

## Sustainable governance practices for ecotourism: engaging local communities in the Golden Triangle Island, Indonesia

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### Abstract

*This qualitative study explores the efforts of the Sumenep District government in developing community-based ecotourism, focusing on the potential of marine tourism and small islands on Madura Island. Despite the commitment to promoting ecotourism through branding initiatives such as the tagline "Sumenep: The Soul of Madura" and the slogan "Golden Triangle Islands" highlighting Gili Iyang, Gili Labak, and Gili Genting several challenges hinder progress. These include unequal tourist distribution among the islands, inadequate infrastructure and accommodation, poor coordination in tourism management, and inefficient resource utilization. The research aims to describe and analyze governmental efforts, identify potential ecotourism types, uncover obstacles preventing optimal development, and propose a development model for community-based ecotourism. Findings indicate that significant gaps in infrastructure and management must be addressed to leverage the islands' ecotourism potential effectively. The study concludes that a comprehensive strategy, including robust regulatory frameworks, is essential to ensure sustainable and protected ecotourism in the Golden Triangle Islands, ultimately benefiting local communities and preserving natural resources.*

**Keywords:** community based ecotourism, local communities, The Golden Triangle Islands

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### Introduction

Sumenep Regency is a unique region, consisting of a land area with 125 islands spread out, the number of inhabited islands is 48 islands or 38%, while the number of uninhabited islands is 77 islands or 62% (Musleh et al., 2023). The Sumenep Regency Government is starting to realize its ecotourism potential, although it is still slow and not optimal in implementing development in the tourism sector (Prasetya & Rani, 2014).

There is a tourism branding tagline, namely "Sumenep: The Soul of Madura" and the slogan "The Golden Triangle Islands". The Golden Triangle Islands consist of Gili Iyang, Gili Labak and Gili Genting. With this tagline, it means that the Regional Government wants to develop tourism activities on the three islands based on the different potentials on each island. The Golden Triangle Islands are located close to each other and if you draw a line between these three islands, they will form a triangle (Jannah & Idajati, 2018).

The Golden Triangle Island, which consists of Gili Iyang, Gili Labak and Gili Genting, has different tourist attractions. Gili I Island which has the best health tourism attraction with the best oxygen (O<sub>2</sub>) content in the world, Gili Labak Island is known for its clear waters so it is called marine tourism as a marine park, and Gili Genting Island is famous for its nature that offers the panorama and uniqueness of the beach that resembles the number 9.

However, there are different problems on the three islands, Gili Iyang Island, concerning accessibility and the emergence of economic inequality due to unequal access to natural resources, as well as concerns about environmental damage due to community carelessness and tourism management that exploits nature's resources (Zainuri et al., 2018). There are several facilities and infrastructure developments that have been neglected, and there is no synergy between managers at the local level in managing Gili Iyang Island Ecotourism (Melyana Ulfa, M.KendryWidiyanto, YusufHariyoko, 2021; Musleh, 2023). A similar problem also occurs on Gili Labak Island, namely the lack of public knowledge about tourism as well as the lack of support from community leaders, making it difficult for Gili Labak Island to develop. The emergence of various problems in the community with several parties related to land ownership rights or land that will be used for development (Anita & Supriono, 2018). Another problem is damage to coral reefs due to snorkeling activities, ship transportation activities, both traffic and anchors, and increased trash. This condition occurs because there is no ecotourism management on this island (F. Kurniawan et al., 2017).

The problems that occur on Gili Gending Island are the unavailability of health facilities in the tourist destination of Gili Gending Island, the lack of a productive age population in ecotourism management, the lack of water for agriculture, and the presence of oil and gas companies polluting the surrounding marine ecosystem, which disrupts livelihoods because what makes people unable to find a livelihood at sea pollutes the surrounding marine ecosystem, so people choose to migrate to other places to find a livelihood. However, to survive these problems, people do not diversify their livelihoods but instead take steps to migrate. Socio-historically, the people of Gili Gending Island have had the habit of migrating when faced with economic problems (Izana & Susanti, 2021).

The successful development of community-based ecotourism in Sumenep Regency requires synergistic collaboration among various stakeholders, including the local government, community leaders, tourism operators, and environmental organizations. This collaborative approach ensures that tourism initiatives are not only sustainable but also beneficial to local communities. Stakeholders must work together to enhance infrastructure, promote environmental conservation, and provide education and training to residents on the benefits and practices of ecotourism. Effective coordination and communication among these parties are essential to address challenges such as environmental degradation, economic inequality, and infrastructure deficiencies (Tamrin et al., 2024; Umiyati & Tamrin, 2021). By fostering a shared vision and collaborative efforts, stakeholders can create a more cohesive and efficient management system that maximizes the region's ecotourism potential while preserving its natural and cultural heritage (Indahsari et al., 2022; Tamrin & Lubis, 2023). This integrated approach aims to empower local communities, ensuring they are active participants in and beneficiaries of the tourism development process, thereby promoting long-term sustainability and resilience of the ecotourism sector in Sumenep Regency.

The current state of ecotourism development in Sumenep Regency reveals substantial gaps. Despite the initial recognition of the region's unique natural attractions, progress in tourism development has been limited. Critical issues such as accessibility challenges, economic disparities due to unequal resource distribution, environmental damage from tourism activities, and inadequate infrastructure remain prevalent (Ali & Kamraju, 2023; Feng et al., 2023; Henderson & Loreau, 2021; Nicoletti et al., 2022). These challenges highlight the need for a comprehensive approach to

ecotourism management that incorporates sustainable development practices (Budeanu et al., 2016; Hashemkhani Zolfani et al., 2015; Pan et al., 2018a; Xu et al., 2023). The purpose of this study is to analyze the existing conditions of ecotourism in the Golden Triangle Islands, identify barriers to effective tourism management, assess environmental and socio-economic impacts, and propose strategies for sustainable development. The study aims to empower local communities, enhance stakeholder collaboration, and promote sustainable practices that benefit both the environment and the local population.

In a broader context, regions with similar ecotourism potential face analogous challenges in balancing tourism growth with environmental conservation and community welfare (Baloch et al., 2023; KC, 2021; Khaledi Koure et al., 2023). Successful examples from countries such as Costa Rica underscore the importance of robust partnerships between local governments, communities, NGOs, and the private sector (Wallbott & Florian-Rivero, 2018). These best practices demonstrate the need for inclusive and sustainable ecotourism initiatives. In the Global South, ecotourism plays a crucial role in economic diversification and poverty alleviation, yet it encounters challenges like inadequate infrastructure, limited access to financing, and competing land-use demands (Bhatt et al., 2024; Brown & Hall, 2008; Kronenberg & Fuchs, 2021; Pan et al., 2018b). Effective strategies in these regions include participatory planning processes, capacity-building programs to enhance local tourism skills, and policies that prioritize environmental sustainability alongside economic benefits (Akbar et al., 2020; Hakimian & Sheely, 2023; Matiku et al., 2021). By integrating international insights and experiences from the Global South, Sumenep Regency can develop a more effective ecotourism strategy that preserves its natural and cultural heritage while promoting inclusive and sustainable development.

The integration of local knowledge and community involvement in ecotourism planning is crucial for creating sustainable and successful initiatives (Samal & Dash, 2024; Svitlichna et al., 2024; Wells et al., 2020; Zainal et al., 2024). Local communities possess valuable insights into their environment, traditions, and practices, which can enhance the authenticity and appeal of ecotourism offerings (Burgos-Ayala et al., 2020; Gordon (Iñupiaq) et al., 2023; Kohsaka & Rogel, 2019; Mazzocchi, 2020). Engaging communities in decision-making processes not only fosters a sense of ownership but also ensures that the benefits of ecotourism are equitably distributed. This participatory approach helps address potential conflicts and aligns tourism development with local needs and values (Della Sala, 2022; Riyanto et al., 2023; Schiavo, 2021; Wondirad & Ewnetu, 2019). By leveraging local expertise and encouraging community engagement, ecotourism projects can achieve greater social and environmental outcomes.

Furthermore, the successful implementation of ecotourism strategies requires ongoing monitoring and evaluation to adapt to changing conditions and emerging challenges. Establishing clear metrics for assessing the impact of ecotourism on both the environment and local communities allows for timely adjustments and improvements (Firman et al., 2023; Jehan et al., 2023; Ngo & Creutz, 2022; Sharma & Sodani, 2024). Regular feedback from stakeholders, including tourists, local residents, and conservationists, is essential for refining policies and practices. This dynamic approach to management ensures that ecotourism initiatives remain relevant and effective in promoting sustainable development while mitigating negative impacts (Diamantis, 2018; Jehan et al., 2023; Roxas et al., 2020; Wondirad et al., 2020). By adopting a flexible and responsive strategy, Sumenep Regency can enhance the resilience and success of its ecotourism endeavors.

## Research Methods

This research is a qualitative study, where the researcher aims to describe and analyze the efforts of the Sumenep Regency government in developing community-based ecotourism (CBE), identify types of tourism that have the potential to be developed into community-based ecotourism (CBE), obtain information on obstacles that cause community-based ecotourism in Sumenep Regency to not develop optimally, and formulate a community-based ecotourism development model in Sumenep Regency. Through qualitative research, researchers are free to obtain data and facts until they reach saturation point, so that the data obtained is able to answer the questions of this research problem. In completing this research, researchers used research and development procedures developed by Borg and Gall. The research is planned to be carried out over two years, with the research activity stages in the first year being exploration and in the second year being implementation and dissemination.

Without reducing the validity of the process and the findings of this research, the research and development (Nkwake, 2023). In this study were adapted and modified in stages as follows: 1) research and collect information about the needs of community-based ecotourism development (CBE); 2) plan prototype components to be developed; 3) develop initial prototypes to be used as models; 4) validate conceptual models with experts and practitioners in the field of tourism; 5) conducting limited trials (trial 1) on the initial model; 6) revising the initial model based on the results of trials and data analysis; 7) conducting trials 2 on the revised model; 8) carrying out final revisions or refinements of the model if researchers and related parties assess the process and resulting products are not satisfactory; 9) carrying out implementation and dissemination to various parties.



**Figure 1.** Research Method

*Source: processed by the author, 2024*

Qualitative analysis is needed in this research to gain a deep understanding of the efforts and challenges faced by the Sumenep Regency government in developing community-based ecotourism (CBE). It allows for an in-depth exploration of the experiences, perspectives, and practices of various stakeholders involved in CBE.

Through qualitative methods, the researcher can uncover rich, detailed insights that are not easily captured through quantitative approaches, helping to identify specific local conditions, social dynamics, and contextual factors that influence the development of CBE in Sumenep Regency.

Qualitative analysis provides a deep and detailed understanding of the research topic by capturing complex phenomena and the meanings behind actions and decisions. This approach allows researchers to study subjects within their natural settings, offering contextual understanding of the environment and circumstances influencing behaviors and outcomes. The flexible nature of qualitative research design enables researchers to adapt their methods as new insights emerge, ensuring a comprehensive exploration of research questions. Additionally, qualitative research generates rich, narrative data that provides a holistic view of the research problem, including emotions, experiences, and interactions. This approach is particularly useful for exploring new or complex phenomena where little is known, helping to generate hypotheses and inform further research.

## **Results and Discussion**

### **Principles of conservation on the Golden Triangle Islands**

The tagline Golden Triangle Island is the nickname for three islands, namely Gili Iyang Island, Gili Labak Island, and Gili Genting Island, which are located in Sumenep Regency, East Java. The Sumenep Regency Government wants to develop integrated tourism activities on these three islands. These three islands are located close to each other and when connected, they will form a triangular line. These three islands also have different potential and tourist attractions on each island.

Gili Iyang, Gili Labak, and Gili Genting are three islands in the Sumenep Regency with significant natural and tourism potential. Gili Iyang is renowned for its high oxygen content, making it attractive to western tourists seeking nature and culture-based experiences untouched by westernization (Brunet et al., 2001). The island's unique natural features and preserved local wisdom set it apart as a tourist destination. Gili Labak, another small island in the region, boasts well-preserved coral reef ecosystems that support a diverse array of reef fish, making it an important area for both small-scale fishing and marine tourism. According to Romadhon (2014), 90% of Gili Labak's population relies on fishing as their primary livelihood. The island features white sand beaches, clear waters, and conditions suitable for snorkeling and diving. As per the 2009-2029 Sumenep Regency Spatial and Regional Planning, Gili Labak's waters are designated as a marine tourism park and environmental area. Gili Genting Island is home to Sembilan Beach, named for its natural sand basin forming the number nine. This beach area, developed as part of the Ministry of Tourism's 2015-2019 strategic plan, showcases sea views, ornamental fish, coral reefs, and seagrass beds, embodying the concept of sustainable tourism (Rosyidah et al., 2021).

Despite their natural beauty and tourism potential, these islands face significant conservation challenges. On Gili Iyang, the increasing number of motorized vehicles contradicts its branding as an "Oxygen Island" and threatens to increase air pollution. While there are efforts to maintain oxygen levels through tree planting and encouraging the use of bicycles, the island lacks clear tourism management and conservation strategies. Gili Labak's management has not effectively balanced tourism development with environmental preservation. The absence of visitor restrictions and proper facility usage guidelines has led to damage to coral reefs, both from tourist activities and improper boat anchoring. The management team has also neglected

facility maintenance, resulting in damaged or inappropriate infrastructure. Gili Genting's tourist attractions, including Sembilan Beach, are mostly managed by local residents with limited assistance from the district government, although regional spatial arrangements have been included in the Sumenep Regency Development Plan 2019-2028 (Rina et al., 2021). Across all three islands, there is a clear need for improved governance, stakeholder involvement, and community participation to enhance public services, advance the local economy, and develop sustainable ecotourism practices that prioritize environmental conservation.

The development of tourism on these islands has brought about various cultural and socio-economic changes. On Gili Iyang, the relatively low level of public education has raised concerns about the community's ability to participate fully in tourism development. However, there is a growing appreciation for foreign cultures, as evidenced by adaptations in dress and technology use, while still maintaining local cultural identity. Gili Labak has seen limited community involvement in ecotourism management, with locals working as tour guides, stall owners, facility attendants, and homestay providers. Language barriers pose a challenge across the islands, particularly on Gili Genting, where limited English skills hinder interactions with foreign tourists. Cultural preservation efforts are evident, such as the unwritten rule at Sembilan Beach prohibiting alcohol and overly revealing clothing, respecting the predominantly Muslim population. The tourism industry has begun to diversify livelihoods, with some residents transitioning from traditional fishing and overseas work to tourism-related occupations. Additionally, there's been an increase in higher education attainment among locals, broadening societal perspectives. However, challenges remain in balancing economic development with environmental and cultural preservation, as well as in providing adequate education and awareness programs for both locals and tourists to ensure sustainable and responsible tourism practices.

## **Principles of Community Participation in the Golden Triangle Islands**

### ***Stakeholders involved in ecotourism management***

The government is one of the stakeholders in managing tourism on Gili Iyang Island through the Sumenep Regency Tourism, Culture, Youth and Sports Office. This department has an important role in providing and developing optimal tourism. The Sumenep Regency Tourism, Culture, Youth and Sports Department has a pilot project to develop Gili Iyang Island Ecotourism by utilizing natural potential in the form of excellent oxygen quality. In this case, the government cannot work alone, so support from local community groups and figures is needed. In managing Gili Iyang Island ecotourism, the stakeholders involved are:

**Table 1.** Stakeholders and Management Roles of Gili Iyang Island, Sumenep

| <b>No.</b> | <b>Stakeholder</b>  | <b>Role</b>  |
|------------|---|--|
| 1.         | Sumenep Regency Tourism, Culture, Youth and Sports Department (Disparbudpora) | <ol style="list-style-type: none"> <li>1. Make a Detailed Spatial Planning Plan (RDTR) and Zoning Regulations for the Gili Iyang Island Strategic Area for the 2016 Fiscal Year and Gili Iyang Island is designated as an integrated tourist area</li> <li>2. Create a Tourism Development Master Plan (RIPPARKAB) for Sumenep for 2016-2030 by establishing Gili Iyang Island as a natural tourism destination and a top priority in terms of tourism development in Sumenep Regency</li> <li>3. Providing tourist facilities and developing the</li> </ol> |

| No. | Stakeholder  | Role   |
|-----|--|--|
|     |  | ecotourism potential of Gili Iyang Island<br>4. Conducting Human Resources (HR) training at the Andang Taruna Pokdarwis<br>5. Coordinate with various local and central government agencies to support tourism support facilities on Gili Iyang Island |
| 2.  | Andang Taruna Tourism Awareness Group (Pokdarwis). | 1. Together with Disparbudpora, Sumenep Regency provided assistance to the Andang Taruna Pokdarwis HR to develop Gili Iyang Island Ecotourism<br>2. Carry out maintenance of tourism objects   |
| 3.  | BUMDESMA (Joint Village Owned Enterprise)          | Carry out activities in the economic sector and public services on Gili Iyang Island   |
| 4.  | The Banraas Village Government                     | Maintains tourist attractions with Pokdarwis   |
| 5.  | The Bancamara Village Government                   | Maintains tourist attractions with Pokdarwis   |
| 6.  | The people of Gili Iyang Island                    | Preserving local art on Gili Iyang Island with Pokdarwis Adang Taruna  |

*Source: Interview results, processed by researchers (2023)*

Gili Labak Island has sufficient potential to be utilized and developed optimally. The management and development of Gili Labak Island cannot be separated from the roles of all related parties, especially the government and all levels of surrounding society. If support from all parties is carried out together and can be implemented well, this does not rule out the possibility that the economy of the surrounding community will also improve. The stakeholders and management roles on Gili Labak Island, Sumenep are:

**Table 2.** Stakeholders and Management Role of Gili Labak Island, Sumenep

| No. | Stakeholder | Role  |
|-----|-------------|---|
| 1.  | Government  | 1. Preparation of a tourist area spatial planning system, involving regional government organizations such as the Health Service, Tourism, Culture, Youth and Sports Department of Sumenep Regency (Disparbudpora), Provincial Maritime and Fisheries Service, and PU Cipta Karya<br>2. Increase accessibility by providing transportation to Gili Labak Island and offering several tour packages for tourists<br>3. Fulfillment of standard facilities (health, security, cleanliness, communication facilities) in tourist areas according to needs. This facility is in the form of the construction of a supporting community health center. The Regional Government also collaborates with the Environmental Service in providing rubbish bins and ways to manage plastic waste and for safety in sea transportation<br>4. Attract investors to build accommodation and supporting facilities, such as chairs, stages, gazebos and other supporting facilities for development on Gili Labak Island |

| No. | Stakeholder                         | Role  |
|-----|-------------------------------------|---|
| 2.  | Private                             | <ol style="list-style-type: none"> <li>1. Help support the provision of facilities for tourism development on Gili Labak Island</li> <li>2. Take part in promoting Gili Labak Island tourism</li> </ol>   |
| 3.  | Tourism Awareness Group (Pokdarwis) | <ol style="list-style-type: none"> <li>1. Providing assistance to Pokdarwis HR to develop Ecotourism on Gili Labak Island with the Sumenep Regency Government</li> <li>2. Carry out maintenance of tourism objects</li> </ol>   |
| 4.  | Gili Labak Island Community         | <ol style="list-style-type: none"> <li>1. Preserving local art on Gili Labak Island with Pokdarwis</li> <li>2. Providing services and needs for Gili Labak tourist visitors</li> <li>3. Produce local products to improve the economy on Gili Labak Island</li> </ol> |

*Source: Interview results, processed by researchers (2023)*

Gili Genting Island has several potential tourist destinations, one of which is Pantai Sembilan. In the development and management of tourism, several actors are involved, namely the government, the private sector and the community. This is done jointly to increase the tourist attraction on Gili Genting Island.

**Table 3.** Stakeholders and Management Role of Gili Genting Island, Sumenep

| No. | Stakeholder                         | Role  |
|-----|-------------------------------------|---|
| 1.  | Government                          | <ol style="list-style-type: none"> <li>1. Preparation of a tourism area spatial planning system, involving regional government organizations such as the Health Office, the Tourism, Culture, Youth and Sports Office of the Sumenep Regency (Disparbudpora), the Provincial Maritime Affairs and Fisheries Service.</li> <li>2. Fulfillment of standard facilities (health, security, cleanliness, communication facilities) in tourist areas according to needs. This facility is in the form of the construction of a supporting community health center.</li> <li>3. Attract investors to build accommodation and supporting facilities, such as assistance with chairs, stages, gazebos and other supporting facilities for development on Gili Genting Island.</li> </ol> |
| 2.  | Private                             | <ol style="list-style-type: none"> <li>1. Help support the provision of facilities for tourism development on Gili Genting Island.</li> <li>2. Take part in promoting Gili Genting Island tourism.</li> </ol>   |
| 3.  | BUMDes (Village Owned Enterprises)  | Carrying out economic activities and public services on Gili Genting Island.  |
| 4.  | Tourism Awareness Group (Pokdarwis) | The Tourism Awareness Group (Pokdarwis) together with the Government of Sumenep Regency provided assistance to Pokdarwis HR to develop Ecotourism on Gili Labak Island and carry out maintenance of tourist objects.  |
| 5.  | The people of Gili Genting Island   | <ol style="list-style-type: none"> <li>1. Preserving local art on Gili Genting Island with Pokdarwis</li> <li>2. Providing services and needs for Gili Genting tourist visitors.</li> <li>3. Produce local products to improve the economy on Gili Genting Island.</li> </ol>   |

*Source: Interview results, processed by researchers (2023)*



### ***Activities and Planning in Ecotourism Development***

Tourism development, particularly ecotourism, offers significant economic benefits to tourist village areas, but requires careful and integrated planning to produce high-quality services and added value (Nugroho, 2018). This is exemplified by the development of Gili Iyang Island, known for its high oxygen levels, which has attracted both domestic and international tourists. According to the 2016-2030 Sumenep Tourism Development Master Plan, Gili Iyang is designated as a priority natural tourism destination, necessitating a strategic, systematic, and integrated approach to development in areas such as tourism destinations, industry, marketing, and institutions (JDIH, 2018). The Tourism, Culture, Youth and Sports Office of Sumenep Regency has ambitious plans to transform Gili Iyang into a professional health tourism destination, leveraging its high-quality oxygen for various therapies and health cures. This development plan includes improving infrastructure like road access, providing air bikes for tourists, creating photo spots, installing signboards and maps, and constructing kiosk buildings. Similarly, on Gili Genting Island, particularly in Bringsang Village where Sembilan Beach is located, efforts are underway to develop ecotourism. Sembilan Beach offers various water activities and accommodations managed by the village-owned enterprise (BUMDes), with plans to improve infrastructure such as repairing bridges and roads to enhance tourist comfort and accessibility. These development initiatives across the Gili Islands demonstrate the implementation of Regional Autonomy in Sumenep Regency, involving state officials in the integrated execution of government duties and development functions, while adhering to principles of good governance. The overarching goal of these tourism development efforts is to improve community welfare while promoting environmental sustainability, highlighting the importance of careful planning and management in ecotourism development.

### ***Forms of initiatives and aspirations of the local community for the development of ecotourism***

The development of ecotourism on Gili Iyang, Gili Labak, and Gili Genting islands in the Sumenep Regency faces numerous challenges despite their significant natural and cultural potential. Gili Iyang, known as Oxygen Island, benefits from the involvement of Pokdarwis Andang Taruna, which acts as a liaison between the local community and the government, fostering community participation in ecotourism development. However, social jealousy exists between its two villages, Bancamara and Banraas. Gili Labak struggles with the absence of regulations, limited transportation, and a lack of community knowledge about ecotourism management. These issues have led to ecosystem degradation and unstructured planning. Gili Genting, particularly Sembilan Beach, faces management conflicts due to unilateral control by a former village head, preventing the village government and BUMDES from optimally managing this village asset. Across all three islands, there is a pressing need for clear regulations, improved infrastructure, and increased community involvement to ensure sustainable ecotourism development.

The role of local communities in ecotourism development varies across the islands, reflecting the different management approaches and challenges. On Gili Iyang, the community shows openness to ecotourism development, with plans to expand into health tourism. Local wisdom and natural resources are being leveraged for tourism, with the community actively participating in preservation efforts. Gili Labak's community engages in beach cleaning and fishing activities, but lacks significant

authority in ecotourism planning due to limited government involvement and training. On Gili Gending, community participation is restricted, particularly at Sembilan Beach, where management lacks transparency and local involvement is limited to small-scale entrepreneurship. The Bringsang Amusement Park, another attraction on Gili Gending, is under village government control but also offers limited community partnerships. Across all three islands, there is a common theme of untapped potential due to inadequate planning, management structures, and regulatory frameworks. The development of these ecotourism destinations requires greater synergy between government bodies, local communities, and other stakeholders to balance economic growth with environmental and cultural preservation.

### **Golden Triangle Island economic principles**

#### ***Opportunities for local communities to open ecotourism businesses and become active economic actors in ecotourism activities***

The development of ecotourism on Gili Iyang, Gili Labak, and Gili Gending islands has significantly impacted their local economies and communities. On Gili Iyang, POKDARWIS Andang Taruna plays a crucial role in driving economic growth by providing opportunities for locals and MSMEs to offer tour packages, homestays, culinary services, and crafts. Ulfa et al. (2021) identified five key areas of economic potential on Gili Iyang: job opportunities in nature, culinary, cultural tourism, and entrepreneurship; local product development; transportation; accommodation; and telecommunications. The island is also planning to expand into health tourism with a Therapy Villa on Ropet Beach, leveraging its high-salt content seawater for therapeutic purposes. Gili Labak, promoted as a tourist destination since 2012, relies on its local community to provide visitor facilities and services, including food stalls, snorkeling equipment, and accommodation (F. Kurniawan et al., 2017). The island's appeal lies in its natural beauty and the strong Madurese culture of its friendly inhabitants, aligning with the definition of a tourist attraction as per the Law of the Republic of Indonesia Number 10 of 2009 (Rosita, 2017). On Gili Gending, particularly at Sembilan Beach, the local community actively participates in the tourism economy by providing food stalls, homestays, transportation services, and water sports rentals. The development of Sembilan Beach has successfully increased tourist visits and local community income (Amalia, 2023), fulfilling the mandate of Law Number 10 of 2009 to revitalize the local economy through tourism. Across all three islands, the involvement of local communities in providing tourism services and products has become a crucial factor in the success of their ecotourism initiatives, demonstrating the potential of sustainable tourism to drive economic growth and community development in these unique island settings.

#### ***Community empowerment in an effort to increase ecotourism businesses for the welfare of local residents***

In developing ecotourism on Gili Iyang Island, the community not only provides the island's resources with its unique characteristics, namely good quality oxygen, but also plays a role in developing the local economy, where the Gili Iyang community and Pokdarwis Andang Taruna become the main controllers and implementers of the sustainability of economic activities. which is proven by the management of tourist destinations, providing supporting facilities such as homestays, transportation, restaurants, and sustainable local arts and culture. The large potential that Gili Iyang

Island has is able to provide benefits to the local community in developing ecotourism on Gili Iyang Island because people do not need to look for work but only need to provide transportation services, provide facilities and carry out buying and selling transactions for visitors (Nasfi et al., 2023). In line with this, Husamah (2018) revealed that by managing and developing Gili Iyang Island well, the local community will certainly gain significant income so that they can improve the aesthetics and cultural integrity of the Gili Iyang community in order to achieve economic prosperity and ecotourism sustainability. The form of empowerment of the Gili Iyang community is realized through "Village Consultation" by Pokdarwis Andang Taruna to provide understanding to the community about the importance of participation in ecotourism development. In addition, there is also assistance from the Sumenep Regency Disparbudpora and several trainings from academics. This can prove that ecotourism not only develops environmental aspects but also provides benefits for local communities.

The utilization of Gili Labak's potential as an ecotourism destination is supported by the beauty of the marine ecosystem. This means that the income of the people of Gili Labak Island is dominated by the use of marine ecosystems such as fishing, snorkeling and diving. By maintaining natural beauty, especially underwater biological conditions such as fish and coral reefs, it will gain the public trust of tourists and improve the community's economy.

The local community participates as a provider of ferry boat transportation services, snorkeling and diving equipment rental services, homestay providers to become MSME actors who provide seafood typical of Gili Labak Island from fishermen's catches. This proves that the use of the sea really benefits the people of Gili Labak Island. In connection with the development of Gili Labak Island tourism, Disparbudpora plans to provide a community empowerment program in collaboration with the East Java Provincial Government by providing guidance and training in the tourism sector, such as how to treat tourists who come and providing assistance with craft tools and cooking utensils that are appropriate for use. promote economic welfare and support the people of Gili Labak.

The potential for strengthening the economy in the ecotourism sector is a great opportunity to be developed. Ecotourism development must be able to provide benefits to the community by becoming a driving force for improving the economy in the region. The development of ecotourism and the development of MSMEs are closely related to the increasing needs of tourists. This is because attractive tourist attractions will encourage tourists to stay longer (Fachrieza et al., 2023). The growth of MSMEs in the Sembilan Gili Genting Beach Area is based on the process of developing ecotourism itself, so community empowerment on Gili Genting Island is achieved by creating jobs as an alternative approach to new sources of income through MSMEs and innovations such as processed siwalan products, namely cobbhuk sugar (Badriyah et al., 2022). Economic progress from the management of the Pantai Sembilan area has received the attention of the Regional Government with the addition of supporting facilities sponsored by the service and banks in Sumenep Regency (Wicaksono et al., 2019). Based on the results of the research, there are 21 homestays in Pantai Sembilan involving partnerships with Bank BRI.

## **The educational principle of the Golden Triangle Island**

### ***Efforts to optimize regional uniqueness and uniqueness as a tourist attraction based on local wisdom***

Conceptually ecotourism is a concept of sustainable ecotourism development with the aim of supporting efforts to preserve the environment, both natural and cultural and increasing the involvement of local communities in management so as to be able to provide economic benefits. Gili Iyang Island is an island that has high oxygen levels, which makes it unique. Based on the results of research in the field, with the natural potential of Gili Iyang Island, namely clean air and high oxygen levels, it was found that there are still Gili Iyang people who are more than 100 years old.

Attraction to ecotourism is one of the main components of the sustainability of its development and management. Gili Labak is a type of tourism based on the attractiveness of underwater beauty in the form of diverse coral reefs and marine biota. The natural potential of Gili Labak Island makes ecotourism very popular with travelers. Tourists can enjoy the charm of white sand beaches and engage in underwater activities such as fishing, snorkeling, and diving. Gili Labak Ecotourism is a tourism activity that is oriented towards marine and underwater resources as an object and is a form of utilization of natural resources by relying on natural services to satisfy tourists' needs for tourism activities. Efforts to optimize the unique natural potential on Gili Labak are achieved through promotions from travel agents by utilizing social media such as Instagram to publicize the beauty of the landscape, potential, and facilities on Gili Labak Island.

The uniqueness of an island is a tourist attraction that has the potential to be developed. The beauty and unique characteristics of an archipelago must be maintained and developed to generate sustainable tourist enthusiasm. Sembilan Beach, as an icon of tourist destinations on Gili Gending Island, is able to become an attraction and attract many tourists. Apart from that, Sembilan Beach has also succeeded in creating opportunities for its community to become involved as MSME actors. Optimizing the advantages of Sembilan Beach is based on community support to realize their will and abilities so that the community can be used as the main basis for developing ecotourism. The community is also a stakeholder, so without community support, ecotourism development will not be optimally sustainable. This proves that the uniqueness of ecotourism can increase people's opportunities for doing business and developing their businesses.

### ***Utilization and optimization of traditional knowledge based on nature and culture preservation as well as the values contained in people's daily lives as added value***

Apart from utilizing natural resources to open various kinds of ecotourism business activities, the people of Gili Iyang also cultivate a local art called "Mancaksaraman". Mancaksaraman is a Pencak Silat performance combined with art movements typical of Gili Iyang Island that tells the story of the stakes to defend the dignity of Gili Iyang from invaders. This art performance was initiated again in 2017 until the Mancaksaraman Paguyuban was formed, which consists of 60 people who are native Gili Iyang people.

The people of Gili Iyang Island play an active role in utilizing and optimizing knowledge through their culture which is still preserved today, in order to protect and preserve nature. This is proven by the community's sustainability in preserving natural

wealth as an added value in daily life, such as marugi fruit, which can be made into tea, moringa leaves and traditional cakes, namely koto-koto cakes which are usually eaten with coffee. Apart from that, the local community also preserves the typical Gili Iyang culture and arts, including "Mancaksaraman" and making crafts such as weaving, necklaces, bracelets and souvenirs.

Marine biodiversity found on Gili Labak Island and protected for its sustainability is one of the educational processes for protecting the environment. Ecotourism can be interpreted as a form of responsible tourism, therefore ecotourism cannot be separated from conservation. Like the Gili Labak people who make fishing nets from wood to preserve nature. The people of Gili Labak Island have made efforts to preserve the marine ecosystem by making traditional fishing gear using bamboo called "Bubu". This fishing tool is made from bamboo and is used to catch fish in the sea, such as grouper, snapper, etc. The people of Gili Labak Island make traditional fishing gear with the aim of not destroying the marine ecosystem so that marine life is maintained. The fish caught are then used by local communities both for sale and for personal consumption. This proves that the people of Gili Labak have implemented traditional knowledge based on nature conservation and cultural values, as shown in Figure 10:

Sustainable tourism development while maintaining the beauty of the environment is the goal of ecotourism, one of which is Gili Genting. The Gili Genting community participates in the development of ecotourism by providing services and becoming an MSME actor. Judging from the area, the potential of village natural resources is the most important part of the development of a village. In this case, the Bringsang Village Government continues to strive to increase ecotourism activities on Gili Genting Island. By utilizing natural potential and local wisdom, the Head of Bringsang Village, with the help and coordination with the local community, has made efforts to establish the Bringsang Amusement Park (THB), located on Gili Genting. Initially, THB was a wilderness that was known to be haunted by the local community. However, the Head of Bringsang Village considered that the land had the potential to be utilized, so it was cleared using his personal funds, and now it has been used as an amusement park. The aim of establishing THB is so that village communities can have parks on their islands without having to go all the way to the Regency first

The establishment of THB clearly provides benefits to the surrounding community because it can provide opportunities for new jobs by creating MSMEs at THB. In fact, according to the information obtained, many people who initially migrated to Jakarta returned to Bringsang Village because of the establishment of this THB. The Bringsang Village Government has supported THB facilities by setting up kiosks for MSMEs with village funds.

### ***Providing quality and valuable experiences for visitors in communicative and innovative forms and delivery techniques***

Ecotourism has developed as a concept that focuses on preserving nature and society in an area. Gili Iyang Island is characterized by high oxygen levels and a unique community culture that can be an attraction for tourists. The communication and coordination factors carried out by the Sumenep Regency Disparbudpora, Pokdarwis Andang Taruna and the local community are mutually sustainable so as to make it easier to solve problems and develop ecotourism. During a visit to Gili Iyang Island, tourists will be presented with new experiences and knowledge covering the potential of nature, culture and the impressive art of the people of Gili Iyang Island.

The existence of Gili Labak gives tourists the impression of the beauty of ecotourism. Ecotourism, as one of the programs initiated by the Central Government to support the independence of the Regional Government is able to provide opportunities to support the economy of its people if it is controlled and utilized properly. However, Gili Labak Island as one of the ecotourism areas in Sumenep Regency still lacks ecotourism support facilities due to the lack of participation of the Sumenep Regency Disparbudpora, even though Gili Labak also has the potential to become a Premium Tourism Destination such as Labuan Bajo.

The natural wealth owned by Gili Labak Island is able to become a special attraction for tourists so that it is nicknamed the "Hidden Paradise Island". Ecotourism activities on Gili Labak Island have a positive impact on tourists, thus providing memorable new experiences. This is evidenced by the large number of tourists visiting Gili Labak rather than the Sembilan Beach on Gili Genting.

Tourist visits are implications of the development process of ecotourism. Based on the results of observations and interviews, the people of Gili Genting Island are quite communicative in conveying information related to their natural potential and culture. In addition, the people of Gili Genting can also communicate using Indonesian, meaning that the people of Gili Genting are able to provide public services to visiting tourists. In order to meet the needs of tourists, the local community, service providers and SMEs at Pantai Sembilan always try to meet their needs while traveling. This is done to be able to provide a memorable experience for tourists so that they can visit again or provide recommendations for Pantai Sembilan tourist destinations to their colleagues.

## **Principles of Golden Triangle Island Tourism**

### ***Optimizing the uniqueness of the region as a tourist attraction***

Utilization of local wisdom as a tourism potential can provide a role for the community to introduce and create appreciation and sensitivity to local social, cultural and traditional values. This can also open up opportunities for the local community to become actors in cultural tourism activities, both actively and passively. Utilization of local wisdom can strengthen and preserve local cultural identity, so that local wisdom becomes an important capital in the process of developing a tourist destination.

Based on the results of research in the field, it shows that Ecotourism on Gili Iyang Island actually has a lot of interesting local wisdom that is still being preserved. The Andang Taruna Tourism Awareness Group (POKDARWIS) has an important role in the sustainability of local wisdom values owned by Gili Iyang Island Ecotourism. POKDARWIS Andang Taruna has the aim of making local wisdom values into tourist attractions that can be offered to attract the attention of tourists to visit Giliyang Island Ecotourism.

The tourism potential of Gili Labak Island, Sumenep Regency, has the potential to be developed more advanced and better. Various efforts have been made by several parties to make Gili Labak Island an attractive tourist spot and able to attract tourists, both domestic and foreign. The development efforts carried out by several parties related to the potential of Gili Labak Island are quite good and capable of attracting tourists.

The potential of Gili Labak Island has been around for a long time, but no one has realized that this potential can be managed and developed into a tourist attraction. This is because the location of Gili Labak Island is quite remote and it is a small island

that was previously only known as Rat Island. Apart from that, the local community on Gili Labak Island is still unfamiliar with the knowledge of utilizing tourism-related potential, and there is also a lack of coordination from community leaders. Gili Labak Island began to become known to the wider community after several people visited there and uploaded documentary photos to social media.

Gili Gending Island tourism is a good example of efforts to optimize regional uniqueness and specialties as a tourist attraction. This is proven by the existence of a natural phenomenon that occurs naturally, which should make the local community feel worried about this phenomenon, the people in Bringsang Village instead utilize this natural phenomenon to become a source of economic income for the surrounding community, previously the beach was famous as a place which is haunted because it is adjacent to a public cemetery complex, has now been transformed into a tourist destination that attracts extraordinary interest, not only from the ticket sector, ship providers and MSMEs who also feel the benefits of managing Sembilan Beach Tourism on Gili Gending Island.

### ***Standard Operating Procedures (SPO) for implementing activities at the Destination.***

Based on the results of field research, it shows that the Standard Operating Procedures (SOP) for implementing activities at the Golden Triangle Island Ecotourism Destination have not yet been prepared in writing, everything is still informal. Therefore, the preparation of Standard Operating Procedures (SOPs) for tourism managers and Pokdarwis on the Golden Triangle Islands, Gili Iyang Island, Gili Labak Island and Gili Gending Island in tourism management is very necessary. The SOPs that need to be regulated include Standard Operating Procedures for Managers and Visitors. , Traders, Tourism Management Operations and SOPs regarding the distribution of Business Profits (SHU). Other SOPs can be prepared at any time as needed based on the decision of the meeting of tourism management members or Pokdarwis.

With the Standard Operating Procedures in place, the implementation and management of tourism by Pokdarwis on the Golden Triangle Island can run well and smoothly. Various forms of problems and deviations can be avoided or even if problems and deviations occur both within the Pokdarwis itself and in organizing and managing tourism, the cause can be found and can be resolved in the right way. If all activities are in accordance with those stipulated in the Standard Operating Procedures, then gradually the quality of public services on the Golden Triangle Island will become more professional, friendly, effective and efficient.

### ***Availability of adequate facilities in accordance with the needs of visitors, local conditions and optimizing local material content***

Based on the description of the research results above, it can be concluded that there are already service provider activities carried out by the private sector in Gili Iyang Island Ecotourism, which both focus on providing sea transportation facilities for tourists crossing, and land transportation facilities for tourists traveling around Gili Island Ecotourism Those who use odong-odong, however, the process of providing transportation services is still not optimal, because they still do not have complete passenger safety equipment such as life jackets and the ship crossing schedule at Dungkek port is still limited, so it will reduce the feeling of security and comfort for tourists visiting there. Gili Iyang Island Ecotourism. The odong-odong transportation

facility is also considered not environmentally friendly, because it can cause air pollution which can later affect the quality of oxygen levels in the Gili Iyang Island Ecotourism.

Gili Labak has problem with terms of service facilities. The quality of service facilities on Gili Labak Island is still very minimal. There are limited fresh water sources in these areas, so the need for clean water is still very limited. In addition, electricity also only turns on at night, on Gili Labak Island there is also no accommodation. There are also still minor accidents occurring among tourists, there are incidents where tourists are almost swept away by the waves due to the boat engine breaking down and not being able to be repaired. The government through its bureaucracy has an obligation to provide services to the community. Public service issues have a very large role because they involve the public interest. In accordance with its main duties, the Sumenep Regency Tourism, Culture, Youth and Sports Department is obliged to fix this problem, but it is not only the government's obligation to develop tourism on Gili Labak Island.

For lodging facilities on Pantai Sembilan, there are homestays that are built to look like huts in the form of houses on stilts.. There are at least 21 homestay units on Sembilan Beach. The homestay building on this beach has a unique architectural style dominated by colorfully painted wooden ornaments. This homestay is also often used as an Instagrammable photo spot by visitors, apart from of course the background of Sembilan Beach itself which is truly charming. Homestays on Sembilan Beach are available in several types which are usually differentiated based on their capacity, from 4 people to a maximum stay of 10 people. In one homestay unit, there are facilities in the form of at least 2 beds or beds with 4 sets of pillows and bolsters, as well as air conditioning (AC). Rates or prices for renting homestays in Pantai Sembilan vary, the rates range from Rp. 400 thousand to Rp. 750 thousand per night. The homestay rental price is of course not tied.

### ***Priority of cleanliness and health in all forms of service, both facilities and services***

In 2022-2021, the Andang Taruna tourism awareness group is collaborating with several academic stakeholders from public and private universities who play an active role in the development of Gili Iyang Island ecotourism in the new normal era, bearing in mind that Indonesia has been facing the Covid-19 pandemic for more than two years, which is certain. Several academics carried out community service and carried out several activities for 1 full month on Gili Iyang Island, including making travel plans and measuring locations, making photobooth icons, creating educational content for Covid-19, distributing masks and hand sanitizers, community service cleaning tourist attractions, installation of hand washing stations and 3M posters, installation of location signs for all tourist objects on Gili Iyang Island, with the aim of providing safety and excellent service to tourists regarding services and facilities in ecotourism Gili Iyang Island.

Pokdarwis on Gili Labak Island also implemented several programs related to development to preserve its tourism potential and keep the surrounding environment clean. There is also community involvement because they are directed by community leaders (in this case, the RT head) on Gili Labak Island to be involved in programs designed to carry out better management of an object. Community involvement in developing tourism potential on Gili Labak Island in Sumenep Regency is not only limited to that but also includes participating in clean-up activities, which is a program



created by Pokdarwis, and a coral reef planting program that also involves local communities in these activities. In addition to planting coral reefs, a clean-up program is also required to maintain the cleanliness of the environment on Gili Labak Island for the sake of mutual comfort while enhancing the potential for natural beauty.

Based on the results of research in the field, at Sembilan Beach, Gili Gending Island really maintains the cleanliness of its natural environment. There are janitors who are on duty every day to clean up rubbish on Sembilan Beach. Every morning, there are 2 officers who sweep from each end of Sembilan Beach and clean various facilities for tourists, such as gazebos, lounge chairs, swings, tourist playgrounds, and homestays, all of which are cleaned every day. This is done with the aim of providing good quality service to tourists who come, so that tourists feel comfortable and will visit again someday.

## Conclusion

The research conducted on the development of the Golden Triangle Islands in Sumenep Regency, comprising Gili Iyang, Gili Labak, and Gili Gending, has culminated in a comprehensive strategy to enhance their potential as ecotourism destinations. Key findings highlight the necessity of designing regulations to govern tourism activities, ensuring the sustainability and protection of these unique locales. Establishing well-defined tourist routes and bicycle lanes is essential for improving accessibility and connectivity among the islands. Each island's distinct characteristics Gili Iyang's health and natural attractions, Gili Labak's marine education, and Gili Gending's water sports should be leveraged to create themed vacation experiences and targeted promotional campaigns. Additionally, preserving and promoting indigenous cultural practices, such as Ludruk arts on Gili Iyang and barrel art on Gili Gending, can enrich the tourist experience and foster a unique brand identity. The integration of local communities into the tourism development process is crucial, as their participation in planning, managing, and promoting the islands will ensure the authenticity and sustainability of the tourism initiatives. Coordinated efforts to establish food and lodging facilities, along with meticulously planned routes and crossing schedules, are vital to support seamless tourist experiences across the Golden Triangle Islands.

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