

## COMMUNITY-BASED TOURISM (CBT) IN THE OSING COMMUNITY'S LOCAL WISDOM TO SUPPORT UNESCO GLOBAL GEOPARK IJEN IN KEMIREN VILLAGE, INDONESIA

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**Citation:** Sumarmi, S., Maryani, E., Rose, R.A.C., Patiro, S.P.S., Noviani, R., Kurniawati, E., & Arinta, D. (2026). Community-based tourism (cbt) in the Osing community's local wisdom to support unesco global geopark Ijen in Kemiren village, Indonesia. *Geojournal of Tourism and Geosites*, 64(1), 176–189. <https://doi.org/10.30892/gtg.64115-1665>

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**Abstract:** Indonesia's ethnocultural diversity embeds actionable local wisdom, and the Osing community of Kemiren Village exemplifies the integration of culture and environmental stewardship in Banyuwangi. This study examines community-based tourism (CBT) grounded in Osing values with the aim of clarifying the community's contribution to the pillars of the UNESCO Global Geopark Ijen. A convergent mixed-methods approach was adopted, combining qualitative and quantitative strands. Data were collected through interviews, participatory observation, documentation, and questionnaires. Interpretative Phenomenological Analysis (IPA) was employed to interpret lived meanings, rituals, and spatial practices, while SWOT analysis was used to synthesize internal capacities and external conditions. Triangulation enhanced credibility and ensured integration of both strands in interpretation. The results show that conservation norms and sacred-spring rituals sustain ecological and cultural balance, while Osing festivals transmit heritage and structure tourism spaces. CBT strengthens participation, stewardship, and authenticity in tourism offerings. The SWOT analysis positions Kemiren within a strength–opportunity quadrant, supported by strong social cohesion and rich geocultural assets that underpin destination resilience. Opportunities emerge from geopark branding and learning tourism, whereas risks of commodification and seasonality remain manageable. Integrating Osing values effectively operationalizes geopark principles, aligning cultural and ecological dimensions that advance conservation, education, and local development. Overall, CBT emerges as a strategic pathway for sustainable geotourism and a scalable model rooted in community heritage landscapes.

**Keywords:** Osing indigenous community, local wisdom, community-based tourism, UNESCO Global Geopark

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### INTRODUCTION

Indonesia, a nation comprising over 1,300 ethnic groups and more than 700 regional languages, is globally recognized for its extensive cultural and ecological diversity (BPS, 2023; UNESCO, 2023). The fundamental of cultural diversity and regional characteristics within local communities serves as a fundamental element in the development of geoparks (Wu et al., 2021). Cultural diversity plays a crucial role in integrating local identity and cultural heritage into sustainable tourism frameworks and environmental conservation (Pai et al., 2025; Ye et al., 2024).

Furthermore, environmental conservation is a key factor influencing global promotion efforts. Indonesia's extensive cultural and ecological diversity has made it a significant region within the Global Geopark Network promoted by UNESCO. In recent years, the integration of local knowledge systems with sustainable geotourism development has gained increasing importance in the management and policy agendas of geoparks (Simbaña-Tasiguan et al., 2025; Xu & Wu, 2022). Among the many indigenous communities contributing to this process is the Osing community from Kemiren Village in Banyuwangi, East Java. The Osing community is particularly suitable for this role due to their dedication to preserving cultural traditions and their expertise in environmental management, especially in the areas of water resource conservation and agricultural landscape management (Abas et al., 2022; Prasetyo, 2021; Sumarmi, 2015). Kemiren is not only recognized as a traditional village, but it is also part of the buffer zone of Ijen Geopark, a site currently

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proposed for UNESCO Global Geopark status. The village's role in supporting this buffer zone and the UNESCO Global Geopark designation is largely attributed to its cultural preservation. A region can be considered for geopark status based on the uniqueness of its geological and cultural characteristics (Deng & Zou, 2022; Wu et al., 2021). The Osing community exemplifies a living heritage system in which rituals, spatial practices, and ecological ethics integrate to create a resilient model of community-based conservation (Datta et al., 2024; Prasetyo, 2021). This conservation effort encompasses sacred springs such as *Belik Lanang* (Male Spring) and *Belik Wadon* (Female Spring), which are deeply established in ritual cycles and socio-religious norms. These practices illustrate a harmonious relationship between humans and nature that has endured across generations (Sumarmi, 2015). Additionally, they align with broader environmental ethics and offer meaningful alternatives to conventional top-down conservation approaches (Bennett et al., 2018; Mc Culloch-Jones et al., 2021).

Despite the rapid development of geopark initiatives in Indonesia in recent years, existing research primarily emphasizes geological interpretations and the development of physical infrastructure (Ansori et al., 2022). This focus has created a significant gap in understanding the roles of intangible cultural heritage and indigenous community governance systems in the conservation and sustainability of geoparks. There has been inadequate attention to integrating community-based cultural landscapes into geopark planning and geotourism strategies (Fernandes, 2025; Lee & Karimova, 2021).

Prior studies in other geoparks, such as Toba Caldera and Maros-Pangkep, have highlighted the influence of cultural rituals, like *Mappalili* (a traditional pre-planting ceremonial ritual) and traditional knowledge systems on place identity, tourist attractions, and ecological integrity (Al Hazar & Astina, 2024; Hutagalung & Nasution, 2024). However, there is a lack of scientific research focusing on how Osing local knowledge contributes to fulfilling the criteria set by UNESCO for Global Geoparks, particularly in the context of Ijen Geopark and Kemiren Village. Therefore, this article seeks to address two primary questions: (1) How is the local wisdom of the Osing community applied to the development of cultural tourism in Kemiren Village? (2) What is the strategy for developing Osing knowledge to support sustainable tourism in accordance with the UNESCO Global Geopark framework? This research aims to analyze Community-Based Tourism (CBT) based on the local wisdom of the Osing community, to support the UNESCO Global Geopark in Kemiren Village, Indonesia.

The study addresses an identified gap by exploring the integration of the Osing community's local wisdom in the development of cultural tourism within Kemiren Village and examining its alignment with the UNESCO Global Geopark framework. Employing participatory fieldwork methods, document analysis, and interviews with local stakeholders, this research investigates the complex integration between cultural identity, land use practices, the sustainability of rituals, and tourism governance in the context of geotourism development. The findings are anticipated to enhance the discourse on geocultural heritage and offer critical insights into how local knowledge systems can be leveraged not only as tourism assets but also as foundational elements for fostering a more equitable and sustainable future for the geopark.

## LITERATURE REVIEW

Local wisdom-based tourism approaches have emerged as central strategies in sustainable tourism development agendas, emphasizing not only economic aspects but also encompassing social, cultural, and ecological dimensions (Judijanto, 2025; Lubis et al., 2025; Putra et al., 2024). In this context, local wisdom is viewed not just as cultural heritage but as an epistemological resource that informs contextual destination planning and governance (Esfehani & Albrecht, 2019). The integration of traditional values, customary practices, and ecological knowledge into decision-making processes is believed to help mitigate ecological risks and enhance social sustainability (Berkes & Turner, 2006; Das et al., 2022; Nugroho et al., 2023). The cultural sustainability paradigm offers a theoretical framework that views culture not as a static entity preserved in time, but as a dynamic space that evolves continuously through daily social interactions and community practices (Grünfelder & Baumann Montecinos, 2025; Shrestha & L'Espoir Decosta, 2025). In local communities such as the Osing community of Kemiren, cultural practices like *Ngopi Sepuluh Ewu* (the ceremonial mass coffee gathering of the Osing community) and *Barong Ider Bumi* (the ritual procession of Barong masks around village perimeters as territorial blessing) serve not only as spiritual expressions but also as instruments for fostering social connections, regenerating values, and creating spatial meanings (Prasetyo, 2021; Sumarmi, 2015). However, there is a lack of comprehensive studies examining how these cultural practices are interpreted, negotiated, and adapted by communities within tourism landscapes to promote the sustainability of UNESCO geoparks (Fernandes, 2025; Simbaña-Tasiguano et al., 2025).

### Local Wisdom in Cultural Tourism Development

Cultural tourism development in traditional villages typically integrates local knowledge systems, serving both as valuable heritage assets and guiding principles for sustainable practices. In Kemiren Village, the Osing community's local wisdom is exemplified through traditional spatial arrangements, spring conservation rituals, and the preservation of sacred forests, which have long influenced the community's approach to space management and cultural continuity (Dewi et al., 2022; Sumarmi, 2015). These practices resonate with the concepts of authentic and meaningful cultural tourism experiences, wherein cultural exchange and active community involvement are central to tourism activities (Lee & Karimova, 2021; Sumarmi et al., 2020). Numerous studies highlight the significance of intangible cultural heritage—such as rituals, performing arts, and customs—in cultivating destination identity and attractiveness (Qiu et al., 2022; Wasela, 2023).

However, within the context of geoparks in Indonesia, existing research tends to focus more on geological interpretation and physical infrastructure development, leaving the roles of intangible heritage and customary governance underexplored (Hutagalung & Nasution, 2024). This indicates a research gap in understanding the active application of Osing local knowledge in cultural tourism initiatives and its influence on tourist engagement, destination planning, and the preservation of cultural heritage. In Kemiren Village, community-based tourism models that are rooted in Osing values, such as the

tumpeng sewu rituals, traditional homestay hospitality, and annual cultural festivals, present significant opportunities for developing sustainable and participatory tourism practices (Albert & Dinah, 2018; Simbaña-Tasiguano et al., 2025). This approach prioritizes not only economic benefits but also the resilience of cultural practices and the cohesion of the community.

### Development Strategies for The Osing Community's Local Wisdom to Support Sustainable Tourism and UNESCO Global Geopark

The UNESCO Global Geopark framework highlights the importance of community participation, the preservation of cultural heritage, and sustainable resource management (Mammadova et al., 2025; Wu et al., 2021). Various studies on geoparks, including Toba Caldera, Kinabalu, and Napo Sumaco, reveal that the successful implementation of geoparks relies significantly on the integration of local knowledge into policies, education, and tourism practices (Dousin et al., 2024; Hutagalung & Nasution, 2024; Simbaña-Tasiguano et al., 2025). To develop and promote the Osing community's local wisdom, it is essential not only to preserve existing practices but also to adapt them into accessible formats through educational materials, cultural interpretation programs, and participatory governance structures (Mammadova et al., 2025). Implementing participatory models that involve traditional leaders, youth, and local stakeholders in the design of tourism experiences can ensure that local voices guide the development of geoparks (Borseková et al., 2023; Hawkins, 2022).

Moreover, building community capacity through tour guide training, digital narrative creation, and community-based ecotourism management has been shown to strengthen local identity and enhance socio-economic resilience (Kumar, 2023).

However, the development of the Osing community's local wisdom still faces significant challenges such as infrastructure limitations, unequal benefit distribution, and a lack of policy coordination. Addressing these issues requires a multisectoral strategy that engages village governments, regional governments, and geopark managers (Karimova & Lee, 2022). By integrating Osing local wisdom into geopark indicators, it is possible to connect global recognition with local identity (Widodo et al., 2024). This recognition can further lead to more inclusive and culturally rooted geopark management (Fernandes, 2025).

## METHOD

### Research Design

This research utilizes a convergent parallel mixed-methods design, integrating quantitative and qualitative data collected simultaneously (Ramos-Tumanan & Ryan, 2019; Shneikat et al., 2025). The data are analyzed separately and then integrated during the interpretation phase to provide a comprehensive understanding of community-based tourism in Kemiren Village, which serves as a model for the development of traditional tourism villages. The purpose of this design selection is to evaluate the potential and analyze strategies for fostering Osing traditional tourism through quantitative methodologies. Additionally, this research seeks to enhance the understanding of individual lived experiences connected to the cultural and economic systems through qualitative approaches. The quantitative component employs structured questionnaires based on the SWOT framework to assess the strategic potential of Osing cultural tourism. The indicators examined include internal factors such as cultural uniqueness (e.g., Barong Ider Bumi, Ngopi Sepuluh Ewu), community participation levels, and local branding capacity, as well as external factors such as tourism demand, media exposure, and policy support. Each indicator is evaluated using Likert scales, followed by a weighted SWOT matrix analysis to determine the strategic position of the cultural tourism in Kemiren (Amirshenava & Osanloo, 2022; Sumarmi et al., 2024).

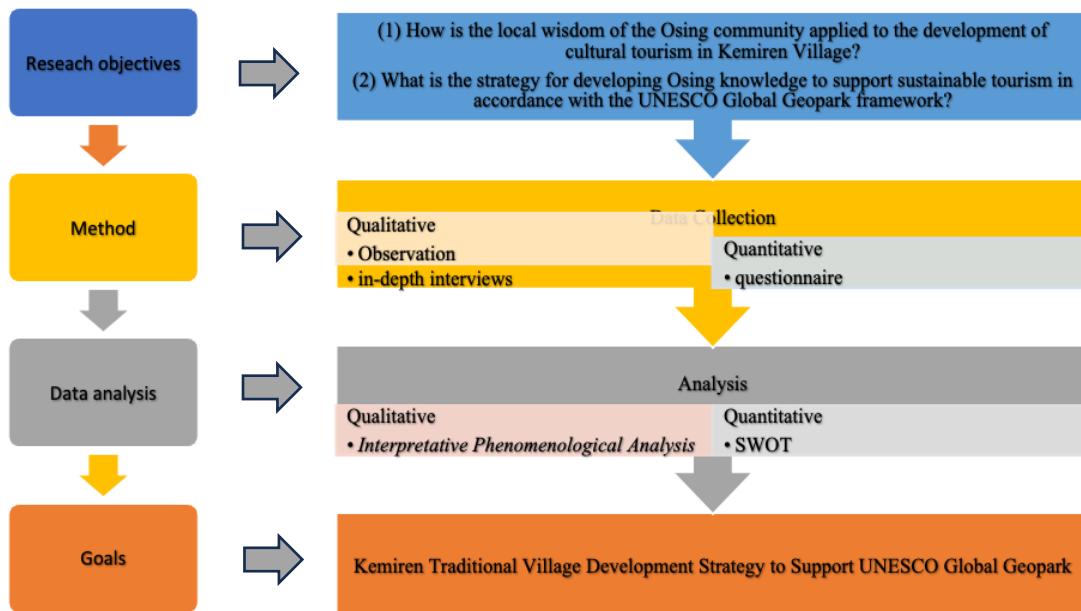


Figure 1. Conceptual Framework for Osing Community Development Strategy in Kemiren Village to Support UNESCO Global Geopark

Simultaneously, the qualitative component adopts a phenomenological approach (Adeniran & Tayo-Ladega, 2024; Alase, 2017) utilizing Interpretative Phenomenological Analysis (IPA) techniques to explore how residents experience and

interpret cultural practices as components of identity and tourism development. In-depth interviews and participatory observations are conducted with traditional elders, performing artists, community leaders, and youth engaged in the preservation of Osing traditions. Figure 1 illustrates the conceptual framework of this research, while Figure 2 shows the research location for the Osing community in Kemiren Village, Glagah District, Banyuwangi.



Figure 2. Research Location in Kemiren Village, Banyuwangi

### Data Sources

This research employs two primary data types: primary and secondary data, which are integrated to explore the correlation between cultural preservation, living environments, and community-based tourism development in Kemiren Traditional Village, Banyuwangi. Primary data is collected through in-depth interviews, participatory observation, and visual documentation conducted in the field. Key informants include Osing traditional leaders, tourism village managers, operators of traditional culinary businesses, representatives of youth cultural preservation, and local officials from the village government and Tourism Department (Table 1). The snowball sampling technique is utilized to select relevant informants, beginning with key figures who recommend networks of others with direct experience in cultural practices and tourism management (Ningrum & Abdullah, 2025; Wang et al., 2025).

Table 1. Research Respondents

| No | Respondents                                | Role and Relevance to Research Focus  |
|----|--|---|
| 1  | Village Head                               | Coordinates local governance and ensures policies align with cultural preservation and tourism                |
| 2  | POKDARWIS (Tourism Awareness Group)        | Promotes community-based tourism development and promotion in the village                                     |
| 3  | Cultural Youth Organization                | Involved in cultural performances, documentation about the tradition, and cross-generation knowledge transfer |
| 4  | Regional Tourism Department Representative | Provides regulatory support and strategies for sustainable cultural tourism development                       |

This method allows researchers to capture a wide array of perspectives and spatial practices present within the community. Secondary data is used to complement and enhance the findings from primary data. Sources for this include official village documents, tourism village development reports, regional regulations about tourism and culture, archives of cultural festivals, as well as spatial maps and regional statistical data.

This information is sourced from the archives of the Kemiren village government, the Banyuwangi District Tourism Department, and relevant academic documents. By combining both primary and secondary data, the research facilitates a comprehensive and contextual analysis of the dynamics of Osing cultural spaces and the collaborative processes among stakeholders in developing sustainable tourism based on local values.

### Data Collection Techniques

This research employs a mixed-method approach, combining qualitative and quantitative data collection techniques. Four main instruments are used complementarily: participatory observation, semi-structured interviews, SWOT-based questionnaires, and documentation.

First, participatory observation is conducted to understand the cultural practices of the Osing community about their living spaces and tourism activities. This observation focuses on three main aspects: locations (such as village spatial structures, traditional houses, and sacred sites), actors (including traditional leaders, homestay owners, and practitioners of arts and culinary traditions), and activities (such as traditional rituals like *Tumpeng Sewu* and *Barong Ider Bumi*, as well as daily community activities related to tourism). All observation activities are systematically recorded in field journals.

Second, semi-structured interviews are conducted with key informants to explore their perceptions, experiences, and roles in cultural preservation and tourism development. The snowball sampling technique is employed to select informants, beginning with central figures such as the chairperson of POKDARWIS (Tourism Awareness Group), traditional leaders, local business operators, and representatives from village government institutions. This interview format allows researchers to gather contextual information while maintaining flexibility according to field dynamics.

Third, SWOT-based questionnaires are used to gather quantitative data that supports the analysis of culture-based tourism development strategies. These questionnaires are structured around four main dimensions: strengths (such as the uniqueness of Osing culture and community involvement), weaknesses (including limitations in infrastructure and challenges in tradition preservation), opportunities (like government support and increasing interest in cultural tourism), and threats (such as cultural commodification and power imbalances in destination management). Respondents evaluate these indicators using five-point Likert scales, and the results are used to construct weighted SWOT matrices.

Finally, documentation is carried out to complement and verify field data. This includes collecting photos of cultural activities, digital archives of tourism promotions, village policy documents, and visual materials created by local practitioners. Tools used for documentation include digital cameras, voice recorders, and documentation worksheets.

By integrating these four techniques, this research provides comprehensive descriptions of the spatial, social, and cultural dynamics involved in tourism-based cultural heritage preservation practices in Kemiren Traditional Village.

### Data Analysis

Data analysis in this research employs a combinative methodological approach that integrates two main analytical frameworks: (1) spatial-cultural analysis based on qualitative geography and (2) strategic evaluation through quantitative SWOT analysis (Sumarmi et al., 2024). This integrated approach aims to achieve a comprehensive understanding of the dynamics of space production, the preservation of cultural landscapes, and the governance of local wisdom-based tourism in the traditional area of Kemiren Village, Banyuwangi.

The qualitative approach utilizes Interpretative Phenomenological Analysis (IPA) contextualized within cultural geography frameworks. This method helps identify how Osing communities interpret, maintain, and reproduce their cultural practices amid constantly changing spatial interactions (Barnard et al., 2018; Iwai, 2024). The analysis is conducted inductively through repeated readings of in-depth interview transcripts, notes from participatory observations, and field documentation (Rutakumwa et al., 2020). The main analytical focus is on the interconnections between sacred space symbolism, collective rituals, spiritual-ecological practices, and the transformation of spatial identity within cultural tourism contexts. These aspects reflect how Osing communities in Kemiren actively shape and represent their cultural landscapes as significant elements of meaningful tourism narratives while also supporting broader geopark development goals.

The quantitative approach involves contextually validated SWOT analysis to evaluate the strategic position of Osing local wisdom-based cultural tourism development in support of global geopark initiatives (Amirshenava & Osanloo, 2022). Data is collected through structured questionnaires using five-point Likert scales, with SWOT indicators weighted based on their strategic significance (Arinta & Susilo, 2023; Helms & Nixon, 2010; Sumarmi et al., 2020). The results of the analysis allow for the mapping of dominant strategies, whether aggressive, defensive, survival-focused, or diversification-oriented. Data validity is ensured through the application of methodological triangulation, including source triangulation (key informants, tourism practitioners, local government), technique triangulation (interviews, observations, documentation, and questionnaires), and theory triangulation (interpretative phenomenology and space production theory).

The validity of qualitative findings is strengthened through member checking, audit trails, and researcher reflection, while the validity of quantitative results is tested through indicator reliability and consistency in weighting. This model aims to maintain the integration of Osing cultural local wisdom within geopark development frameworks.

Table 1. SWOT Matrix (Source: Sumarmi et al., 2024)

| SWOT Analysis  |                |           |          |
|----------------|----------------|-----------|----------|
| External Audit | Internal Audit |           |          |
|                | Opportunities  | Strengths | Weakness |
|                |                | SO        | WO       |
|                | Threats        | ST        | WT       |

## RESULT AND DISCUSSION

### Description of the Kemiren Village Area

Kemiren Village is located in the Glagah District of Banyuwangi Regency, in the easternmost part of Java Island, Indonesia. This village is situated in a transitional zone between the coastal lowlands of the Bali Strait and the foothills of

the volcanic Ijen Mountains, creating a unique ecological and cultural interface. The coordinates of the village are approximately 8°12' S and 114°22' E, with an elevation ranging from 100 to 350 meters above sea level. It features a humid tropical climate that supports agricultural activities due to its fertile volcanic soil and traditional irrigation systems.

Kemiren is one of the few officially recognized "Traditional Villages" in Banyuwangi and serves as the cultural center of the Osing community. This ethnolinguistic group is believed to be direct descendants of the Majapahit Kingdom (Dewi et al., 2022; Prasetyo, 2021). The Osing community maintains its cultural identity through traditional rituals, such as *Tumpeng Sewu* (ceremonial feast featuring a thousand cone-shaped rice offerings) and *Barong Ider Bumi*, as well as agricultural practices, spiritual beliefs, and a distinct language that sets it apart from Javanese and Balinese cultures (Dewi et al., 2022; Sumarmi, 2015). The settlement structure in Kemiren forms a linear clustered pattern that follows irrigation flows, rice fields, and sacred forest areas, reflecting a cosmological land use model that integrates agricultural productivity with spiritual significance. In recent decades, Kemiren Village has been developed as a cultural tourism destination through regional government initiatives, emphasizing its intangible cultural heritage, such as gastronomy (*Ngopi Sepuluh Ewu*), music (*gandrung*), wooden stilt house architecture, and traditional rituals.

However, this transformation has also created tensions between commodification and preservation, which reshape spatial practices and community authority over cultural spaces. The village entrance gate, decorated with Osing scripts and traditional carvings, serves as a symbolic threshold between modern urban tourism and sacred traditional spaces (Figure 3). This village has been recognized as a model for community-based cultural tourism, but it also faces external pressures such as mass tourism, top-down governance, and the symbolic appropriation of space.



Figure 3. Kemiren Traditional Tourism Village Gate, Banyuwangi (Source: Researcher, 2025)

From the socio-economic perspective, Kemiren Village is home to the Osing community, the last descendants of the Blambangan Kingdom, who maintain a distinctive and deeply rooted cultural identity. The community actively preserves various rituals and traditions, such as *Tumpeng Sewu*, *Barong Ider Bumi*, and *Ngopi Sepuluh Ewu*. These practices serve not only as cultural expressions but also as collective strategies for maintaining identity, social solidarity, and ecological sustainability. Due to this cultural significance, Kemiren Village has been officially designated as a Traditional Village and a Cultural Tourism Village by a decision from the East Java Governor, granting it legal status for local cultural preservation and development (Winarno et al., 2021).

Geographically, Kemiren Village represents a dynamic cultural landscape where the interactions between the community, local values, and the environment create a unique sense of place. The village's transformation into a cultural tourism destination has established new relationships between sacred and economic spaces while reshaping the meanings of public spaces through festivals and cultural events (Hanoğlu et al., 2025; Su, 2018). This makes Kemiren Village a strategic location for studying the spatial dynamics of cultural revitalization and sustainable tourism governance.

According to a 1995 decision by the East Java Governor, Kemiren Village was designated as a Traditional Tourism Village, focusing on cultural preservation and local-based tourism development (Winarno et al., 2021). The village is located at the foothill of the Ijen Mountains, characterized by tropical highland ecological features, and serves as a cultural and spiritual corridor for the Osing community (Bachri et al., 2020; Wiyono & Wahono, 2025). The Kemiren community maintains various rituals, languages, and traditional social structures that reflect their rich local wisdom (Nurhayati et al., 2024; Shofwan et al., 2022). One of the most significant cultural expressions is the *Tumpeng Sewu* ritual, an annual spiritual celebration that expresses gratitude for welfare and protection from ancestors. This tradition showcases the intricate relationship between sacred spaces, cultural identity, and community-based ecotourism practices. The local wisdom of the Osing community has fostered growth in the tourism sector while also exerting pressure on land use.

In the past two decades, the growth of the tourism sector and economic needs have prompted spatial transformations, including the increased conversion of agricultural land into homestays, tourism stalls, and improved tourist accessibility. Data on land cover indicates a significant rise in settlement areas from 23,210 m<sup>2</sup> in 2014 to 27,981 m<sup>2</sup> in 2025, alongside a

decrease in wet and dry agricultural land from 147,834 m<sup>2</sup> to 132,449 m<sup>2</sup>. These land use changes are illustrated in Figure 4. However, this transformation is not only destructive; the Osing community strives to integrate cultural values into these changes. For instance, they continue to use traditional *joglo-osing* house architecture, maintain layered yard systems (*telatah*), and conduct *selametan* rituals before converting land functions.

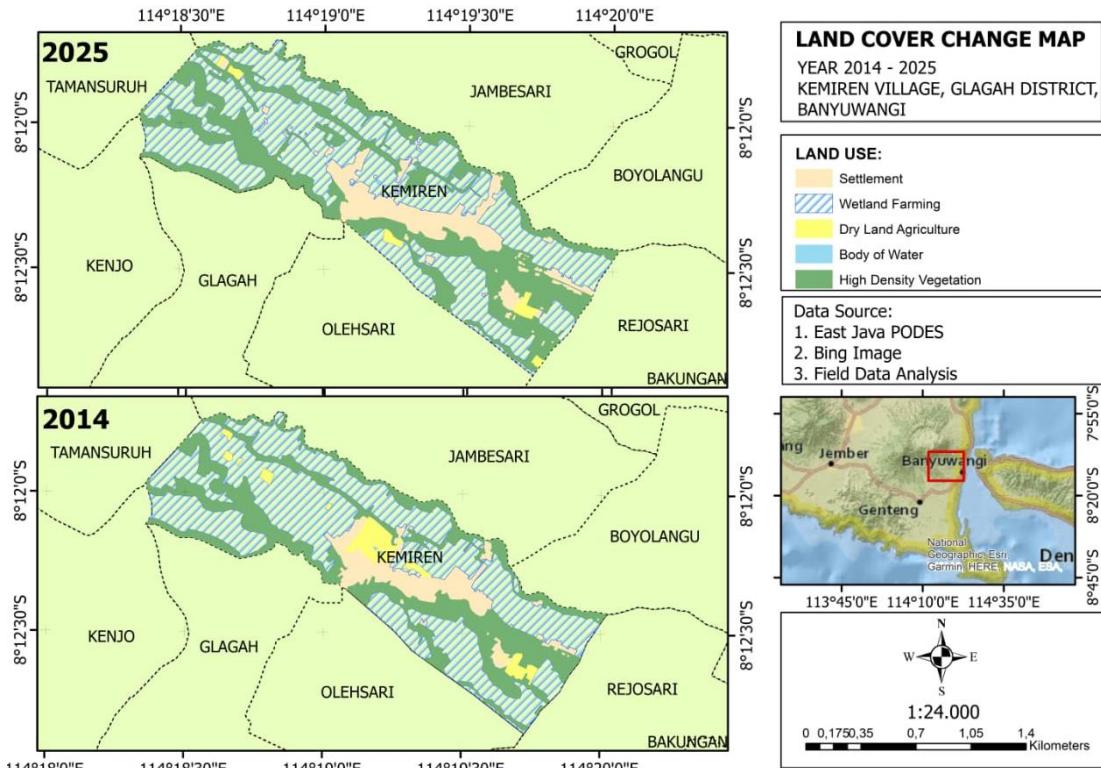


Figure 4. Land Transformation Map of Kemiren Village From 2014-2025, Glagah District, Banyuwangi (a) Kemiren Village area in 2014: residential area 23,210 hectares, (b) Kemiren Village area in 2025: residential area 27,981 hectares (Source: Researcher analysis, 2025)

Land cover changes in Kemiren Traditional Village from 2014 to 2025 reveal complex spatial dynamics shaped by the correlation of Osing cultural preservation, community-based tourism development, and evolving socio-economic pressures. Spatial data indicates a significant growth in residential land, which increased from 23,210 hectares to 27,981 hectares over the last decade. This expansion reflects not only the rising demand for housing but also the growth of tourism infrastructure, including homestays and community-managed cultural centers (Bi & Yang, 2023; Suardana et al., 2024). From a cultural geography perspective, this transformation illustrates how space is socially produced through symbolic interactions between local residents and tourists (Trisia et al., 2024). Therefore, the land cover changes in Kemiren are not only ecological phenomena but also expressions of identity transformation and social control over space, significantly influenced by local cultural and economic dynamics within sustainable geopark frameworks.

In contrast, rice field areas (wetland farming) experienced a decline, decreasing from 137,580 hectares to 129,449 hectares. This reduction in wet agricultural land mainly results from its conversion for tourism infrastructure development, or a lack of agricultural labor forces. Nevertheless, agricultural cultural values are preserved through ritual practices, such as *Tumpeng Sewu*, which reinforce the Osing community's agricultural identity and their connection to the seasons. Additionally, dry agricultural land saw a drastic decrease from 10,254 hectares to just 3,000 hectares by 2025. This decline reflects a shift towards secondary forests, cultural conservation areas, or regions integrated into nature and spirituality-based tourism destinations, like the *Petilasan Mbah Buyut Cili* (a sacred ancestral shrine) site. This transformation highlights the adaptation and integration of ecological values with economic needs through community-based tourism (Butler, 1999; Frame et al., 2021). It confirms that the meanings and functions of space are dynamic, shaped by the social, spiritual, and economic narratives crafted by local communities in response to external pressures and sustainable tourism opportunities. This illustrates the community's processes of adaptation in utilizing dry land for more sustainable and meaningful tourism.

Moreover, high-density vegetation actually increased from 76,553 hectares to 86,739 hectares. This growth reflects forest conservation efforts, reforestation, and restrictions on the exploitation of green spaces based on the local wisdom. This increase is also linked to belief practices that prohibit excessive use in sacred and spiritual zones, as commemorated in rituals such as *Rebo Wekasan* (a sacred Wednesday purification ritual). In contrast, bodies of water saw a slight decrease from 9,063 hectares to 9,000 hectares. This change is relatively minor and may be attributed to natural factors such as sedimentation, seasonal climate variations, or adjustments to traditional irrigation structures. Nonetheless, the presence of water remains a vital element of the community's cultural space, particularly in spiritual contexts and water-based agricultural systems.

Overall, the transformation of land cover in Kemiren Village reflects intricate processes of Osing cultural spatialization, where local values, spirituality, and adaptation to modern tourism converge into a cohesive narrative. This process

underscores the significance of incorporating local wisdom and geography in designing adaptive, participatory, and landscape-based tourism management strategies. Land use changes in Kemiren Village can be seen in Figure 5.

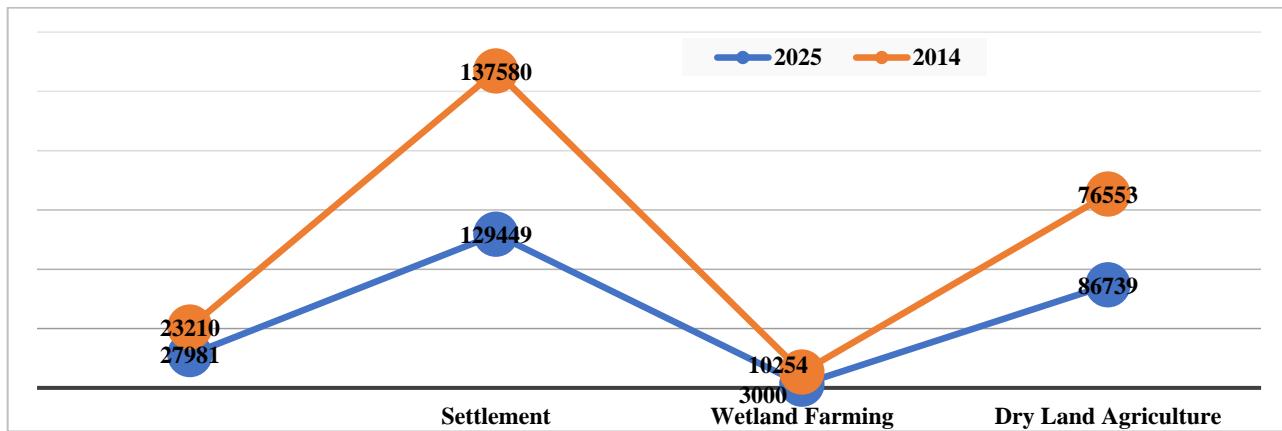


Figure 5. Land Cover in Kemiren Village, Glagah District, Banyuwangi, from 2014 to 2025 (Source: Banyuwangi in figures, 2025)

### Identification of Osing Cultural Local Wisdom Application in Supporting UNESCO Global Geopark

The local wisdom of the Osing community in environmental protection is reflected in their integration of belief systems, social norms, culture, and traditions that have been passed down through generations. This practice not only signifies a collective community identity but also comprises a unique form of knowledge developed through the interactions between humans and their environment (Dabzesies & Taks, 2021). In the context of managing water resources, local wisdom is evident in conservation practices that address both domestic and agricultural needs (Abas et al., 2022; Aspan et al., 2023). Additionally, this local wisdom serves as a cultural expression that represents traditional knowledge systems existing within the social structures of the community. Conceptually, it encompasses folklore, myths, traditional ceremonies, and norms that regulate community behavior toward nature (Lubis et al., 2025). These values not only serve symbolic purposes but also have practical dimensions aimed at maintaining environmental harmony and sustainability.

The local wisdom of the Osing community can be understood as a value system and ethical practices that guide community behavior in ecological contexts (Bachri et al., 2020; Sumarmi, 2015). This form of traditional understanding of nature reflects ethical relationships that communities consciously implement in their daily lives. The physical and biotic environments, including soil, water, plants, and humans, are seen as inseparable parts of an ecological system that must be protected. While human-nature interactions can lead to environmental degradation, the Osing community successfully fosters relationships that generate new ecological knowledge to support conservation efforts (Bachri et al., 2020; Prasetyo, 2021; Sumarmi, 2015). In water resource management within Kemiren Village, the Osing community utilizes various sources such as closed springs, the Public Water Supply Agency (PDAM), and wells. This management is framed within local ethics through advice, prohibitions, social sanctions, and traditional symbols, especially concerning sacred locations like *Mbah Buyut Cili*, *Belik Lanang*, and *Belik Wadon*.

Primarily consisting of farmers, the Osing community relies heavily on water sustainability, particularly for rice agricultural activities. Practices such as constructing *paglak* (traditional water distribution structures) facilities and using bamboo musical instruments during harvest are integral parts of the agricultural cycle regulated by traditional norms. Communities perform specific rituals before cutting trees on their land as a form of respect for nature and ecological balance (Bredenoord, 2024). Prohibitions against cutting trees near springs and social sanctions from local authorities demonstrate a synergistic relationship between traditional and formal regulatory systems. These conservation efforts are further supported by annual rituals such as *Rebo Wekasan*, which take place in spring areas to honor ancestral spirits and seek blessings from nature (Prasetyo, 2021). The belief in *danyang* (guardian spirits of water sources), reinforces the community's commitment to maintaining sustainable water sources (Rahmah & Sulistyono, 2024; Sejati et al., 2023). During these ceremonies, traditional foods such as *jenang abang* (red rice porridge) and *sego golong* (rolled rice balls) are offered as symbols of respect for nature. Prohibitions against littering and careless defecation, among other rules, have been passed down through generations to maintain the cleanliness and purity of water sources.

Water springs flowing in Kemiren Village, such as *Belik Lanang* and *Belik Wadon*, not only fulfill daily needs but also serve as spiritual and social centers in community life. Ceremonies and prayers conducted during annual rituals express gratitude and seek agricultural blessings that depend on water sustainability (Astina & Kurniawati, 2021; Lin & Xie, 2025). This collective awareness fosters strong environmental ethics while reinforcing the community's ecological identity. As part of their conservation strategies, these communities also plant protective trees such as bamboo, bendo, kluwak, and various fruit trees around agricultural land and water sources. These plants serve as natural protectors, helping to maintain soil moisture and ensure the continuity of water flow. Prohibitions against cutting large trees, like fig and durian trees, near *paglak* and springs are structured ecological strategies aimed at sustainably maintaining water quality and quantity.

Additionally, the Osing community celebrates cultural festivals such as the *Barong Ider Bumi* Festival, a disaster prevention ritual conducted along village boundaries. This festival indirectly helps to strengthen territorial boundaries and prevent land conversion speculation that would violate collective agreements (Prasetyo, 2021).

Similarly, the *Tumpeng* Sewu Festival, celebrated along settlement alleys and in residents' yards, emphasizes the preservation of house structures, yards, and traditional spatial patterns rooted in kinship (telatah). Meanwhile, *Rebo Wekasan* Rituals, centered around spring sources and sacred sites like *Petilasan Mbah Buyut Cili*, affirm the importance of lands considered sacred and not to be carelessly converted. These sites serve not only as spiritual centers but are also socially and ecologically protected (Bao & Liu, 2025; Zhang & Li, 2024). The appearance of the *Mbah Buyut Cili* Site is depicted in Figures 6 and 7. Figure 8 illustrates the spatial structures involved in the development of traditional settlements. The Osing community's ecological awareness is evident in their view of nature as a divine trust that must be used wisely (Das et al., 2025; Omma, 2025). Principles of cross-generational sustainability are reflected in the understanding that the benefits of nature are not only for current generations but must also be preserved for future generations. Therefore, a collective responsibility to protect nature is maintained through internalized practices and ethical guidelines.



Figure 6. Exterior View of Petilasan Mbah Buyut Cili (Source: Author, 2025) Figure 7. Interior View of Petilasan Mbah Buyut Cili



Figure 8. (a) House Designs of the Osing Community in Kemiren Village, Banyuwangi;  
(b) Spatial structure and settlement patterns of the Osing community in Kemiren Village, Banyuwangi (Source: Author, 2025)

### Tourism Development Strategy Model for Osing Community in Kemiren Village, Banyuwangi

Tourism development strategies for the Osing community in Kemiren Village should focus on geographic approaches that are adaptable to change, promote participatory governance, and respect sacred spaces. A SWOT analysis highlights the significance of synergy among stakeholders and the need for a balance between cultural preservation and economic development in tourism. The details of the SWOT analysis are presented in Table 3.

Table 3. SWOT Analysis of Osing Community in Kemiren Village, Glagah District, Banyuwangi (Source: Researcher, 2025)

| Internal Factors |  |       |        |        |       |
|------------------|--|-------|--------|--------|-------|
| Strengths (S)    |  | Level | Weight | Rating | Score |
| 1                | Kemiren is located in the strategic foothill area of Mount Ijen, making it easily accessible and becoming a tourist route to famous volcanic destinations    | 3     | 0.08   | 4      | 0.30  |
| 2                | The village's agricultural landscape remains pristine, such as terraced rice fields strengthening cultural landscape-based tourism attractions               | 3     | 0.08   | 4      | 0.30  |
| 3                | Settlement spatial arrangements follow Osing traditional patterns, showing spatial regularity reflecting local cultural identity                             | 3     | 0.08   | 4      | 0.30  |
| 4                | Existence of sacred zones such as <i>Petilasan Mbah Buyut Cili</i> and <i>Barong Ider Bumi</i> routes, adding spiritual and symbolic value to village spaces | 2     | 0.05   | 4      | 0.20  |

|   |   |   |      |      |      |
|---|---|---|------|------|------|
| 5                                       | Dense vegetation around the village functions as an ecological buffer, supporting a balance between nature and tourism activities                     | 3 | 0.08 | 3    | 0.23 |
| 6                                       | Controlled land use changes over one decade, showing community living space resilience against development pressures                                  | 1 | 0.03 | 3    | 0.08 |
| 7                                       | Village topography is varied but not extreme, facilitating tourism facility construction without disrupting natural harmony                           | 3 | 0.08 | 3    | 0.23 |
| 8                                       | Stable water sources from traditional irrigation systems, supporting sustainable agriculture and becoming attractions for educational tourism         | 3 | 0.08 | 3    | 0.23 |
| 9                                       | Village residents directly involved in tourism management through local communities   | 3 | 0.08 | 3    | 0.23 |
| 10                                      | Osing traditional houses and rice field landscapes create an authentic atmosphere for tourists  | 3 | 0.08 | 3    | 0.23 |
| 11                                      | Family-based homestays support local economy and strengthen community-based tourism   | 2 | 0.05 | 3    | 0.15 |
| 12                                      | Traditional values function to maintain spatial order and tourist behavior  | 3 | 0.08 | 3    | 0.23 |
| <b>Total</b>                            |   |   | 0,80 | 0,80 | 2,68 |
| <b>Weaknesses (W)</b>                   |   |   |      |      |      |
| 1                                       | Kemiren Village lacks adequate public transportation access to support increased tourist visits   | 3 | 0.13 | 4    | 0.52 |
| 2                                       | Village location directly bordering agricultural areas makes tourism facility development require careful attention to avoid damaging productive land | 3 | 0.13 | 4    | 0.52 |
| 3                                       | Some village areas are difficult to access during the rainy season due to minimal tourism infrastructure supporting landscape-based tourism           | 2 | 0.09 | 3    | 0.26 |
| 4                                       | Tourism attraction distribution still centered at certain points, causing spatial utilization imbalance   | 1 | 0.04 | 3    | 0.13 |
| 5                                       | Not all sacred areas and cultural landscapes are spatially mapped, risking neglect in tourism development plans                                       | 2 | 0.09 | 3    | 0.26 |
| 6                                       | Absence of clear tourism zoning in village spatial planning documents complicates land conversion control   | 2 | 0.09 | 3    | 0.26 |
| 7                                       | Community economic dependence on wetland agriculture makes transition to ecotourism not yet fully stable  | 2 | 0.09 | 3    | 0.26 |
| <b>Total</b>                            |   |   |      | 23   | 2.22 |
| <b>X = Strengths-Weaknesses = 0.46</b>  |   |   |      |      |      |
| <b>External Factors (EFAS)</b>          |   |   |      |      |      |
| <b>Opportunities (O)</b>                |   |   |      |      |      |
| 1                                       | Kemiren Village location on tourism route to Ijen Crater opens opportunities for integrated cultural and natural tourism packages                     | 3 | 0.18 | 3    | 0.53 |
| 2                                       | Regional government support in "Majestic Banyuwangi" branding strengthens village geographical position as a flagship destination                     | 3 | 0.18 | 3    | 0.53 |
| 3                                       | Potential for landscape-based ecotourism development of terraced agriculture and tropical dry forests can become local characteristics                | 3 | 0.18 | 2    | 0.35 |
| 4                                       | Global tourism trend changes toward authentic culture and local experiences increase interest in traditional villages like Kemiren                    | 2 | 0.12 | 3    | 0.35 |
| 5                                       | Existence of national parks and conservation areas around Banyuwangi supports inter-destination synergy opportunities                                 | 1 | 0.06 | 3    | 0.18 |
| 6                                       | CSR programs and tourism village assistance from the private sector and NGOs can support area-based local capacity strengthening                      | 1 | 0.06 | 3    | 0.18 |
| <b>Total</b>                            |   |   |      | 17   | 2.12 |
| <b>Threats</b>                          |   |   |      |      |      |
| 1                                       | Investors can shift community control over traditional land   | 3 | 0.25 | 3    | 0.75 |
| 2                                       | Agricultural land conversion to tourism buildings can damage cultural landscapes  | 2 | 0.17 | 3    | 0.50 |
| 3                                       | Economic dependence on tourism makes villages vulnerable during visitor crises  | 1 | 0.08 | 3    | 0.25 |
| 4                                       | Tourism infrastructure built without resident participation can trigger spatial conflicts   | 1 | 0.08 | 3    | 0.25 |
| <b>Total</b>                            |   |   |      | 12   | 1.75 |
| <b>Y = Opportunities-Threats = 0.37</b> |   |   |      |      |      |

The IFAS and EFAS matrices used in this research were developed through the scoring and weighting of each internal and external factor, as detailed in Tables 1 and 2. The strategic coordinate values are determined by calculating the differences between Strength and Weakness scores for the horizontal axis (x), and between Opportunity and Threat scores for the vertical axis (y). The results indicate that Kemiren Traditional Village occupies a strategic position at x = 0.46 and y = 0.37. These coordinates place the village's development in Quadrant I (SO Strategy), illustrating strong internal conditions and a supportive external environment. In this context, strengthening the Osing cultural identity through festivals, digitalization of geospatial information, and the development of tourism routes based on cultural landscapes are key strategies. These initiatives support the three UNESCO Geopark pillars: conservation, education, and sustainable community development. Furthermore, S-O and W-O strategies that promote community involvement in tourism management, enhance institutional capacity, and focus on cultural asset digitalization align well with community empowerment principles, which are important indicators for geopark evaluation.

Conversely, S-T and W-T strategies aimed at mitigating the risks of cultural degradation and the commodification of traditional spaces will support Kemiren Village's socio-ecological resilience. This positioning makes the village an ideal candidate for educational and sustainable destination development within the Global Geopark network.

Overall, the strategies formulated not only support local tourism development but also provide a strong foundation for integrating Kemiren Village into global geopark initiatives in a participatory and contextually relevant manner.

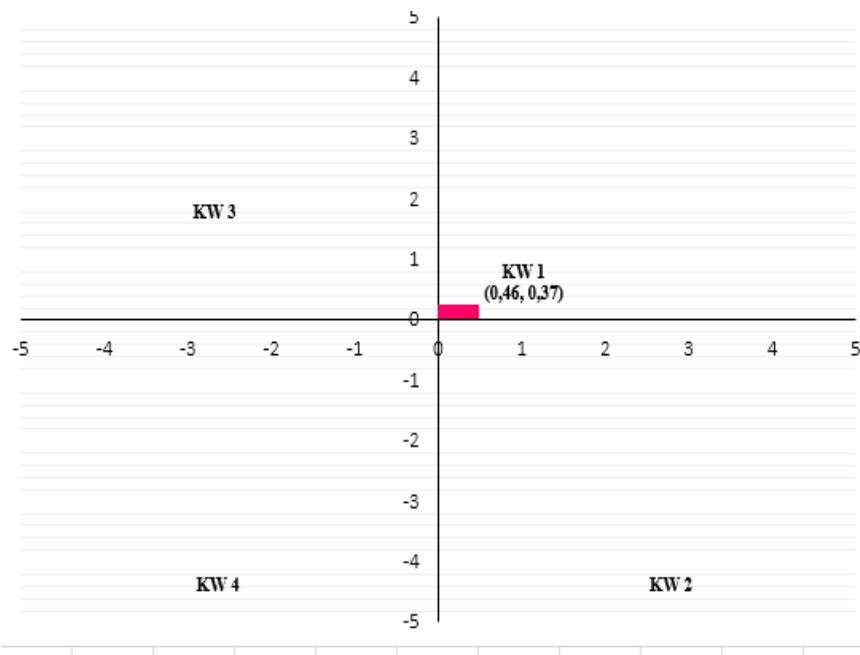


Figure 9. SWOT Quadrant of Kemiren Village, Banyuwangi (Source: Data Analysis, 2025)

### Policy Recommendations for Osing Community Local Wisdom Development to Support UNESCO Global Geopark

Kemiren Village's location in Quadrant I indicates that it is well-positioned to aggressively develop culture-based tourism. This positioning reflects a synergy between internal strengths, such as the preservation of traditions and traditional social structures, and external opportunities, including rising cultural tourism trends and regional policy support. Therefore, the recommended strategy is a growth-oriented approach that emphasizes the sustainable and participatory optimization of local potential, without sacrificing cultural and ecological values.

Several policies that can be implemented to support the development of a UNESCO Global Geopark include:

- 1) Strengthening the Osing cultural image through visual identity enhancement and tourism experiences at the *Barong Ider Bumi* and *Tumpeng Sewu* Festivals. These events should serve not only as tourist attractions but also as drivers for cultural education and local value regeneration;
- 2) Designing cultural tourism packages that link sacred sites, agricultural locations, and traditional residences, thereby creating comprehensive and meaningful tourism narratives;
- 3) Expanding tourism promotion through participatory, geospatial-based digital information that involves Osing community members; and
- 4) Building collaborative governance using a Penta Helix approach that brings together government, community, academia, business practitioners, and media elements to strengthen institutional sustainability and enhance the destination. Through this approach, tourism can serve as not only an economic driver but also a means of conservation and support for the development of the Osing community's local wisdom, all contributing to the advancement of the Ijen Global Geopark.

### CONCLUSION

This research emphasizes how Community-Based Tourism (CBT) based on the local wisdom of the Osing community effectively supports the UNESCO Global Geopark in Kemiren Village, Indonesia. The indigenous knowledge of the Osing community plays a crucial role in the development of cultural tourism that aligns with UNESCO Global Geopark principles. Local practices, such as the *Rebo Wekasaran* rituals, the *Barong Ider Bumi* Festival, and the conservation of sacred springs, not only promote ecological sustainability but also reinforce the community's cultural identity. These practices create value systems that guide governance in their living spaces, enhance tourism attractions based on local values, and foster harmonious relationships between people and their natural landscapes.

The application of integrative strategies—such as promoting digitalization, strengthening institutional capacity, and encouraging multi-stakeholder collaboration—enhances participatory tourism sustainability. A SWOT analysis confirms that Kemiren Village has significant strategic potential to develop as a geopark destination, supported by its strong geocultural foundations, which align with the Ijen Global Geopark. Therefore, this research emphasizes the importance of using local wisdom as the cornerstone for tourism development to benefit geoparks. The development model

showcased in Kemiren Village can serve as a best practice example for other traditional villages aiming to cultivate community-based tourism rooted in local culture and gain global recognition.

The findings emphasize the necessity for policymakers and stakeholders to prioritize the integration of local wisdom in tourism initiatives, ensuring that economic development aligns with cultural preservation. By leveraging the unique geocultural assets of villages like Kemiren, other communities can utilize their potential to create sustainable tourism models that enhance local livelihoods while protecting heritage. This approach not only promotes environmental sustainability but also fosters a sense of pride and ownership among local residents, ultimately contributing to the resilience of both local communities and natural landscapes in the face of global challenges.

**Author Contributions:** Conceptualization, S.S and D.A. and E.K; methodology, S.S. and E.M. and R.A.C.R.; software, S.P. S.P.; validation, R.N and E.K; formal analysis, S.S and R.A and E.M.; investigation, S.S and D.A; data curation, R.N; writing - original draft preparation, S.S; writing - review and editing, S.S and D.A. and S.P.S.P. and E.K.; visualization, D.A.; supervision, S.S. and E.M. and R.A.C.R.; project administration, D.A. All authors have read and agreed to the published version of the manuscript.

**Funding:** Not applicable.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** The data presented in this study may be obtained on request from the corresponding author.

**Acknowledgements:** We thank the Institute for Research and Community Service (*Lembaga Penelitian dan Pengabdian Masyarakat*—LPPM) Universitas Negeri Malang for funding the study and the entire research team. The research and researchers have no conflict of interest toward individuals or groups.

**Conflicts of Interest:** The authors declare no conflict of interest.

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