

**GOVERNANCE OF OXYGEN TOURISM DEVELOPMENT BASED ON
COMMUNITY-BASED TOURISM (CBT) IN GILI IYANG, SUMENEP
REGENCY**

Imam Hidayat

Faculty of Social and Political Sciences,
Public Administration Study Program,
Universitas Wiraraja,
imamhidayat@wiraraja.ac.id;

Anis Kurli

Faculty of Social and Political Sciences,
Public Administration Study Program,
Universitas Wiraraja,
aniskurli@wiraraja.ac.id;

Rillia Aisyah Haris

Faculty of Social and Political Sciences,
Public Administration Study Program,
Universitas Wiraraja,
rilliaharis@gmail.com;

Deny Feri Suharyanto

Faculty of Social and Political Sciences,
Public Administration Study Program,
Universitas Wiraraja,
dhenz@wiraraja.ac.id;

Rindy Antika Sugandha

Faculty of Social and Political Sciences,
Public Administration Study Program,
Universitas Wiraraja,
antikarndy2@gmail.com;

Hediyanti Sukma

Faculty of Social and Political Sciences,
Public Administration Study Program,
Universitas Wiraraja,
dherdiyantisukma@gmail.com;

ABSTRACT

One of the top 5 tourist destinations with the highest oxygen levels in the world is in Indonesia, namely on Gili Iyang Island, Sumenep Regency, East Java. It is a nature tourism spot with high oxygen levels ranging from 20.9% to 21.5% and features the richness of local culture, adding to its appeal for visitors. However, these superior resources have not been managed well; there is no participation

from the local community in developing the tourism industry, the uniqueness of local traditions, cuisine, and culture is not maximized. There is weak government support for tourism infrastructure, and there is no empowerment or development of the local community to support the tourism industry. Research objective: To develop a governance framework for tourism development based on community-based tourism (CBT) as a recommendation for reformulating the stages of sustainable tourism development, taking into account local wisdom as the main asset in enhancing the quality of the tourism industry on Oxygen Island, Gili Iyang. Research method: This study uses a descriptive qualitative method with an observational study, involving the observation of tourist behavior and interactions, tourism policies in Sumenep, the behavior of tourism-aware groups, and other stakeholders involved in tourism development.

Keywords: *Tourism Development Governance, Tourism Industry Development, Community Based Tourism, Sustainable Tourism*

A. INTRODUCTION

Sumenep Regency is located at the eastern tip of Madura Island in East Java Province, and is one of the regencies with advantages in the tourism industry sector (Sadik & Wijanarko, 2022). Through the preparation of the Sumenep Regency Tourism Development Master Plan for 2018-2025, which regulates tourism and culture, the development program and work plan for the tourism industry in Sumenep emphasize that the tourism industry is one of the strategies for achieving economic independence and has a significant impact on increasing Sumenep's regional revenue (APBD) (Sumenep et al., 2021).

One of Sumenep Regency's flagship tourist attractions is the world's best oxygen tourism, located on Gili Iyang Island in Sumenep Regency (Lokal & Kabupaten, 2025). It takes approximately 3 hours to travel from the city center of Sumenep. This oxygen tourism has received attention from both the regency and provincial governments, which was reinforced by the visit of the Governor of East Java and the Speaker of the Indonesian House of Representatives in 2022. By visiting the oxygen tourism site directly, they promised to provide support for accessibility to develop tourism.

However, until now, oxygen tourism has not shown significant development, as evidenced by the declining number of visitors; in 2022, only around 50 – 100 visitors were recorded (Izzuddin & Ilahiyah, 2022). Therefore, there is a need for a reformulation regarding creative and innovative management of tourism to restore tourists' interest and confidence in visiting oxygen tourism sites. For this purpose (Jalaluddin & Permatasari, 2021), tourism management should prioritize the principles of sustainable tourism. Improving tourism management governance is very appropriate for the development of oxygen tourism because this governance introduces a paradigm about a deeper understanding of the benefits of pure oxygen found at tourist locations (Sarna, 2021), then invites the local community to participate by leveraging culture, tradition, and arts managed with a participatory institutional concept and involving all stakeholders to synergize in providing support for the advancement

of oxygen tourism (Suhaimi et al., 2024).

Governance of Oxygen Tourism Development based on Community Based Tourism (CBT) as a solution to the declining number of visits to oxygen tourism by relying on in-depth introduction of the advantages of oxygen tourism, namely through tourism branding, active participation of the local community, and managing institutions based on issues at the tourist site (Azwar et al., 2023).

The stages of tourism development governance are as follows the discovery stage by optimizing the role of social media as a brand, which will provide the public with more in-depth information about the advantages of oxygen tourism the local response stage by involving local community members to actively participate, starting from planning and engaging by relying on their culture, traditions, and arts the institutionalization stage which provides an opportunity for managers to redesign strategic tourism plans by reevaluating based on the problems they face the compromise stage which involves expanding cooperation with all stakeholders (Jendra et al., 2023). Community-Based Tourism (CBT) governance is recommended as the right approach for the future of Oxygen Island tourism, with education to the community about the importance of the tourism industry being able to achieve sustainable tourism (Anom et al., 2017).

B. METHOD

This research method was carried out over a period of one year. The method used in this study is a descriptive qualitative approach. This descriptive research is not intended to test a specific hypothesis, but to depict a variable, phenomenon, or condition as it is. This research approach uses the author's perspective or thinking based on events or phenomena that occur (Thalib, 2022). The researcher attempts to describe how oxygen tourism management on Gili Iyang Island, Sumenep Regency, is carried out based on Community-Based Tourism (CBT) management. Then, the management will be identified based on the Community Based Tourism (CBT) concept so that factors that hinder and limit the optimization of oxygen tourism management, especially from the human resources aspect such as community participation and governance by local organizations, can be examined. This research is conducted on oxygen tourism at one of the best oxygen locations in the world, located on Gili Iyang Island, Sumenep Regency. This is because the researcher wants to identify aspects or elements in tourism management that are not yet optimal, particularly concerning local organization and community participation based on Community Based Tourism (CBT) governance. This study will use purposive sampling techniques to collect research data through various considerations. In order to understand the design of the tourism morphosis model in the management and development of tourism based on Community Based Tourism (CBT), subjects are needed, namely the Head of the Department of Culture, Youth, Sports, and Tourism, the managers of Oxygen Tourism, the community involved, as well as the local community who are not members of Pokdarwis, and also the administrators and members of Pokdarwis as the managers or local organization in Oxygen Tourism. This will make it easier for researchers to obtain and analyze information from various perspectives regarding the factors that contribute to the suboptimal development

of Oxygen Tourism.

C. EXPLANATION

This study uses three concepts for the implementation of CBT, which include community attitudes towards tourism, community awareness, and community empowerment (Durkin & Peric, 2017; Piartrini, 2018; Rocharungsat, 2008). These three concepts fall under the following principles (Durkin & Peric, 2017; Piartrini, 2018)

1. Community initiatives to participate in tourism.
2. Encouraging local communities to preserve the environment.
3. Sharing tourism benefits fairly with the local community.
4. Recognizing and supporting the potential and participation of the community for empowerment purposes (Mahmudah Budiatiningsih, 2024) .

As for the research results compiled by the researcher, they are as follows

Community initiatives to participate in tourism

The community of Gili Iyang Island, widely known as the "Oxygen Island" due to its high oxygen levels and excellent air quality, demonstrates a fairly significant level of participation in the development of tourism in the area (Society, 2023). Community initiatives are growing as awareness increases of the great potential their region holds as a premier destination for health tourism and ecotourism in Sumenep Regency.

In general, the initiative emerged from a combination of local awareness, the value of mutual cooperation, as well as economic and social incentives (Sarna, 2021). The community began to realize that the presence of tourists brings positive impacts to the economy, particularly through employment opportunities in the service, culinary, transportation, and lodging sectors. Therefore, their participation is not only in the form of physical involvement but also in the form of ideas, innovation, and social responsibility towards the local environment and culture (Hardjati, 2021). This aligns with the results of interviews conducted by the researchers, which stated that:

"We, as the local community on Gili Iyang, realize that this tourism will not succeed if we just remain as spectators; therefore, we always coordinate with the tourism management parties" (Interview, September 26, 2025).

The motivation of the community to participate is not only economic but also based on pride in their regional identity. They feel a sense of responsibility to maintain the image of Gili Iyang as the "World Oxygen Island." Ecological awareness has grown because they directly see that environmental cleanliness is proportional to tourist comfort. This awareness has become a new social value in the community, where taking care of the environment is not only a moral obligation but also a strategy to sustain tourism. In addition, community involvement is also influenced by the support of village government policies and the Sumenep Tourism Office, which encourage the formation of Pokdarwis groups and conduct training on tourism services, digital marketing, and homestay management. Through these programs, the community gains new knowledge and becomes increasingly confident in being the main actors in the local tourism

sector.

Based on the observations made by the researcher, various forms of initiatives that emerged in Gili Iyang reflect the adaptive and creative character of the community. Some of these include:

a. Construction of facilities and infrastructure through self-reliance.

The community, together with the tourism awareness group (Pokdarwis), independently builds simple facilities such as gazebos, seating areas for tourists, parking areas, and walkways leading to natural oxygen points. They also participate in communal work activities to clean the beach and tourist areas every week. Community-based tourism promotion: The youth of Gili Iyang use social media such as Instagram, TikTok, and YouTube to showcase the beauty of the island and explain the health benefits of high-oxygen air. This promotion is carried out without significant government assistance, instead as a personal and community initiative.

b. Development of local products and tourism services.

Several residents take advantage of economic opportunities by opening food stalls offering typical Madura cuisine, providing homestays, renting boats, or selling souvenirs such as handicrafts made from marine materials. The role of women is also seen as active in household economic activities related to tourism.

c. Environmental and local culture preservation.

The community rejects development that is considered to damage the coastal ecosystem and clean air, while continuing to preserve traditional activities such as sea blessings, nyadar rituals, and local arts to attract tourists with cultural appeal.

Community initiatives on Gili Iyang Island reflect a strong and sustainable model of participation in community-based tourism development (Murtikasari, 2021). This participation not only strengthens local economic independence but also serves as a tangible manifestation of the community's collective awareness of the importance of preserving the island's ecological and cultural identity. With the right support from the government and private sector, Gili Iyang has the potential to become an ideal example of a sustainable tourist destination that grows from the bottom up, driven by the spirit and initiatives of its own people (Wahyuni, 2021).

Encouraging local communities to preserve the environment.

Public awareness of the importance of protecting the environment usually grows from direct experiences dealing with ecological problems such as pollution, coastal erosion, declining water quality, and reduced vegetation (Purwanti & Mulyadi, 2024). In this context, people begin to perceive the environment not only as an economic resource but also as a living space whose balance must be maintained.

This awareness encourages the formation of collective actions such as regular community service, integrated waste management, and greening activities in public spaces (Damas Dwi Anggoro, 2022). This process demonstrates a transformation of social values, from exploitative behavior to conservative and environmentally responsible behavior. As the informants conveyed to the

researcher:

"We, as the government responsible for tourism management, are also moved to always encourage the local community to collaboratively protect the environment as a source of natural wealth that is not possessed by other regions" (Interview, September 26, 2025).

Environmental preservation is a shared responsibility between the government, private sector, and society. However, in practice, society holds a very strategic position because they are the ones closest to natural resources and the ones who feel the direct impact of environmental changes the most (Balahmar, 2023). This awareness then gives rise to various local community initiatives that grow from the bottom up to protect, maintain, and preserve the surrounding environment (Bambang Kusbandrijo, 2018).

The success of community initiatives cannot be separated from the support of government policies. Programs such as sustainable tourism villages, climate villages (ProKlim), and sustainable villages serve as platforms for synergy between citizen initiatives and government technical support. In this context, the government acts as a facilitator providing training, access to funds, and supporting regulations while the community becomes the main actor in preservation (Sari, 2021). This collaboration strengthens local capacity and accelerates behavioral change. For example, waste management and mangrove preservation training provided by the government to local communities has been proven to increase environmental awareness while expanding green-based economic opportunities (Wilda Rasaili, 2024).

Community initiatives in preserving the environment have broad positive impacts. Ecologically, reforestation and waste management activities reduce land degradation and pollution (Hardjati, 2021). Socially, solidarity among residents grows, along with an increased sense of collective responsibility towards the environment. Economically, new job opportunities emerge from waste management, eco-friendly crafts, and ecotourism.

Sharing tourism benefits fairly with the local community

Gili Iyang is one of the premier destinations in Sumenep Regency, known for its high oxygen levels, clean environment, and underwater natural beauty. The island is inhabited by people whose main livelihoods are as fishermen, farmers, and a small portion as tourism service entrepreneurs (Kurnia et al., 2025). Along with the increasing number of tourists, new economic opportunities have begun to emerge, such as providing homestays, food stalls, boat rentals, and local tour guides.

Nevertheless, the main challenge that arises is how the economic benefits of tourism can be enjoyed more evenly (Tahir, 2016). In the initial stages, tourism management is often concentrated in the hands of a few individuals or groups who have greater capital and access to information, while other members of the community still serve as labor with low wages. In this context, local policies and initiatives are needed to ensure that tourism development does not create new disparities at the community level. This fact aligns with the results of interviews, which conveyed to the researcher that:

“The people in Gili Labak are still very interested in running shops, sir, because the income we receive is not yet sufficient to meet our daily basic needs. (Interview, September 26, 2025).

When the benefits of tourism are distributed fairly, a double effect emerges that strengthens the socio-economic resilience of the community (Rony Wirawan et al., 2023). First, household welfare improves due to new employment opportunities that arise. Second, a sense of ownership of tourist destinations grows, encouraging residents to maintain the cleanliness and beauty of the environment. Third, social cohesion is created because the community feels that tourism is not only for a select few, but the result of collective effort (Resdiana & Hasanah, 2020).

Equitably distributing the benefits of tourism to the local community is the key to the success of sustainable tourism development, especially in areas like Gili Iyang that rely on natural wealth and local wisdom (Maulana et al., 2025). The principles of distributive, procedural, and recognition justice must be implemented simultaneously through the active participation of the community at every stage of tourism development. With the support of local institutions, government policies favoring the community, and continuous academic guidance, tourism can become an instrument for economic equity as well as socio-cultural preservation (Dianbudiyanto et al., 2025). Therefore, in the future, the orientation of tourism development should not only focus on increasing the number of tourists, but also on the extent to which its benefits can strengthen the welfare and social justice of the local community.

Based on field observations, in-depth interviews, and documentation, it is known that the community of Gili Iyang has a fairly high collective awareness of the local potential they possess. This potential includes natural beauty, high-oxygen air, abundant marine resources, and strong social traditions. Most residents have understood that tourism can become an alternative source of new economic opportunities besides farming and fishing (Sabdoningrum & Hidanah, 2025).

Recognizing and supporting the potential and participation of the community for empowerment purposes.

Interview results show that the community has begun to actively participate in various tourism activities, such as providing lodging services (homestays), maritime transportation, local culinary offerings, and oxygen tourism guiding. This involvement is driven not only by economic factors but also by pride in local identity and the desire to maintain a positive image of Gili Iyang in the eyes of tourists (Wiji Susilo & Suhariyanto, 2025).

"We want Gili Iyang to be known for its beauty and air quality, but also for the friendliness of its residents," said one community leader who was interviewed (Interview, September 26, 2025).

The level of community participation can be categorized into functional participation and interactive participation (referring to Pretty's theory, 1995) (Constella et al., 2025), where the community is not only involved as activity implementers but also contributes to planning and decision-making at the local level through village forums and tourism awareness groups.

Research shows that recognizing the potential of local communities is the starting point for successful empowerment. Local governments and partner institutions (including universities) have begun to acknowledge that the Gili Iyang community possesses valuable local knowledge, especially in terms of maintaining ecological balance and fostering harmonious relationships with the marine environment.

This form of recognition is evident in the community-based tourism development policy coordinated by Pokdarwis. For example, village regulations stipulate that every tourism activity must involve local personnel, and a portion of the revenue from tickets and tourism services is used for environmental conservation funds and social activities.

"In the past, we were just spectators, but now the village has given us the trust to manage tourism activities ourselves," said one member of the Pokdarwis (Interview, September 26, 2025).

Such recognition aligns with the concept of recognition justice (Schlosberg, 2007), which emphasizes the importance of appreciating the roles, identities, and wisdom of local communities in the development process. With this recognition, communities feel valued and are more motivated to participate actively (Kadek Sarna, 2024).

Based on the analysis of the research results, it can be concluded that recognition of local potential is a primary prerequisite for community empowerment. Recognition without support will only create symbolism, while support without recognition has the potential to cause dependency. Therefore, both aspects must go hand in hand within a participatory framework that is fair.

Conceptually, these findings reinforce the theories of Arnstein and Cohen & Uphoff that genuine participation can only be realized if the community has control over decisions that affect their lives. In the context of Gili Iyang, empowerment is not only about economic improvement, but also about social transformation toward a self-reliant, confident, and empowered society (Hakim et al., 2025).

D. CONCLUSION

Research results indicate that the recognition and support of the potential and participation of the community are key factors in the empowerment process in Gili Iyang. Through collaboration between the community, government, and supporting institutions, a participatory system has been established that enables the community to become the main actors in managing local tourism. Positive impacts such as improved welfare, environmental conservation, and strengthened local institutions are tangible evidence that development based on recognition and participation can create social and economic sustainability for coastal communities.

REFERENCES

Anom, I. P., Suryasih, I. A., & Nugroho, S. (2017). *Turismemorfofis: Tahapan selama seratus tahun perkembangan dan prediksi pariwisata Bali*. 07, 59–80.

- Azwar, H., Hanafiah, M. H., Ghani, A. A., Azinuddin, M., & Shariffuddin, N. S. M. (2023). Community-Based Tourism (Cbt) Moving Forward: Penta Helix Development Strategy Through Community Local Wisdom Empowerment. *Planning Malaysia*, 21(1), 72–88. <https://doi.org/10.21837/PM.V21I25.1225>
- Balahmar, A. R. U. (2023). *WATESNEGORO VILLAGE GOVERNMENT STRATEGY IN*. 21(2), 378–392.
- Bambang Kusbandrijo. (2018). *No Title*. 16(1), 50–61.
- Constella, G., Firdauz, A., & Na, S. (2025). *IMPLEMENTATION OF HYBRID PLTS AND ELECTRIC BIKES AS AN EFFORT TOWARD GO GREEN TOURISM ON NGIROBOYO BEACH PACITAN IMPLEMENTASI PLTS HYBRID DAN SEPEDA LISTRIK SEBAGAI UPAYA MENUJU GO GREEN TOURISM DI PANTAI NGIROBOYO PACITAN* 9(3), 329–340.
- Damas Dwi Anggoro. (2022). *No Title*. 20(1), 275–283.
- Dianbudiyanto, W., Fitriani, N., Shalva, R. N., Ratri, D., & Hutama, D. A. (2025). *Inventory of Greenhouse Gas Emissions in the Energy Sector in Gili Iyang Island , Sumenep Regency Using the IPCC 2006 Method*. 5(1), 91–104.
- Hakim, L. D. R., Karyadi, L. W., Wijayanti, I., Hilmi, F., & Maulana, D. A. (2025). Komunitas Lokal Dalam Pengembangan Pariwisata Berkelanjutan: Studi Pada Desa Wisata Gili Gede, Lombok Barat. *JUPEIS: Jurnal Pendidikan Dan Ilmu Sosial*, 4(2), 60–68. <https://doi.org/10.57218/jupeis.vol4.iss2.1593>
- Hardjati, S. (2021). *No Title*. 19(1), 52–53.
- Izzuddin, M. G., & Ilahiyah, I. (2022). Tata Kelola Ekowisata Berbasis Ergonomi dan Kearifan Lokal di Wisata Pulau Oksigen Gili Iyang. *Jurnal Ilmiah Pariwisata*, 27(3), 241–252.
- Jalaluddin, F., & Permatasari, A. N. (2021). *Peran Aplikasi “ Visiting Jogja ” dalam Mengembalikan Kepercayaan Wisatawan untuk Berwisata ke Yogyakarta*. 5(2), 128–144.
- Jendra, I. W., Harisal, H., Kanah, K., & Astuti, N. W. W. (2023). Pengajaran Bahasa Asing Bagi Pelaku Pariwisata di Pantai Melasti, Desa Ungasan, Kecamatan Kuta Selatan, Kabupaten Badung. *Bhakti Persada*, 9(1), 59–66. <https://doi.org/10.31940/bp.v9i1.59-66>
- Kadek Sarna. (2024). 2 1) 2). 3(2), 157–167. <https://doi.org/10.30872/tas.v3i2.1052>
- Kurnia, R., Nasution, A., Suwardi, R., & Sugita, I. W. (2025). *Keberlanjutan Wisata Mangrove Silau Laut dalam Perspektif Ekologi dan Pariwisata Keberlanjutan Wisata Mangrove Silau Laut dalam Perspektif Ekologi dan Pariwisata*. 4.
- Lokal, K., & Kabupaten, D. I. (2025). 1 , 2 1,2. 19(1978), 5501–5508.
- Mahmudah Budiatiningsih. (2024). <http://stp-mataram.e-journal.id/JIH>. 13(1), 123–136.
- Maulana, M. R., Rahmawati, M., Kristanto, V. H., & Sianturi, I. (2025). *Manajemen Risiko Embarkasi dan Debarkasi Penumpang pada Kapal*

- KMP Gili Iyang di Pelabuhan Bawean*. 4(2), 4815–4825.
- Murtikasari, R. A. (2021). *DEVELOPMENT OF TOURISM VILLAGE THROUGH CBT APPROACH*. 19(1), 314–327.
- Purwanti, D., & Mulyadi, A. (2024). *No Title*. 22(2), 278–296.
- Resdiana, E., & Hasanah, L. (2020). *Peran Pokdarwis Andang Taruna Sebagai Katalisator Terwujudnya Karakter Peduli Wisata (Studi Di Banraas Pulau Gili Iyang Madura) memancing dan kadar oksigen yang Sumenepmempunyai terumbu karang dan mangrove terluas di Jawa Timur dengan Jawa Timur* . Hal i. 2(2).
- Rony Wirawan, Sasmito Jati Utama, & Deasy Arieffiani. (2023). Analisis Community Based Tourism dalam Pengembangan Wisata Pulau Gili Iyang di Kecamatan Dungkek Kabupaten Sumenep. *Policy and Maritime Review*, 2(1), 32–44. <https://doi.org/10.30649/pmr.v2i1.45>
- Sabdoningrum, E. K., & Hidanah, S. (2025). *ANALYSIS OF REPRODUCTIVITY OF MADRASIN CATTLE BEFORE AND AFTER FOOT AND MOUTH DISEASE ON GILI IYANG ISLAND , SUMENEP* . 27(1), 32–35.
- Sadik, J., & Wijanarko, A. (2022). Buletin Ekonomika Pembangunan Pengembangan Pantai Sembilan Sumenep Berbasis Partisipasi Masyarakat Buletin Ekonomika Pembangunan. *Buletin Ekonomika Pembangunan*, 3(1), 1–16.
- Sari, A. A. (2021). *No Title*. 19(1), 183–194.
- Sarna, K. (2021). *The Existence of Subak in The Legal Politics of Development Program in Bali*. 43(3), 34–44. <https://doi.org/10.5281/zenodo.5035637>
- Society, C. (2023). *Journal of Government Civil Society*. 7(2).
- Suhaimi, S. N., Putri, T. A., Harahap, A., & Furqan, A. (2024). Analisis Penerapan Community Based Tourism (Cbt) Di Desa Wisata Mekarsari, Kabupaten Bandung. *Jurnal Industri Pariwisata*, 6(2), 160–173. <https://doi.org/10.36441/pariwisata.v6i2.1555>
- Sumenep, B., Cara, T., Dan, P., Rincian, P., Desa, D., Desa, S., Kabupaten, D. I., Rahmat, D., Yang, T., Eba, M., & Sumenep, B. (2021). *NOMOR o*.
- Tahir, R. B. 2016. (2016). *No Title*.
- Thalib, M. A. (2022). *Pelatihan Teknik Pengumpulan Data dalam Metode Kualitatif untuk Riset Pelatihan Teknik Pengumpulan Data dalam Metode Kualitatif untuk Riset Akuntansi Budaya*. June. <https://doi.org/10.23960/seandanan.v2i1.29>
- Wahyuni, R. T. (2021). *No Title*. 19(2), 267–281.
- Wiji Susilo & Suhariyanto. (2025). *Beban Kerja Pembangkit Listrik Tenaga Diesel*. 3(1), 171–179.
- Wilda Rasaili. (2024). *No Title*. 22(2), 391–406.