UNESCO Global Geopark located in Merangin Regency, Jambi Province, Indonesia, and was designated as a UNESCO Global Geopark in 2023 (UNESCO, 2023). The geopark encompasses significant geological, biological, and cultural heritage that provides an important foundation for sustainable eco-geotourism development. Its

outstanding geoheritage includes Early Permian fossilized flora dating to approximately 296 million years ago, representing a distinctive geological heritage of international significance (UNESCO, 2023). The geopark also contains diverse geological formations, rich biodiversity, and cultural heritage that are closely associated with local communities and their livelihoods (Dowling & Newsome, 2018; UNESCO, 2023). These resources provide opportunities for conservation, environmental education, community-based tourism, and sustainable local economic development.

The combination of geoheritage, biodiversity, cultural heritage, and community-based economic activities makes Merangin Jambi an important setting for examining sustainable destination governance. In a geopark context, destination management must extend beyond tourism promotion to include the coordination of conservation, community participation, tourism development, and local economic interests (Dowling & Newsome, 2018; Geoparks, 2016). Therefore, the DMO perspective is particularly relevant because effective destination governance requires collaboration among government institutions, local communities, tourism businesses, and other stakeholders to balance tourism development with geoheritage conservation and community welfare (Bramwell & Lane, 2011b; Pike & Page, 2014b).

Ecologically, Merangin Geopark is closely connected to Kerinci Seblat National Park, which forms part of the *Tropical Rainforest Heritage of Sumatra*, recognized by UNESCO as a globally important conservation area (UNESCO, 2020). The existence of tropical rainforests, endemic biodiversity, water resources, and customary forests provides the area with strategic ecological functions as an environmental reserve and ecosystem buffer for the future (Whitten et al., 2000). Consequently, tourism development within the geopark cannot solely prioritize economic growth through tourism expansion but must also promote management models that support environmental conservation and long-term socio-ecological sustainability (Dowling & Newsome, 2018).

Merangin Geopark is also strategically important as a research locus because it represents a complex destination governance system involving multiple stakeholders with varying institutional capacities. The geopark development process involves local government institutions, geopark management agencies, tourism awareness groups (*Pokdarwis*), local communities, tourism business operators, and residents living around the geopark area. Such multi-stakeholder involvement makes Merangin Geopark a relevant case for analyzing the implementation of *Destination Management Organization* (DMO), collaborative governance, and community participation in eco-geotourism development (Jamal & Getz, 1995; Volgger & Pechlaner, 2014).

Although research on geopark governance, DMOs, and community-based tourism has expanded, three gaps remain. Theoretically, limited research integrates DMO, community empowerment, and the Tourism Area Life Cycle (TALC) within a single framework for understanding eco-geotourism destination governance. Empirically, limited evidence explains how these three perspectives operate simultaneously when DMO-related functions are performed through existing government institutions and community organizations. Contextually, Merangin Jambi Geopark provides an important case because it combines geoheritage, biodiversity, and cultural heritage managed through multiple stakeholders and was designated as a UNESCO Global Geopark in 2023. Therefore, this study integrates these three perspectives to address three questions: (1) how are DMO-related functions implemented and coordinated among stakeholders; (2) how is community empowerment manifested through tourism value chains and destination management; and (3) how does community involvement relate to tourism development dynamics within the TALC?

Nevertheless, eco-geotourism development in Merangin Jambi Geopark still faces complex destination governance challenges. Although community-based destination management structures have been established, DMO implementation remains fragmented, particularly in stakeholder coordination, integrated destination promotion, and institutional role distribution (Rahman & Jeddawi, 2025). Previous studies have examined geopark governance, community participation, and destination management separately; however, limited attention has been given to the integration of DMO implementation, community empowerment, and the Tourism Area Life Cycle (TALC) in understanding eco-geotourism governance in geopark destinations. This study therefore addresses this empirical and theoretical gap by examining how these three perspectives interact in the development of eco-geotourism in Merangin Jambi Geopark, while providing practical insights for strengthening collaborative destination governance and community participation.

Another challenge concerns community participation, which remains predominantly operational rather than strategic in terms of decision-making and tourism business networking. This condition indicates that community participation has not yet fully evolved toward *empowerment participation*, as conceptualized in tourism participation theory (Tosun, 2006). In addition, limited local human resource capacities, weak tourism industry networking, and inadequate institutional integration continue to constrain community-based eco-geotourism development.

Previous studies on the implementation of *Destination Management Organizations* (DMOs) within geopark areas have demonstrated that successful geopark development strongly depends on collaborative governance, institutional integration, and local community involvement in destination management (Farsani et al., 2012; Dowling & Newsome, 2018). In several UNESCO Global Geoparks across Europe and Asia, DMO models have been developed through *multi-stakeholder governance* approaches integrating local governments, communities, tourism businesses, academics, and conservation organizations within coordinated destination management systems (Catana & Brilha, 2020; Henriques & Brilha, 2017). Studies conducted in geoparks in China, Portugal, and South Korea indicate that effective DMO implementation strengthens geoheritage conservation, improves visitor experiences, expands local economic benefits, and enhances long-term destination sustainability (Zouros, 2004; Kim & Kim, 2024; Martínez-Martín et al., 2023).

However, the implementation of DMO models within geoparks in developing countries continues to face multiple challenges, particularly regarding weak institutional coordination, limited local human resource capacities, insufficient destination marketing networks, and suboptimal community participation in sustainable destination governance (Aquino et al., 2018; Widawski et al., 2020). Therefore, there remains a need for research examining the existing conditions of DMO governance and community participation in geopark destinations to identify implementation gaps relative to internationally established geopark DMO practices.

Based on these conditions, this study does not aim to position Merangin Jambi Geopark as an ideal model of destination development. Instead, it seeks to analyze the existing conditions of destination governance, identify gaps in DMO implementation, and evaluate community involvement within the dynamics of the *tourism life cycle*. This study offers a conceptual contribution through the integration of DMO perspectives, community participation, and *tourism life cycle* theory within the context of geopark-based eco-geotourism development. Practically, the study is expected to provide

strategic recommendations for more collaborative, participatory, and sustainable destination governance aligned with internationally recognized DMO practices.

Literature Review

Destination Management Organization (DMO)

A Destination Management Organization (DMO) refers to an institution or organizational entity responsible for coordinating tourism destination management through integrated collaboration among multiple stakeholders (Pike & Page, 2014). In contemporary tourism management, DMOs are no longer viewed solely as destination marketing agencies but as strategic institutions that integrate governance, destination development, visitor experience management, environmental sustainability, and community empowerment (Morrison, 2023). In the context of geopark destinations, these functions are particularly important because destination management must balance tourism development, stakeholder interests, community benefits, and geoheritage conservation.

According to Volgger & Pechlaner (2014), DMO represents a form of *collaborative governance* aimed at creating synergy among governments, private sectors, local communities, academics, and civil society organizations in tourism destination management. Within the context of sustainable tourism, DMOs play an essential role in facilitating cross-sectoral coordination, strengthening destination networks, managing stakeholder conflicts, and ensuring that tourism benefits are distributed equitably among local communities (Bramwell & Lane, 2011).

In geopark destinations, the implementation of DMO becomes increasingly important because destination management is not solely oriented toward tourism economic growth but also toward geoheritage conservation, local cultural preservation, and environmental protection (Dowling & Newsome, 2018). UNESCO (2021) emphasizes that sustainable geopark management requires governance systems involving multiple stakeholders collaboratively through participatory and community-based approaches.

The establishment of DMO in sustainable tourism destination management requires active involvement from local communities and stakeholder support as part of *participatory governance* (Jamal & Getz, 1995). Stakeholders in destination development include local governments, destination management authorities, tourism business operators, local communities, academics, media, and civil society organizations with interests in tourism destination governance (Byrd, 2007).

Local community involvement in DMO formation is crucial because communities are the actors most closely connected to destination resources and possess valuable *local knowledge* related to culture, environmental conditions, and the socio-cultural characteristics of tourism areas (Murphy, 1985). Tosun (2006) argues that community participation in tourism development can enhance policy legitimacy, strengthen local ownership of tourism destinations, and support the socio-ecological sustainability of tourism areas.

Within the geopark context, stakeholder support for DMO establishment is also essential for maintaining a balance between conservation objectives and the economic utilization of destination resources (Farsani et al., 2012). DMO models implemented in UNESCO Global Geoparks across various countries have adopted *multi-stakeholder governance* approaches that position local communities as integral components of destination management structures (Catana & Brilha, 2020).

DMO programs in sustainable tourism destination management aim to create equilibrium among economic growth, environmental conservation, and local cultural preservation (UNWTO, 2021). Morrison (2018) explains that DMO programs encompass not only destination promotion but

also tourism attraction management, community capacity building, tourism product development, resource conservation, and the strengthening of local cultural identity.

Within the sustainable tourism approach, local socio-cultural values constitute essential elements that must be preserved in destination development processes (Saarinen, 2006). The success of destination management is strongly influenced by the ability of DMOs to maintain the authenticity of local culture while simultaneously creating high-quality visitor experiences (Bramwell, 2011).

In geopark destinations, DMO programs are also directed toward geoheritage conservation, environmental education, geoproduct development, and local community economic empowerment (Dowling & Newsome, 2018). Therefore, the implementation of DMO programs requires simultaneous integration among conservation, education, cultural preservation, and community economic development initiatives (UNESCO, 2021).

Community Empowerment

Community empowerment in tourism refers to the process of enhancing the capacity of local communities to actively participate in the development, management, and utilization of tourism activities in a sustainable manner (Scheyvens, 1999). Within the community-based tourism approach, local communities are positioned as subjects of development who have the right to obtain economic, social, cultural, and environmental benefits from tourism activities (Goodwin & Santilli, 2009a). In the context of eco-geotourism, community empowerment is particularly important because sustainable destination development requires local communities to have meaningful opportunities to participate in decision-making, access tourism-related economic opportunities, develop their capacities, and contribute to the management and conservation of local resources (Scheyvens, 2002; Timothy, 1999b).

According to Timothy (1999a), community empowerment in tourism encompasses access to decision-making processes, equitable distribution of economic benefits, participation within tourism business chains, and the enhancement of local community capacities. Community empowerment also functions as an essential instrument in promoting destination sustainability because it strengthens the socio-economic resilience of local communities (Tosun, 2006).

Within the geopark context, community empowerment constitutes a fundamental principle of conservation-based and sustainable regional development (UNESCO, 2021). Local communities are not only positioned as tourism service providers but also as custodians of geological heritage, cultural resources, and the environmental sustainability of geopark areas (Farsani et al., 2012).

One of the key indicators of community empowerment is the equitable distribution of economic benefits generated through tourism activities (Scheyvens, 1999). Sustainable tourism emphasizes that local communities should receive direct economic benefits through their involvement in tourism-related activities such as tour guiding services, attraction management, transportation services, culinary businesses, homestays, and the marketing of local products (UNWTO, 2021).

Ashley & Roe (2002) argue that equitable income distribution can strengthen community support for tourism destination development and reduce social conflicts arising from economic inequality within the tourism sector. In the geopark context, the equitable distribution of tourism benefits also contributes to conservation efforts because communities receiving economic benefits from tourism are generally more likely to support environmental preservation initiatives (Dowling & Newsome, 2018).

Community empowerment is also associated with community access to formal tourism business and production chains (Timothy, 1999a). Such access may include business capital assistance, training programs, mentoring, certification, product marketing support, and government policies supporting community-based tourism enterprises (Goodwin & Santilli, 2009b).

According to Tosun (2006), limited access to economic and institutional resources often constitutes a major barrier to the development of *community-based tourism* in developing countries. Therefore, support from governments and stakeholders becomes essential for strengthening local community capacity in sustainable tourism business management.

Community empowerment in sustainable tourism should be implemented through integrated approaches involving individuals, community groups, and inter-group collaboration (Scheyvens, 1999). Such integrated approaches aim to create socio-economic synergy within destination management while strengthening local community networks (Murphy, 1985a).

In geopark development, integrated community empowerment includes community training, geoproduct development, human resource capacity enhancement, strengthening of community institutions, and the development of local tourism economic networks (UNESCO, 2021). Consequently, empowerment initiatives not only improve local economic capacity but also reinforce social sustainability and conservation efforts within geopark areas.

Community Involvement in the Tourism Life Cycle

The *Tourism Area Life Cycle* (TALC) approach was introduced by Butler (1980) to explain the developmental stages of tourism destinations, including *exploration*, *involvement*, *development*, *consolidation*, *stagnation*, and eventually either *decline* or *rejuvenation*. At each stage of destination development, community involvement becomes a crucial factor influencing destination sustainability (Getz, 1992).

According to Haywood (1986), destinations that actively involve local communities throughout tourism development stages tend to demonstrate stronger social and environmental resilience than destinations developed through exploitative approaches. Therefore, community participation represents an essential element in sustainable tourism destination management.

Community involvement within the *tourism life cycle* includes information dissemination, identification of economic opportunities, and community participation in destination development activities (Timothy, 1999a). Tosun (2006) emphasizes that local communities should be provided with access to information and tourism business opportunities in order to participate actively in destination development processes.

Within the geopark context, community opportunity identification may involve geoproduct development, tourism services, community-based conservation initiatives, and the development of local cultural attractions (Dowling & Newsome, 2018). Therefore, community involvement becomes an integral component in promoting the economic and social sustainability of geopark areas.

Community-based tourism development is also associated with strengthening local community capacity to compete within tourism production and service delivery processes (Scheyvens, 1999). From the perspective of sustainable tourism, healthy competition can improve tourism product quality and strengthen destination competitiveness (UNWTO, 2021).

Methods

Research Design

This study employed a qualitative case study design with a descriptive-interpretive approach to examine the implementation of Destination Management Organization (DMO) functions, community empowerment, and community involvement within the tourism life cycle in eco-geotourism development in the Merangin Jambi Geopark. A case study design was considered appropriate because the research focuses on an in-depth examination of a specific destination within its natural and institutional context, including stakeholder relationships, governance practices, and community experiences (Creswell & Poth, 2016; Denzin, 2017). Merangin Jambi Geopark was selected as the case because it represents a complex multi-stakeholder destination that combines geoheritage conservation, tourism development, and community-based economic activities, while its destination governance and DMO functions are still being strengthened. This design enables the study to examine how DMO implementation, community empowerment, and community involvement operate and interact within the tourism life cycle of the geopark.

This study utilized *in-depth interviews* as the primary data collection method to obtain comprehensive information regarding destination governance, stakeholder support, community empowerment, and community involvement in sustainable tourism development within the Merangin Jambi Geopark area. Through in-depth interviews, the researcher was able to explore participants' perceptions, experiences, and understandings concerning the implementation of DMO and community-based eco-geotourism development (Kvale & Brinkmann, 2009b).

Research Site and Research Object

The study was conducted in the Merangin Jambi Geopark area, Indonesia. This area was selected because it possesses significant geoheritage resources, biodiversity, and community-based tourism potential while simultaneously facing various challenges related to sustainable destination governance. The object of this study was the management of DMO, community empowerment, and community involvement

within the *tourism life cycle* in the development of eco-geotourism destinations in Merangin Jambi Geopark.

Unit of Analysis and Research Informants

The study involved seven purposively selected informants representing key stakeholders involved in the management and development of eco-geotourism in the Merangin Jambi Geopark (Table 1). The informants included representatives of the Geopark Management Board, the Regional Technical Implementation Unit (UPTD), tourism business operators, and local community members directly involved in tourism activities. Informants were selected based on their institutional roles, knowledge, experience, and direct involvement in destination governance, community empowerment, tourism activities, or conservation. To protect participant confidentiality, each informant was identified using a code (AZ, OK, SH, JR, TF, EI, and YA).

Data Collection Methods

This study employed three data collection techniques: in-depth interviews, field observations, and documentation analysis. In-depth interviews served as the primary data collection method and were conducted with seven purposively selected informants representing the Geopark Management Board, Regional Technical Implementation Unit (UPTD), tourism business operators, and local community members involved in tourism activities. The interviews used a semi-structured format supported by an interview guide, allowing the researcher to explore participants' experiences and perspectives flexibly and comprehensively (Kvale & Brinkmann, 2009a). With informed consent obtained from all participants, the interviews were audio-recorded and subsequently processed for transcription and imported into NVivo for systematic coding and analysis. The interviews focused on: (1) the establishment and implementation of DMO functions; (2) stakeholder support and coordination; (3) community empowerment; (4) community involvement within the tourism life cycle; and (5) challenges in eco-geotourism development in the Merangin Jambi Geopark. Field observations were conducted to examine tourism activities, destination management practices, community involvement, and relevant tourism facilities and sites. Documentation analysis was used to

Table 1. Profile of Research Informants

Code	Age	Educational Background	Position/Role	Stakeholder Category	Interview Date	Interview Duration
AZ	59	Doctoral (S3)	General Manager, Merangin Jambi Geopark Management Board	Geopark Management	27 February 2024	Approximately one full day
OK	34	Diploma (D3)	Staff, Regional Technical Implementation Unit (UPTD) of Merangin Geopark; Tourism Business Operator	UPT / Tourism Business	27 February 2024	Approximately one full day
SH	44	Junior Secondary Education (MTs)	Local Community; Rafting Operator	Local Community / Tourism Business	28 February 2024	Approximately one full day
JR	37	Master's (S2)	Secretary, Merangin Jambi Geopark Management Board	Geopark Management	28 February 2024	Approximately one full day
TF	35	Senior Secondary Education (SMA)	Local Community; Mount Masurai Tour Guide	Local Community / Tourism Business	29 February 2024	Approximately one full day
EI	40	Bachelor's (S1)	Conservation, Education, and Community Empowerment Division, Merangin Jambi Geopark Management Board	Geopark Management	1 March 2024	Approximately one full day
YA	46	Bachelor's (S1)	Regional Technical Implementation Unit (UPTD) of Merangin Geopark; Tourism Business Operator	UPT / Tourism Business	2 March 2024	Approximately one full day

Table 2. Operational Definitions of the Study

Aspect	Research Focus	Indicators	Data Sources	Research Questions	Social Situation
DMO	Stakeholder support for community empowerment in tourism management based on local socio-cultural values (Volgger & Pechlaner, 2014; Pike & Page, 2014)	Establishment of <i>Destination Management Organization</i> (DMO) involving local communities and supported by stakeholders	Geopark Management Authorities and related technical units	How has destination management been organized and implemented in the Merangin Jambi Geopark, particularly in relation to the establishment or performance of DMO-related functions? Please describe the processes involved, participating actors and institutions, forms of coordination, available evidence, and challenges or institutional gaps.	Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: DMO establishment
			Geopark Management Authorities and related technical units	Has the DMO establishment process involved local communities and received support from local government and other stakeholders?	Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: DMO establishment
Unesco		DMO programs in sustainable tourism management based on socio-cultural values (UNESCO, 2021; Morrison, 2018)	Geopark Management Authorities and related technical units	Does DMO management prioritize the sustainability of local socio-cultural values?	Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: DMO programs
Community Empowerment	Community empowerment in sustainable tourism development (Scheyvens, 1999; Timothy, 1999)	Communities receive equitable roles and income from sustainability-based tourism activities	Geopark Management Authorities and related technical units	Have local communities obtained fair roles and income from sustainable tourism activities?	Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: Tourism economic benefit distribution
		Communities obtain access to tourism business chains and formal production processes (Ashley & Roe, 2002; Tosun, 2006)	Local communities and tourism business operators	Do local communities receive support or assistance from the government in operating tourism-related businesses?	Place: Merangin Jambi Geopark Area. Actors: Local communities. Activities: Tourism business access
		Community empowerment at individual, group, and inter-group levels in sustainable tourism management	Geopark Management Authorities and related technical units	Have local communities been empowered individually, collectively, and across groups in sustainable tourism management?	Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: Community empowerment programs
			Local communities	Do local communities feel involved in	Place: Merangin Jambi Geopark Area. Actors: Local

Aspect	Research Focus	Indicators	Data Sources	Research Questions	Social Situation
Community Involvement in the Tourism Life Cycle	Community involvement within the <i>tourism life cycle</i> from introduction, growth, to maturity stages (Butler, 1980; Getz, 1992)	Communities are informed, involved, and identified with tourism economic opportunities that may benefit local communities	Geopark Management Authorities and related technical units	sustainable tourism activities? Are local communities informed and involved in identifying economic opportunities from sustainable tourism activities?	communities. Activities: Community involvement Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: Tourism opportunity identification
		Tourism activities are oriented toward community development and community capacity building in tourism business competition (Scheyvens, 1999; Tosun, 2006)	Geopark Management Authorities and related technical units	Have tourism activities been oriented toward community development and the creation of competitive tourism business environments?	Place: Merangin Jambi Geopark Area. Actors: Geopark Management Authorities and technical units. Activities: Community capacity development

complement the interview and observation data by examining relevant institutional, tourism, and geopark-related documents. The three data sources were triangulated to strengthen the credibility and contextual interpretation of the findings.

Documentation was used as supporting data to complement the interview and field observation findings. The documents analyzed included geopark management reports, policy documents, institutional records, photographs, tourism program reports, and other relevant documents related to eco-geotourism destination development in the Merangin Jambi Geopark. Documents were selected based on their relevance to DMO implementation, community empowerment, tourism development, and conservation activities. The documentary evidence was compared with interview and observation findings to support data triangulation and strengthen the credibility of the analysis.

Operational Definitions

Operational definitions were used as analytical guidelines to explain the research focus, indicators, data collection methods, data sources, and observed social situations within the study. This study consisted of three primary aspects, namely *Destination Management Organization* (DMO), community empowerment, and community involvement within the *tourism life cycle*.

The DMO aspect was analyzed through stakeholder support for community empowerment in tourism management based on local socio-cultural values. The research focused on the establishment of DMO involving local communities and stakeholder support, as well as DMO programs in sustainable tourism management (Volgger & Pechlaner, 2014; Pike & Page, 2014).

The community empowerment aspect was analyzed through equitable economic benefit distribution, community access within tourism business chains, and integrated empowerment of individuals and community groups in sustainable tourism management (Scheyvens, 1999; Timothy, 1999). Meanwhile, community involvement was analyzed through community participation within the *tourism life cycle*, identification of tourism economic opportunities, and community capacity development in sustainable tourism activities (Butler, 1980; Tosun, 2006).

The operational definitions of this study are presented in Table 2.

Data Analysis

This study employed qualitative thematic analysis supported by NVivo 12. The analysis began with the transcription of the recorded interviews, followed by data familiarization, initial coding, categorization, and thematic interpretation (Miles et al., 2013) (Miles et al., 2014). The coding process combined deductive and inductive coding. Deductive codes were developed based on the three main analytical focuses of the study DMO implementation, community empowerment, and community involvement within the *tourism life cycle* while additional codes were identified inductively from participants' responses. NVivo 12 was used to organize the interview data, manage coding references, examine patterns across informants and thematic categories, and support systematic comparison of coded evidence. Matrix Coding Queries were also used to examine the distribution of coding references across informant characteristics and thematic categories. Findings from interviews, field observations, and documents were subsequently compared to support data triangulation and interpretation.

The trustworthiness of the study was ensured through credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1994). Credibility was strengthened through source and method triangulation by comparing information obtained from interviews with different stakeholder groups with evidence from field observations and relevant documents. Transferability was supported by providing contextual descriptions of the Merangin Jambi Geopark, its multi-stakeholder governance structure, community involvement, tourism activities, and destination characteristics, enabling readers to assess the applicability of the findings to comparable contexts. Dependability was addressed through a systematic analytical procedure involving interview transcription, data familiarization, deductive and inductive coding, categorization, thematic interpretation, and the documentation of coding processes using NVivo 12. Confirmability was supported by comparing interpretations across interview sources and documentary evidence and by grounding the findings in documented empirical evidence and verbatim interview statements rather than researcher

assumptions.

Result and Discussion

Research Informant Profile

The NVivo 12 Matrix Coding Query provides additional evidence of the coding patterns identified in the study. As shown in Figure 1, six coding categories were examined across informant characteristics. The matrix indicates that the coding references were distributed across both age and occupational categories, with the highest references associated with informants aged 30–40 years (7 references) and community representatives (5 references). Other informant characteristics recorded one coding reference each. These results demonstrate that the identified themes were examined across different informant characteristics rather than being derived from a single stakeholder category. The Matrix Coding Query therefore provided an analytical basis for comparing the distribution of coded evidence across informants and supported the interpretation of community empowerment as a cross-cutting dimension of ecogeo-tourism development.

Destination Management Organization (DMO) Management DMO Formation in the Merangin Jambi Geopark

The research findings (Figure 2) indicate that DMO-related functions in the Merangin Jambi Geopark are implemented through collaborative and community-based destination management across several major tourism destinations, including Biuku Tanjung Village, Sungai Air Batu Teluk Wang, Danau Pauh, Mount Masurai, and Rumah Tuo Rantau Panjang. Community involvement is reflected in the roles of Village-Owned Enterprises (BUMDes), Tourism Awareness Groups (Pokdarwis), youth organizations (Karang Taruna), village institutions, and local tourism operators in managing and maintaining tourism destinations and providing tourism services.

In Air Batu Village, local community involvement is particularly evident in rafting operations and destination management. EI explained that local actors are involved in

managing and maintaining tourism destinations through Pokdarwis and Karang Taruna: “Managing and maintaining tourism destinations through Tourism Awareness Groups (Pokdarwis) and youth organizations (Karang Taruna), including destination preservation and maintenance” (EI, informant). JR further explained that local actors independently manage tourism services by utilizing environmental services from Geopark sites, involving tourism practitioners, Karang Taruna, and BUMDes, as well as providing tour guide services, tourism equipment, accommodation, and culinary activities: “Independent management of tourism services through the utilization of environmental services from Geopark sites, involving tourism practitioners, Karang Taruna, and BUMDes, as well as providing tour guide services, tourism equipment, accommodation, and culinary activities” (JR, informant). Similarly, OK emphasized the involvement of village government, BUMDes, Pokdarwis, and Karang Taruna in tourism attraction management: “Tourism attraction management involves the village government, BUMDes, Tourism Awareness Groups (Pokdarwis), and youth organizations (Karang Taruna)” (OK, informant). These interview findings demonstrate that community involvement in destination management extends beyond operational tourism activities to include destination maintenance, tourism service provision, guiding, accommodation, culinary businesses, and institutional participation. The findings are consistent with the NVivo coding results, which identify community involvement and stakeholder participation as prominent elements in DMO-related destination management. However, the evidence indicates that these arrangements represent collaborative and community-based DMO functions rather than a fully integrated formal DMO institution. This distinction is important because the current governance structure relies on coordination among existing institutions and community organizations rather than a single formally integrated destination management entity.

The source triangulation results revealed consistency of information among the Geopark Management Board, Technical Implementation Unit (UPT), local communities, and tourism business actors regarding community involvement in the establishment of the DMO. All informants emphasized that

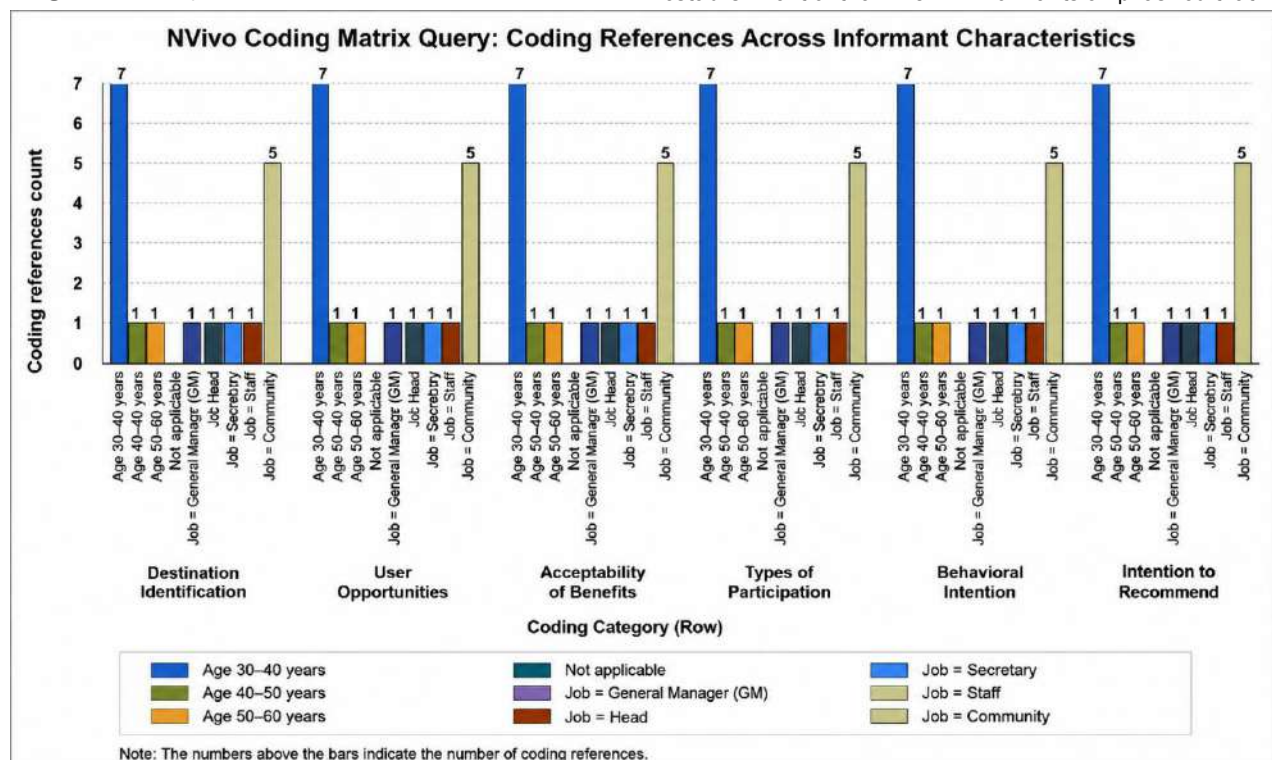


Figure 1. NVivo 12 Matrix Coding Query: Coding References Across Informant Characteristic

local communities are not only involved in operational activities but also participate in the management, promotion, and development of geopark tourism destinations.

Method triangulation through program documentation and NVivo coding analysis further demonstrated that community-based destination management activities emerged as the dominant theme in the implementation of the DMO within the Merangin Jambi Geopark. The coding results revealed a strong relationship between community involvement, destination management, and stakeholder support in the development of eco-geotourism.

Nevertheless, the findings also indicate that the DMO implementation in the Merangin Jambi Geopark has not yet fully developed into a formally integrated institution comparable to the DMO models implemented in several UNESCO Global Geoparks. Instead, the management structure remains collaborative, community-based, and locally managed. This condition suggests that tourism destination management in the Merangin Jambi Geopark is still in the process of strengthening destination governance and institutional capacity.

DMO Programs in Sustainable Tourism Management

The research findings (Figure 3) indicate that the DMO programs implemented in the Merangin Jambi Geopark are oriented toward social, cultural, and environmental sustainability. The implemented programs predominantly involve younger generations as the primary actors in tourism activities and geopark conservation initiatives.

The DMO programs encompass flora and fauna conservation activities, preservation of local customs and traditions, strengthening of local socio-cultural values, as well as the management of safety and cleanliness within tourism destinations. Local communities continue to maintain indigenous knowledge and local wisdom in their daily lives and tourism activities, including customary norms, traditional practices, and the preservation of local historical heritage transmitted across generations.

The results of source triangulation revealed a shared

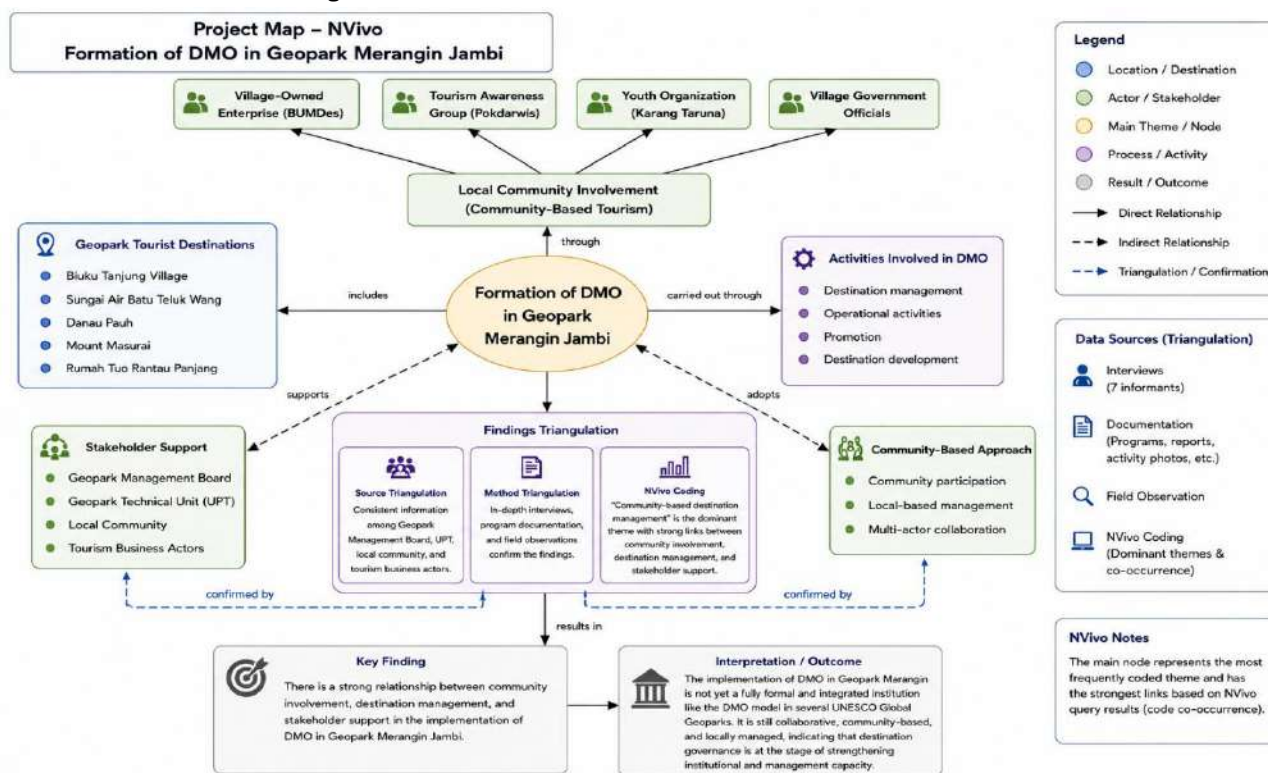
perception among the Geopark Management Board, local communities, and tourism actors regarding the importance of cultural preservation and environmental conservation in the management of geopark tourism destinations. This information as further supported through documentation of conservation activities, geopark educational programs, and tourism promotion initiatives based on local cultural values.

Furthermore, the NVivo coding analysis demonstrated that the themes of conservation, local culture, and community empowerment appeared with high frequency throughout the informant interviews. These findings indicate that the implementation of DMO programs in the Merangin Jambi Geopark is not solely oriented toward increasing tourist arrivals, but also toward maintaining the sustainability of geoheritage, local culture, and environmental conservation as integral components of eco-geotourism development.

Stakeholder Support in DMO Management

The research findings (Figure 4) indicate that stakeholder support in DMO management is implemented through the involvement of local government authorities, the Geopark Management Board, the Technical Implementation Unit (UPT), local communities, and community groups in the development of geopark tourism destinations. Such support includes tourism promotion, community institutional development, destination management, and local community empowerment.

The results of source triangulation revealed consistent information among informants regarding the patterns of stakeholder support for community-based eco-geotourism development. Information obtained from the Geopark Management Board was consistent with statements from local communities and tourism business actors concerning the importance of stakeholder collaboration in the Method triangulation through program documentation and NVivo analysis further demonstrated that stakeholder support is primarily focused on three major aspects, namely community involvement in destination development, participation of community groups such as *Pokdarwis* (Tourism



Source: NVivo 14 Analysis Results, 2024

Figure 2. Formation of DMO in Geopark Maringin Jambi

management of geopark tourism destinations.

Awareness Groups) and Karang Taruna (Youth Organizations), as well as community participation in tourism promotion and destination management activities.

The NVivo coding results also revealed that the themes of stakeholder collaboration and community participation exhibited strong interrelationships within the implementation of the DMO. These findings indicate that DMO management in the Merangin Jambi Geopark has adopted a *multi-stakeholder governance* approach, although inter-institutional coordination still requires further strengthening to ensure that destination management can operate in a more integrated and sustainable manner.

Community Empowerment

Community Roles and Income

The research findings (Figure 5) indicate that communities surrounding the tourism destinations within the Merangin Jambi Geopark have obtained economic benefits from sustainable tourism activities. Community involvement includes tour guiding services, rafting operators, homestay management, parking management, tourism levy services, destination security, and other tourism-related services.

The results of source triangulation revealed consistency of information among local communities, tourism business actors, and the Geopark Management Board regarding the increasing economic opportunities experienced by local communities following the development of eco-geotourism activities within the geopark area. This information was further strengthened through documentation of tourism activities and the development of community-based tourism enterprises within the geopark.

Method triangulation through NVivo coding analysis demonstrated that the themes of community economic benefits and community involvement in tourism management exhibited strong relationships with the development of community-based tourism destinations. Local communities

were not only positioned as operational actors in tourism activities but were also actively involved in the management and conservation of tourism destinations. These findings indicate that the development of eco-geotourism in the Merangin Jambi Geopark has created new economic opportunities for local communities through sustainable and community-based tourism approaches.

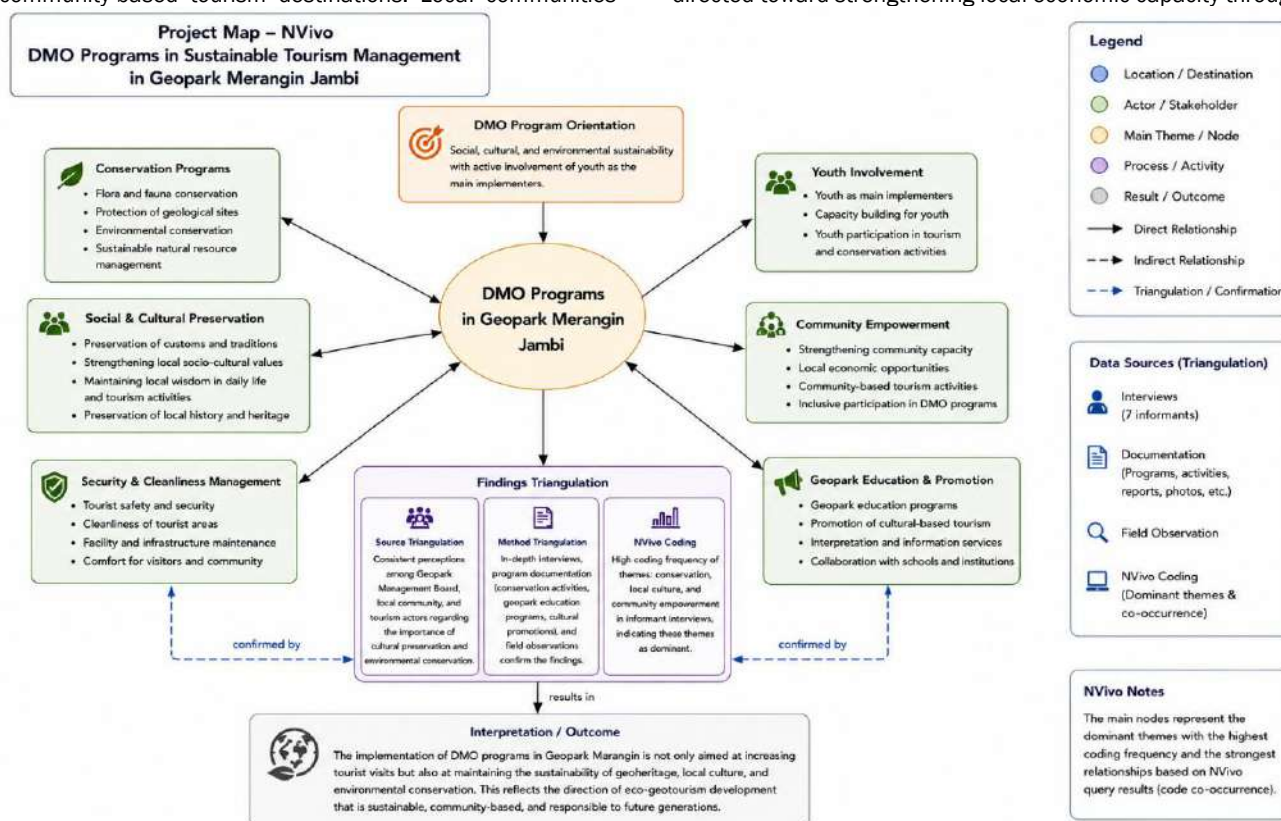
Community Access to Tourism Businesses

The research findings (Figure 6), indicate that local communities have obtained access and support in developing tourism-related businesses through training programs, certification, mentoring, and human resource capacity-building initiatives. Local governments and the Geopark Management Board have provided facilitation to improve community competencies in tourism services and destination management.

The results of source triangulation demonstrated consistency of information among local communities, tourism business actors, and the Geopark Management Board regarding the forms of support provided to local communities. Informants stated that communities received access through tourism management training, tour guide certification programs, and the development of community-based tourism enterprises.

Method triangulation through activity documentation and NVivo coding analysis revealed that community access consisted of three main aspects, namely the types of support provided, the groups receiving access, and the mechanisms through which communities accessed tourism-related activities.

The NVivo coding results further indicated that the themes of community capacity-building and access to tourism businesses appeared with high frequency throughout the informant interviews. These findings suggest that community empowerment in the Merangin Jambi Geopark has been directed toward strengthening local economic capacity through



Source: NVivo 14 Analysis Results, 2024

Figure 3. DMO Program Sustainable Tourism Management in Gepark Merangin Jambi

participatory and community-based approaches.

Integrated Community Involvement and Empowerment

The research findings (Figure 7) indicate that local communities are actively involved in various training programs, destination development meetings, and sustainable tourism activities. Community groups such as *Tracking Family Adventure*, *Pokdarwis* (Tourism Awareness Groups), *Karang Taruna* (Youth Organizations), and other local community organizations play significant roles in tourism service management, destination promotion, and conservation activities within the geopark area.

In addition, integrated community empowerment has also been implemented through the development of local *geoproducts*, including coffee, ginger, palm sugar, and other agricultural products produced by local communities in the Mount Masurai area. Farmers have received training covering cultivation processes, maintenance, post-harvest processing, and the marketing of local products.

The results of source triangulation revealed consistency of information among local communities, tourism communities, and the Geopark Management Board regarding community involvement in local product development and community-based tourism activities. This information was further supported through documentation of community empowerment activities and training programs related to the development of local tourism products.

Method triangulation through NVivo coding analysis demonstrated that the themes of community empowerment, cultural conservation, and *geoproduct* development exhibited strong interrelationships within the development of eco-geotourism in the Merangin Jambi Geopark. These findings indicate that community empowerment in the Merangin Jambi Geopark is not solely oriented toward economic objectives, but also toward the preservation of local culture

and the sustainable conservation of the geopark area.

Community Involvement in the Tourism Life Cycle Tourism Economic Opportunities

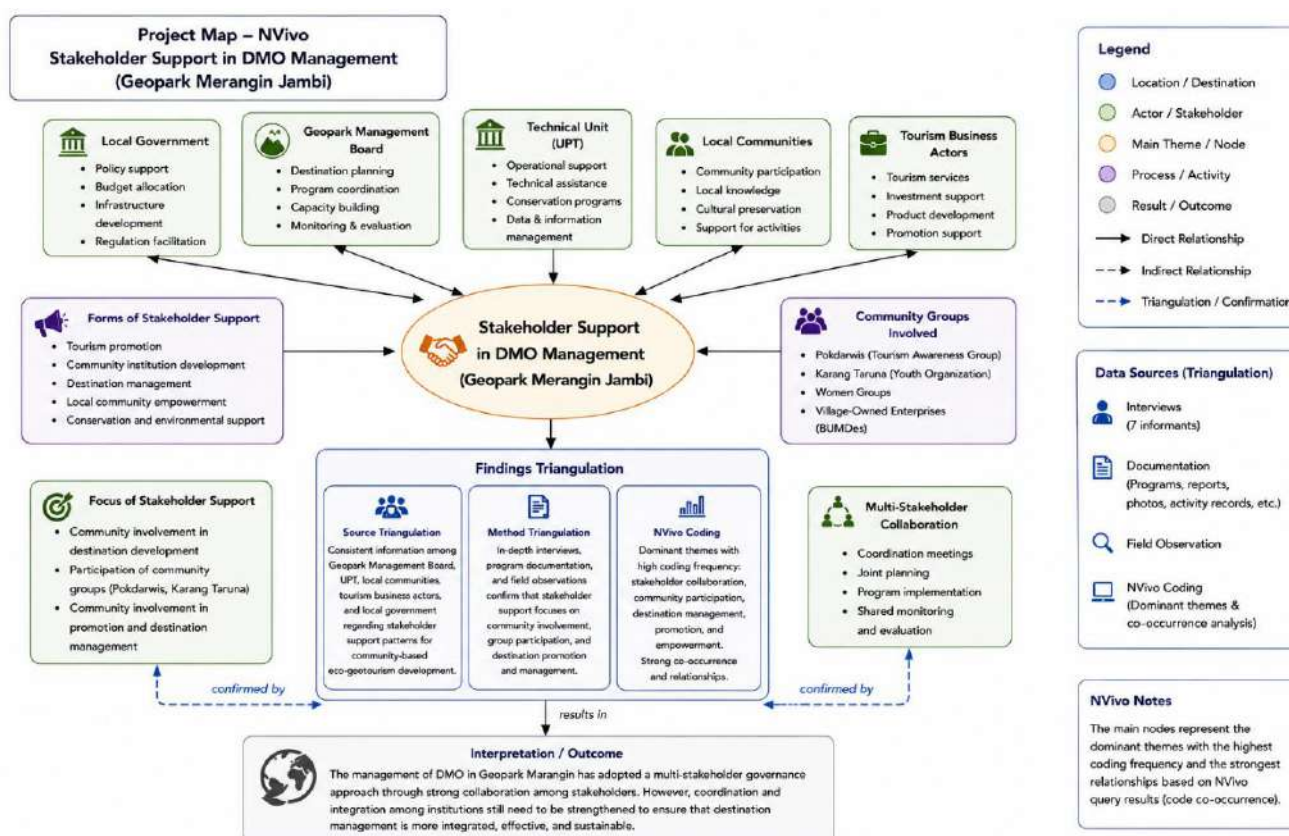
The research findings (Figure 8) indicate that tourism development in the Merangin Jambi Geopark has created various economic opportunities for local communities. These opportunities include homestay businesses, restaurants, tour guide services, outdoor equipment rentals, souvenir sales, and the development of local products such as coffee, ginger, and palm sugar. Community groups involved in the development of these economic opportunities consist of *Pokdarwis* (Tourism Awareness Groups), *Karang Taruna* (Youth Organizations), Village-Owned Enterprises (BUMDes), farmer groups, women farmer groups, micro, small, and medium enterprises (MSMEs),

The results of source triangulation revealed consistent information among the Geopark Management Board, tourism business actors, and local communities regarding the emergence of new economic opportunities following the development of eco-geotourism activities within the geopark area. This information was further strengthened through documentation of community-based tourism business development and local economic empowerment activities.

Method triangulation through NVivo coding analysis demonstrated that community economic opportunities consisted of three major aspects, namely the identification of business opportunities, groups benefiting from these opportunities, and the types of tourism businesses developing within the geopark area. These findings indicate that community involvement throughout the tourism life cycle has created new economic spaces for local communities through the development of community-based tourism enterprises and the strengthening of local economic capacity.

Competitive Rivalry in Tourism Businesses

The research findings (Figure 9) indicate that tourism development in the Merangin Jambi Geopark has also



Source: NVivo 14 Analysis Results, 2024

Figure 4. Stakeholder Support in DMO Management

generated increasing competition among tourism business actors, particularly within rafting services, tour guide services, homestay businesses, restaurants, and tourism equipment rental services. Each tourism business actor possesses distinct competitive advantages in attracting visitors. For example, the Air Batu River operator emphasizes expertise in geotourism guiding services, while other operators demonstrate stronger competitiveness in equipment maintenance and tourism promotion activities and other local community organizations.

The results of source triangulation revealed consistency of information among tourism business actors, local communities, and the Geopark Management Board regarding the emergence of increasingly competitive tourism business environments alongside the development of eco-geotourism within the geopark area. This information was further supported through documentation of tourism activities and the growth of community-based tourism enterprises within destination areas.

Method triangulation through NVivo coding analysis demonstrated that the themes of business competition, service quality, and tourism product innovation exhibited strong interrelationships in the development of community-based tourism enterprises. These findings indicate that business competition within the geopark area tends to be competitive while simultaneously contributing to the improvement of tourism service quality. This condition encourages local communities to continuously strengthen business capacity, service innovation, and tourism product quality as part of community-based eco-geotourism development.

The economic opportunities generated through eco-geotourism in the Merangin Jambi Geopark suggest that community empowerment extends beyond participation in tourism activities toward involvement in local tourism value chains. From a community empowerment perspective, this indicates that tourism can create pathways for communities to access economic resources and develop local capabilities when they are involved in service provision and tourism-

related enterprises (Scheyvens, 1999)(Goodwin & Santilli, 2009). However, the findings also suggest that economic participation alone does not necessarily constitute full community empowerment, particularly when decision-making authority and control over tourism resources remain distributed among multiple institutions. This condition highlights the importance of strengthening institutional arrangements that enable communities not only to obtain economic benefits but also to participate meaningfully in destination governance.

Implementation of Destination Management Organization (DMO)

Theoretically, this study extends DMO theory by showing that DMO functions in an emerging geopark can operate through collaborative and community-based governance before developing into a formal institution. It also demonstrates that participation in tourism value chains is insufficient for empowerment without involvement in decision-making. From a TALC perspective, tourism diversification indicates characteristics of the growth stage that should be understood alongside institutional and community dynamics. It also reflects a broader regulatory gap in Indonesia, where the existing tourism regulatory framework provides general principles for sustainable tourism and community empowerment but does not specifically regulate the operationalization of ecotourism destinations and integrated destination management mechanisms (Eddyono, 2025b). Consequently, destination management in Merangin relies substantially on existing government institutions, community organizations, and local tourism actors to perform DMO-related functions without a specific regulatory framework that formally defines their roles, authority, coordination mechanisms, and accountability. This condition helps explain why collaboration has developed organically but remains fragmented across institutional and community actors. From a governance perspective, the issue is therefore not merely the absence of a formal DMO, but the absence of a sufficiently explicit institutional and regulatory framework to transform existing collaborative practices into an

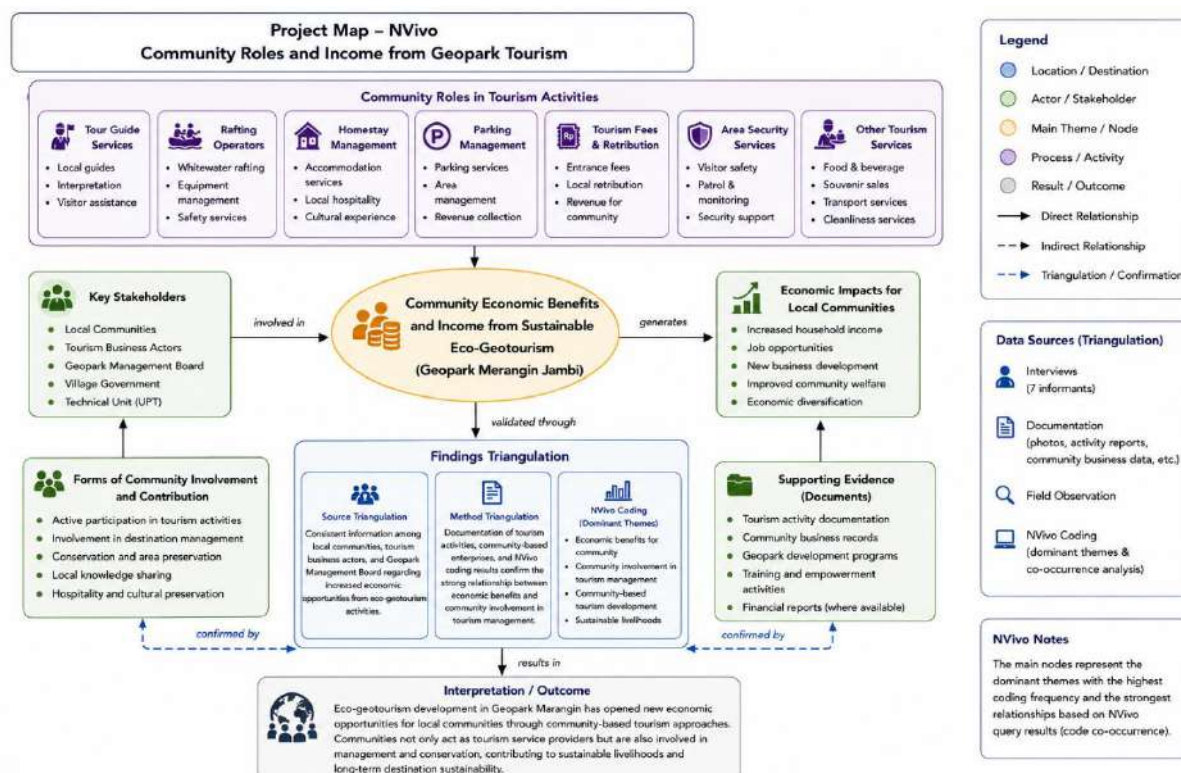


Figure 5. Local Community Roles and Income

integrated destination management system. The practical implication is that strengthening DMO implementation requires not only clearer institutional roles and coordination mechanisms at the destination level but also stronger policy and regulatory support for integrated destination governance, community participation, conservation, and sustainable tourism management.

From the perspective of modern DMO theory, destination management is no longer solely focused on destination marketing, but also encompasses destination governance, environmental sustainability, visitor experience management, and local community empowerment (Pike & Page, 2014; Morrison, 2018). The findings of this study demonstrate that the implementation of the DMO in the Merangin Jambi Geopark has evolved toward a *destination governance* approach through the strengthening of community participation in tourism management and geopark conservation activities.

These findings also reinforce the study conducted by Ulfa & Eddyono (2024) regarding DMO policy analysis in countries with the world's highest tourism development index, which revealed that the success of sustainable tourism destination management is strongly influenced by stakeholder integration, destination governance, and the strengthening of local community participation within destination management systems. In the context of the Merangin Jambi Geopark, the involvement of local communities within the DMO management structure indicates that destination management has shifted toward a participatory and community-based governance model.

Nevertheless, the findings indicate that DMO-related functions in the Merangin Jambi Geopark remain predominantly community-oriented and have not yet developed into a fully integrated institutional arrangement. This condition suggests that destination management is still distributed across existing government institutions,

community organizations, and tourism actors rather than coordinated through a formally integrated destination management structure. From the perspective of the DMO and geopark governance literature, effective destination management requires institutional arrangements capable of integrating conservation functions, tourism promotion, environmental education, tourism product development, and cross-stakeholder coordination (R. Dowling & Newsome, 2018; Geoparks, 2016).

These findings are also consistent with the study conducted by Sulistyadi et al. (2021) concerning indicators of sustainable tourism development planning, which emphasized that successful destination management is significantly influenced by institutional capacity, stakeholder coordination, community participation, and the integration of conservation aspects into destination planning. In the context of the Merangin Jambi Geopark, strengthening the institutional capacity of the DMO is essential to ensure that eco-geotourism development can operate in an integrated and sustainable manner.

Furthermore, the findings demonstrate that DMO programs in the Merangin Jambi Geopark are not solely oriented toward increasing tourist arrivals, but also toward flora and fauna conservation, local cultural preservation, and community empowerment. These findings support the concept of eco-geotourism, which positions geoheritage conservation, environmental education, and local community welfare as core components of geopark development (Dowling, 2013; Newsome & Dowling, 2018).

Eddyono (2025a) study regarding the implementation of ecotourism elements in national parks also demonstrated that conservation-based destination development should integrate environmental protection, tourism education, community participation, and local economic sustainability within a unified management system. Therefore, the implementation of the DMO in the Merangin Jambi Geopark should not only focus on

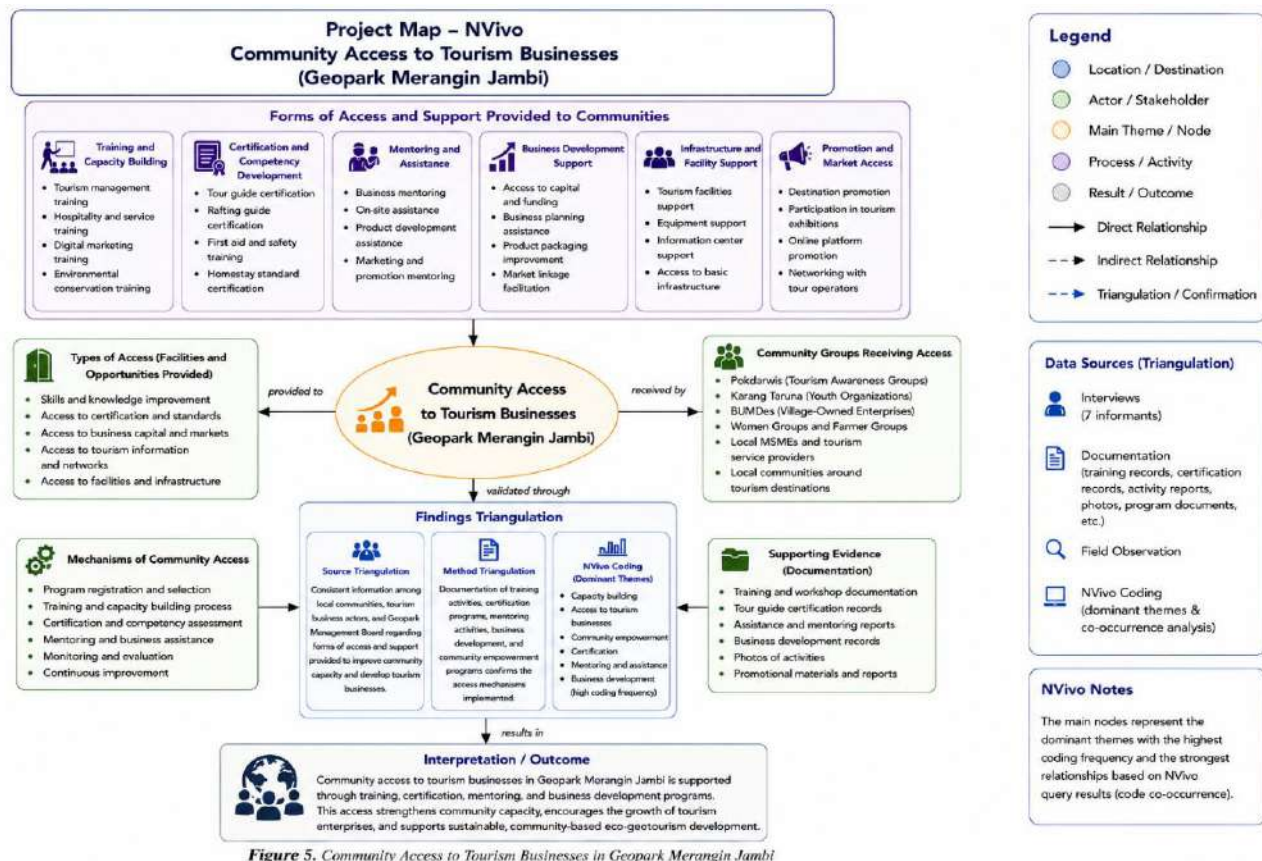


Figure 5. Community Access to Tourism Businesses in Geopark Merangin Jambi

Figure 6. Community Access to Tourism Business

tourism destination development, but also on strengthening area conservation and protecting geoheritage resources as strategic reserves for future sustainability.

Empirically, the success of geopark management is strongly influenced by the ability of the DMO to maintain a balance between conservation objectives and tourism-related economic utilization (Aquino et al., 2018; Henriques & Brilha, 2017). Therefore, in accordance with the theory of sustainable destination governance, DMO management in the Merangin

Jambi Geopark should be directed toward strengthening formal institutional structures, enhancing cross-stakeholder integration, reinforcing local community capacity, and developing sustainable conservation policies (UNWTO, 2021; UNESCO, 2021).

Community Empowerment

The research findings indicate that the development of eco-geotourism in the Merangin Jambi Geopark has created economic opportunities for local communities through their involvement in tourism services, homestay management, culinary businesses, rafting services, souvenir sales, and the development of local geoproducts. These findings are consistent with the theory of community-based tourism, which positions local communities as the primary actors in sustainable tourism development (Murphy, 1985; Scheyvens, 1999a).

According to community empowerment theory, community involvement in tourism-related economic activities can enhance local economic capacity, strengthen the sense of ownership toward tourism destinations, and support the social and ecological sustainability of tourism areas (Timothy, 1999; Tosun, 2006). The findings of this study demonstrate that local communities in the Merangin Jambi Geopark not only receive economic benefits, but are also directly involved in the management and conservation of the geopark area.

This condition indicates the strengthening of a *community empowerment* approach within eco-geotourism development.

These findings reinforce the study conducted by Hadiningsih & Eddyono (2025) concerning the impact of *community-based tourism* development on community welfare in Batulayang Tourism Village, Bogor, which revealed that community involvement in tourism management can increase community income, expand local business opportunities, and strengthen the socio-economic capacity of tourism village communities. In the context of the Merangin Jambi Geopark, eco-geotourism development has also generated economic multiplier effects for local communities through their involvement in various tourism business chains.

Furthermore, the findings are also consistent with the study conducted by (Khadafi & Eddyono, 2026) regarding Lava Tour Merapi, which demonstrated that community-based tourism development can improve community economic welfare through the development of tourism services, the strengthening of creative economies, and the diversification of local businesses. Similar conditions can be observed in the Merangin Jambi Geopark through the development of local *geoproducts* such as coffee, ginger, palm sugar, and community-based agricultural products originating from geopark areas.

Training programs, certification initiatives, business mentoring, and human resource capacity-building activities reported by the Geopark Management Board indicate that community empowerment initiatives have included efforts to strengthen local capacity within the tourism economic chain. The available evidence in this study documents the existence of these capacity-building activities and the forms of support provided to local communities, including tourism management training, tour guide certification, mentoring, and community-based tourism enterprise development. However, the study did not systematically collect data on the frequency, scale, number of participants, or measurable

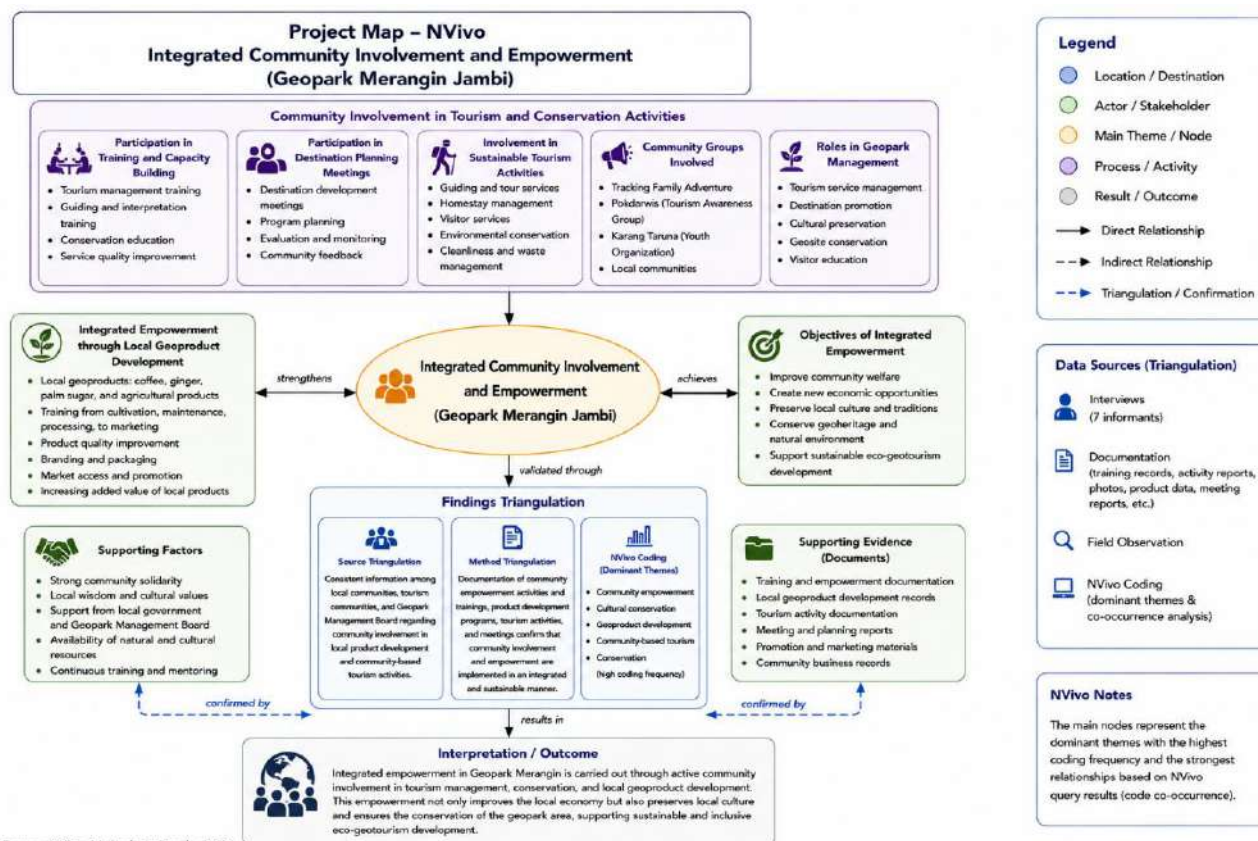


Figure 7. Integrated Community Involvement and Empowerment

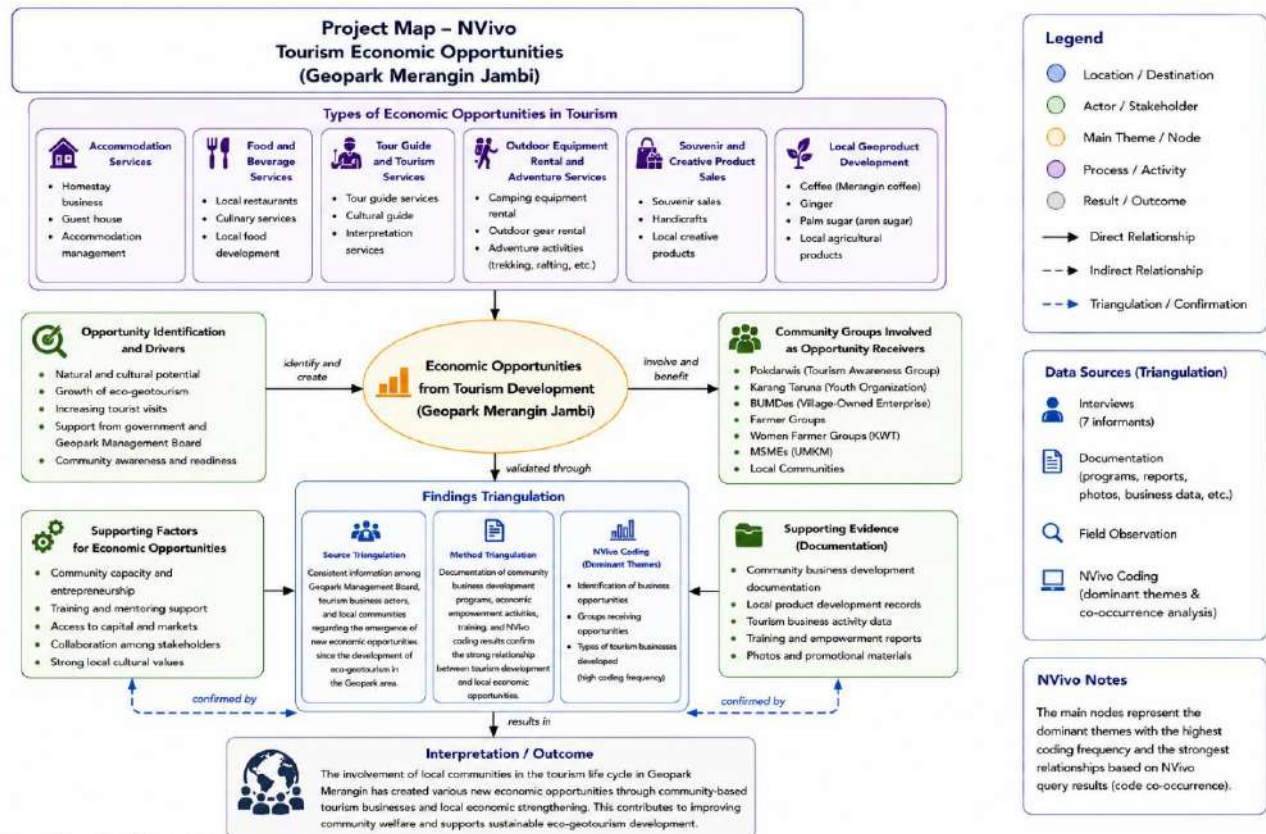


Figure 8. Tourism Economic Opportunities

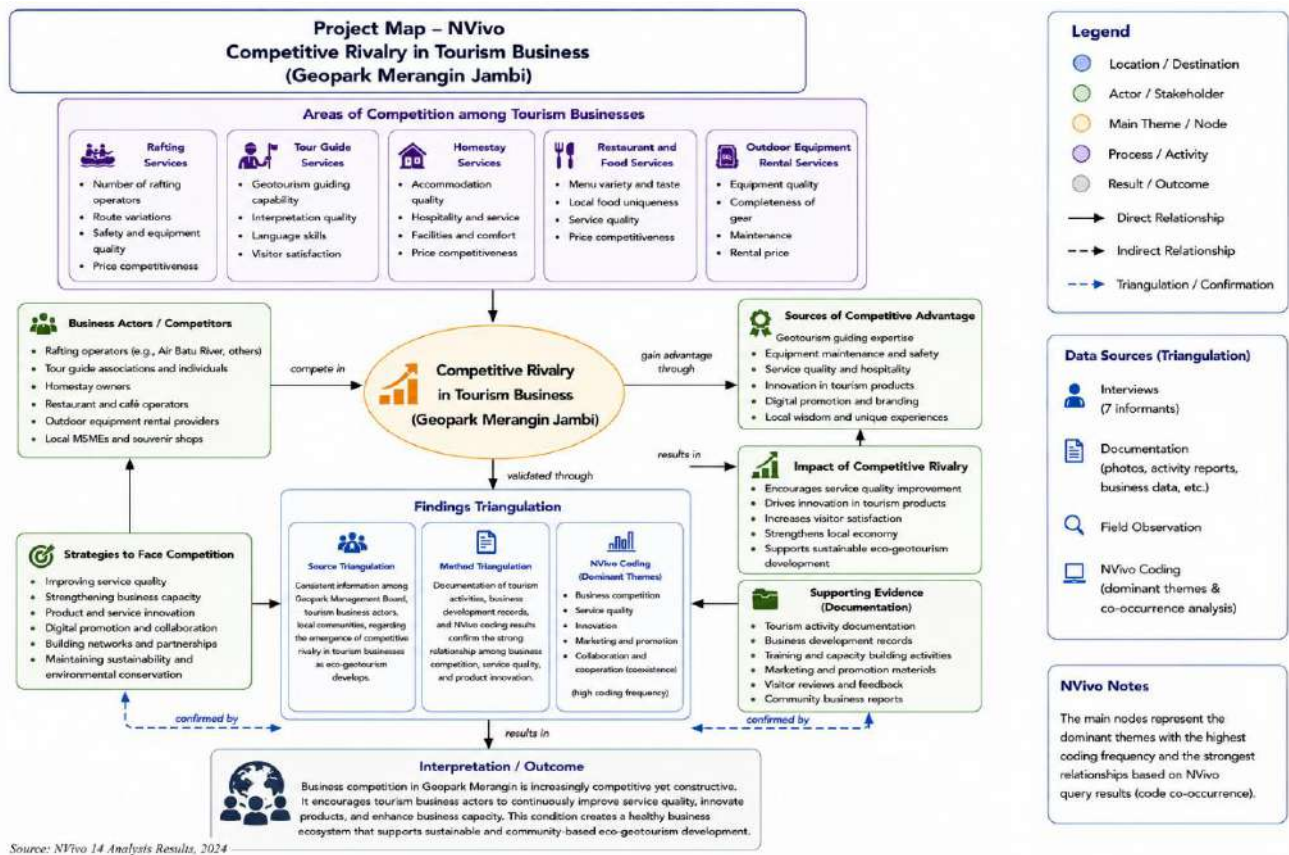


Figure 9. Competitive Rivalry

outcomes of these programs. Therefore, the findings are limited to documenting the existence and reported forms of

capacity-building activities rather than evaluating their effectiveness. These findings are consistent with previous

studies emphasizing the importance of community capacity development in community-based tourism (Goodwin & Santilli, 2009; Giampiccoli & Saayman, 2018).

Nevertheless, the findings also indicate that community capacity in managing tourism-related businesses still requires further strengthening, particularly in terms of digital marketing, tourism product innovation, and the institutional strengthening of community-based enterprises. These findings are consistent with the study conducted by Saadah & Eddyono (2025) regarding the resilience of Tinalah Tourism Village in the post-pandemic period, which revealed that the sustainability of tourism villages is strongly influenced by communities' ability to adapt to tourism market changes, tourism digitalization, and the strengthening of local business capacity.

Theoretically, community empowerment within eco-geotourism should not only focus on increasing community income, but also on strengthening social capacity, preserving local cultural values, and enhancing community resilience toward economic and environmental changes (Scheyvens, 1999; UNWTO, 2021). Therefore, eco-geotourism development in the Merangin Jambi Geopark should be directed toward the continuous strengthening of community capacity through digital tourism training, the development of creative products based on geoheritage resources, and the reinforcement of local community economic networks.

5.3 Community Involvement in the Tourism Life Cycle

The research findings indicate that the development of eco-geotourism in the Merangin Jambi Geopark has created economic opportunities for local communities through their involvement in tourism services, homestay management, culinary businesses, rafting services, souvenir sales, and the development of local geoproducts. These findings are consistent with the principles of community-based tourism, which position local communities as important actors in sustainable tourism development (Murphy, 1985b; Scheyvens, 1999a). From the perspective of Butler (1999), Tourism Area Life Cycle (TALC), the emergence and diversification of tourism-related businesses may suggest characteristics associated with the growth stage, particularly where local economic activities and tourism services become increasingly diversified. However, this study does not classify Merangin Jambi Geopark as being definitively in the growth stage because the available evidence is cross-sectional and does not include longitudinal indicators such as visitor arrivals, investment growth, changes in the number of tourism businesses, or other time-series destination development indicators. Therefore, the TALC interpretation should be understood as an indicative analytical perspective rather than a confirmed stage classification.

During the growth stage, tourism destinations generally experience increasing tourist arrivals, the expansion of tourism-related economic activities, and greater community involvement within the tourism industry (Butler, 1980; Getz, 1992). The findings of this study demonstrate that local communities in the Merangin Jambi Geopark have begun developing various tourism-related businesses, including homestays, restaurants, tour guide services, tourism equipment rentals, and local products based on geoheritage resources. These findings indicate that eco-geotourism has become a catalyst for community-based local economic growth.

These findings reinforce Eddyono et al. (2021) study on tourism competitiveness in Indonesian national parks, which revealed that destination competitiveness is strongly influenced by tourism service quality, tourism product innovation, local economic strengthening, and community involvement in destination management. In the context of the Merangin Jambi Geopark, community participation in tourism business development demonstrates an

increasing destination capacity to create community-based tourism experiences.

Furthermore, the study conducted by Eddyono et al. (2022) concerning tourism competitiveness, international tourist arrivals, and non-tax state revenue in Indonesian national parks demonstrated that improvements in destination quality and community participation have strong relationships with destination attractiveness and tourism economic sustainability. This condition indicates that community involvement throughout the tourism life cycle can become an important instrument in strengthening sustainable geopark competitiveness.

On the other hand, tourism development has also generated increasing competition among tourism business actors. The findings reveal that competition occurs in terms of service quality, tourism product innovation, promotional capabilities, and the differentiation of tourism experiences. These findings are consistent with the theory of destination competitiveness, which states that destination competitiveness is significantly influenced by service quality, product innovation, and stakeholders' ability to create high-quality tourism experiences (Ritchie & Crouch, 2003; Dwyer & Kim (2003).

Empirically, various studies have demonstrated that tourism business competition within community-based destinations can positively contribute to improving tourism service quality when managed collaboratively and sustainably (Sharma et al., 2021; Seyfi et al., 2025). The findings from the Merangin Jambi Geopark indicate that tourism business competition encourages local communities to continuously improve business capacity, service innovation, and the quality of locally based tourism products.

Nevertheless, TALC theory also explains that during the growth stage of tourism destinations, there is potential for conflicts of interest, unequal distribution of economic benefits, and increasing pressure on environmental carrying capacity if tourism growth is not sustainably managed (Butler, 1980; Saarinen, 2006). In the context of the Merangin Jambi Geopark, this issue becomes particularly important because geopark areas possess geoheritage conservation functions that require long-term protection.

Therefore, in accordance with the theory of sustainable tourism governance, eco-geotourism management in the Merangin Jambi Geopark should be directed toward strengthening destination regulations, controlling tourism carrying capacity, ensuring equitable distribution of economic benefits for local communities, and reinforcing collaboration among tourism business actors and destination stakeholders (Bramwell & Lane, 2011; UNWTO, 2021). Such an approach is essential to ensure that tourism growth generates not only short-term economic benefits, but also supports the long-term social, cultural, and environmental sustainability of geopark areas.

Conclusion

This study addresses three research questions. First, DMO-related functions in the Merangin Jambi Geopark operate through collaborative and community-based arrangements involving government institutions, community organizations, tourism businesses, and local communities, but remain partially integrated due to limited formal institutional coordination. Second, community empowerment is reflected in participation across tourism value chains, although economic participation alone does not ensure empowerment without meaningful involvement in decision-making. Third, diversification of tourism-related activities indicates characteristics associated with the growth stage of the Tourism Area Life Cycle (TALC), although this interpretation remains

indicative due to the absence of longitudinal data. Theoretically, the study contributes by showing how DMO functions can emerge through distributed community-based governance, how tourism participation can provide pathways toward empowerment but does not necessarily result in full empowerment, and how TALC development should be interpreted alongside institutional and community dynamics.

This study has several limitations. First, the cross-sectional qualitative case study design captures destination governance and community involvement at a particular period and therefore cannot establish changes in DMO implementation, community empowerment, or TALC development over time. Second, the study involved seven purposively selected informants representing key stakeholder groups; therefore, the findings provide contextual and

information-rich insights but should not be interpreted as statistically representative of all stakeholders in the geopark. Third, the absence of longitudinal destination indicators limits the ability to determine the TALC stage definitively. Future research should therefore employ longitudinal designs to examine changes in destination development and TALC stages over time, conduct comparative studies across geoparks to identify differences in DMO institutional arrangements and community empowerment, and incorporate broader multi-stakeholder validation to strengthen the robustness and transferability of the findings. Practically, the findings highlight the need for a clear DMO regulatory framework, formalized stakeholder roles and coordination mechanisms, community capacity building, integrated destination promotion, and conservation-oriented monitoring.

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