

EMPOWERING COASTAL COMMUNITIES THROUGH COMMUNITY-BASED TOURISM: A CASE STUDY OF MUARA GEMBONG WITH A FOCUS ON PANTAI BAHAGIA, INDONESIA THROUGH THE PENTA HELIX LENS

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Abstract

This study explores the potential of Muara Gembong, a coastal sub-district in Bekasi Regency, West Java, to develop sustainable tourism through a Community-Based Tourism (CBT) approach supported by the Pentahelix model. Faced with environmental degradation, tidal flooding, and declining fisheries, the region seeks alternative pathways for socio-economic resilience. Using qualitative methods such as field observations, interviews, focus group discussions, and participatory co-design sessions, this research highlights the key roles played by the local KEBAYA community, private sector partners, and academic institutions in designing tourism experiences rooted in local culture and ecology. The findings reveal significant opportunities for mangrove ecotourism, culinary heritage-based tourism, and craft-based activities like natural-dye batik making. However, persistent challenges such as poor infrastructure, weak governance, limited market access, and unequal stakeholder dynamics hinder progress. The study concludes that integrated stakeholder collaboration, policy recognition, capacity-building, and formalized community ownership structures are essential to transform Muara Gembong into a model of inclusive and sustainable rural tourism.

Keywords : *Community-Based Tourism, Muara Gembong, Indonesia, Pentahelix*

INTRODUCTION

Muara Gembong is a coastal sub-district located in the northern part of Bekasi Regency, West Java, Indonesia (Hanan et al., 2020; Salampey et al., 2021). The area has a population of over 40,000 residents, most of whom rely on fishing and small-scale agriculture, making local livelihoods highly dependent on coastal and marine resources (Hanan et al., 2020; Lukman et al., 2025). Mangrove ecosystems play a vital role in this region, serving both as natural coastal protection and as habitats for diverse flora and fauna, while also supporting emerging ecotourism activities, particularly in villages such as Pantai Mekar (Lukman et al., 2025; Saepudin, 2022; Suwito & Yusuf, 2020). In recent years, Muara Gembong has experienced increasing environmental pressures, particularly tidal flooding and coastal abrasion, which have disproportionately affected coastal villages such as Pantai Bahagia (Supermana, 2024; Yahya & Carina, 2024). These flood events have disrupted settlements, aquaculture, transportation, and local economic activities. A key contributing factor is the degradation of mangrove forests, which have historically functioned as natural barriers against coastal hazards. Since the late 1970s, mangrove cover in Muara Gembong has declined substantially due to land conversion, leading to accelerated shoreline erosion and declining fisheries productivity (Jayawiguna, 2024; Prabawa et al., 2021). These environmental challenges are further compounded by limited infrastructure and relatively low levels of community welfare, underscoring the need for alternative and more sustainable livelihood strategies in the area (Hapzi et al., 2024).

Despite the decline of fishing as the primary livelihood and the environmental challenges faced by the area, Muara Gembong possesses considerable potential for sustainable tourism development. Several studies highlight the suitability of the region for ecotourism, supported by mangrove

ecosystems, coastal biodiversity, traditional fishing practices, and the availability of non-timber forest products (NTFPs) derived from mangroves that can simultaneously support conservation and community livelihoods (Hapzi et al., 2024; Lukman et al., 2025; Nugraha et al., 2019). In particular, Pantai Bahagia has been identified as a potential site for marine and conservation-based tourism, including mangrove conservation activities and wildlife protection initiatives such as the preservation of the Javan langur (Antara, 2020). This potential is further reinforced by provincial spatial planning policies that designate Muara Gembong as a zone for coastal natural tourism and marine-based activities (Nugraha et al., 2019).

Community-Based Tourism (CBT) refers to tourism initiatives that are owned, managed, and controlled by local communities, with the primary objective of generating benefits for community members while integrating tourism into the local economy (Yanes et al., 2019; Zielinski, Jeong, et al., 2020; Zielinski et al., 2021). CBT emphasizes direct community participation in decision-making, management, and benefit-sharing, while external actors are expected to play a facilitative rather than ownership role (Dłużewska & Giampiccoli, 2021; Zielinski, Kim, et al., 2020). As such, CBT is commonly associated with small- to medium-scale tourism development that prioritizes local control, cultural integrity, and environmental sustainability (Priatmoko et al., 2021)

Since its initial conceptualization by Murphy, CBT has gained prominence as a response to the limitations of top-down tourism development approaches, particularly in rural and marginalized communities (Dolezal & Novelli, 2022; Pham Hong et al., 2021). The CBT approach is widely regarded as an integral component of sustainable tourism development, as it promotes community empowerment, equitable benefit distribution, and local participation in planning and governance processes (Nagy & Segui, 2020). CBT is especially relevant in remote or less-developed areas due to its relatively low entry barriers, potential for local ownership, and capacity to link tourism development with natural resource conservation and livelihood diversification (Dłużewska & Giampiccoli, 2021; Witchayakawin et al., 2024).

Despite its potential, CBT implementation is often constrained by unequal power relations within communities and between communities and external stakeholders, which can limit genuine participation and community ownership (Dolezal & Novelli, 2022; Zielinski, Kim, et al., 2020). Successful CBT development typically requires supportive policies, adequate infrastructure, access to information, and collaboration with external partners who control capital and technical expertise, creating tensions with CBT principles that restrict external ownership (Dłużewska & Giampiccoli, 2021; Yanes et al., 2019). Additional challenges include limited skills and knowledge, internal community conflicts, and unequal benefit distribution, which can undermine collective action and threaten the sustainability of CBT initiatives (Dolezal & Novelli, 2022; Pham Hong et al., 2021).

The Pentahelix framework refers to collaborative governance involving five key stakeholders: academics, the private sector, government, communities, and media. All stakeholders need to work together to support development and policymaking processes (Caraka et al., 2021; Roxo et al., 2025). In the context of tourism development, the Pentahelix model is widely applied to enhance coordination among stakeholders, improve strategic planning, and support sustainable tourism management (Forss et al., 2021; Purnomo et al., 2021; Rahman & Wardana, 2025). This framework is particularly relevant to community-based tourism (CBT), which requires multi-actor collaboration while maintaining community ownership and participation.

Within the Pentahelix model, each stakeholder plays a complementary role. Academics contribute through research, conceptual development, and capacity building to support evidence-based tourism planning (Fernández-Villarán et al., 2024; Novianti, 2020). The private sector functions as an enabler by providing investment, technology, and market access, often through partnerships and corporate social responsibility initiatives (Novianti, 2020; Yunas et al., 2023). Local communities act as the core actors in CBT by contributing local knowledge, cultural assets, and direct participation in tourism management, thereby strengthening ownership and sustainability (Gannon et al., 2021; Prayitno et al., 2024). The government plays a central role as regulator and coordinator, responsible for policy formulation, enforcement, and cross-sectoral collaboration to create an enabling environment for tourism development (Purnomo et al., 2021; Shkarupeta & Babkin, 2024). Meanwhile, the media acts as a catalyst by enhancing destination visibility, shaping tourism branding, and disseminating information through digital and mass communication platforms (Herawati et al., 2022; Novianti, 2020).

Effective interaction among these five stakeholders is essential to ensure that CBT initiatives are not only economically viable but also socially inclusive and environmentally sustainable (Roxo et al., 2025; Skočajić et al., 2024).

Nevertheless, tourism development in Muara Gembong remains limited and largely unstructured. While the area offers diverse natural and cultural attractions, tourism activities are not yet organized into coherent products that can be accessed easily by visitors. One notable gap is the absence of clearly defined tourism packages, which are widely recognized as an effective and relatively low-cost mechanism for stimulating tourism demand compared to large-scale infrastructure development (Čavlek, 2016; Ibagimov et al., 2025; Miralles et al., 2024). Addressing this gap, this study aims to design and propose community-based tourism packages for Muara Gembong with a focus on Pantai Bahagia as the primary case study using a qualitative approach grounded in the Community-Based Tourism (CBT) and Pentahelix frameworks that could potentially be scaled to the entire kecamatan. While Muara Gembong encompasses several coastal villages, this study focuses on Pantai Bahagia as a primary case. Pantai Bahagia was selected due to its active community organizations, ongoing conservation-tourism initiatives, and representation of the broader environmental and socio-economic challenges facing the sub-district. Examining Pantai Bahagia provides an in-depth, contextual understanding of CBT potential, while insights remain relevant to the wider Muara Gembong region.

RESEARCH METHOD

This study adopts a qualitative approach using a case study design to examine the development of community-based tourism in Muara Gembong, with Pantai Bahagia as the primary unit of analysis. The research focuses on exploring local tourism readiness, stakeholder collaboration, and the co-design of tourism packages as a strategy for initiating sustainable, community-led tourism in a coastal and environmentally sensitive context. Data were collected over a period of five days starting from June 27 2025 by visiting and staying directly in Pantai Bahagia. Data were collected through multiple qualitative methods to capture diverse perspectives and ensure data triangulation. Daily field observations were conducted to document physical accessibility, environmental conditions, existing infrastructure, and community activities related to tourism and conservation. Semi-structured interviews were conducted with an average duration: 45–60 minutes in Bahasa Indonesia, audio-recorded with consent, and later transcribed. Interview covered perceptions of tourism potential, environmental challenges, livelihood opportunities, and stakeholder roles. One focus group discussion (FGD) with community members (n=8 per FGD) were also done to identify shared aspirations, constraints, and ideas related to tourism development. Participatory co-design sessions involving researchers and community members in designing and simulating potential tourism package components, such as mangrove-based experiences, culinary activities, and cultural workshops. Lastly, document analysis of local visitor logs from 2023–2024 was also done to discern patterns based on numbers and types of visitors to design an optimal travel package.

A total of 12 informants were selected using purposive sampling techniques. Participants included local residents who are part of the KEBAYA community network (n=8), local entrepreneurs private-sector CSR representatives (n=2), and academic researchers (n=2). Selection criteria included direct involvement and presence at the time in tourism, conservation, or community development activities in Pantai Bahagia. Data Analysis: Thematic analysis was employed. Transcripts, observational notes, FGD outputs, and documents were coded inductively. Codes were grouped into recurring themes related to community capacity, environmental conditions, tourism readiness, and stakeholder roles within the Pentahelix framework.

RESULTS AND DISCUSSIONS

The following sections present findings structured around key themes, supported by direct evidence from interviews and observations.

Accessibility, Infrastructure, and Tourism Readiness

Field observations and stakeholder interviews consistently show that infrastructure emerged as the most immediate and frequently cited barrier to tourism. Poor road conditions, particularly muddy, unpaved access routes, were frequently cited by residents as discouraging potential visitors. Pak

Muhidin, a fisherman and part-time guide, articulated the core contradiction: the area has attractions, but access repels visitors. *“Dari segi atraksi seperti kuliner boga bahari, keberadaan hutan mangrove, aktivitas konservasi, dan juga hewan langka, sudah cukup untuk mendatangkan pengunjung secara reguler, tapi jalan mau masuk ke sini itu, susah.”*

Translation: "In terms of attractions like seafood cuisine, mangrove forests, conservation activities, and rare animals, it's enough to attract regular visitors, but the road to get in here is difficult." These concerns were corroborated by direct observations during fieldwork, including vehicles becoming immobilized on muddy roads. In contrast, private-sector stakeholders involved in conservation-oriented CSR initiatives perceived river-based access as relatively adequate and even potentially experiential for visitors. From this perspective, boat travel was viewed as part of the tourism appeal rather than a constraint. However, both community members and external stakeholders agreed that tourism in Muara Gembong remains minimal and unstructured. The majority of visitors consist of researchers, conservation groups, and CSR participants, with no formal entrance system, tourism management structure, or pricing mechanisms in place. The absence of essential tourism infrastructure such as homestays, eateries, guiding services, and structured tourism packages was repeatedly highlighted in interviews, encompassed by Pak Ardi. *“Di sini itu belum ada penginapan atau homestay, tempat makan yang jelas juga tidak ada. Jadi kalau semisal nya ada turis yang datang pun, mereka bingung mau tinggal dimana.”*

Translation: "Here, there are no guesthouses or homestays, no clear eating places either. So even if tourists come, they are confused about where to stay." While natural attractions such as mangrove forests and seafood-based culinary traditions exist, the lack of supporting amenities results in visitors feeling unsupported and limits the duration and economic impact of visits. Even existing facilities, such as the mangrove observation deck, were reported to generate limited economic benefits, as visitors tend to engage only briefly and rarely participate in paid activities.



Image 1. The street at Pantai Bahagia village

Environmental Conditions and Conservation Constraints

Environmental vulnerability emerged as a central theme across interviews. Residents described tidal flooding as increasingly frequent and unpredictable, with inundation now occurring monthly rather than annually. Long-term residents reported adapting through household-level measures such as elevating floors and preparing small boats for mobility. Ibu Mauyi, a long-term resident, described a normalization of this hazard. *“Ya, mengganggu, tapi ya sudah biasa,”* translation: “yes it is annoying, but it is normal” she stated, explaining that floods now occur monthly, not annually, with water levels reaching the calf. Households have adapted individually by raising floors and keeping boats ready, but no coordinated, village-level mitigation strategy exists beyond participation in mangrove planting programs. From a conservation perspective, interviews with researchers involved in ecological monitoring identified the presence of key endemic species, including the Javan langur, Bangau Bluwok, and long-tailed macaque. Researcher Pak Tulus, the lead researcher regarding the local wildlife, identified key endemic species as assets for ecotourism but emphasized their fragility. He stressed that populations, while stable, are not resilient enough for mass tourism. Crucially, he noted that wildlife is

highly timid: "Observation from under 50 meters often causes animals to become defensive or flee, you need at minimum 200-meter viewing distance to not disturb the animals". While current populations were described as relatively stable, informants emphasized that the area is not yet suitable for large-scale wildlife tourism due to habitat sensitivity and limited ecological resilience. Seasonal constraints further complicate conservation research and tourism planning, as physical accessibility and data reliability vary between dry and wet periods. Stakeholders stressed that responsible tourism development would require strict spatial zoning, hunting prohibitions, trained conservation guides, and investment in low-impact infrastructure such as walkways and observation platforms. Maintaining sufficient distance between visitors and wildlife was identified as critical to minimizing stress and habitat disruption. These findings reinforce the need for cautious, controlled, and conservation-led tourism models rather than mass tourism approaches.



Image 2. Picture of Long-Tailed Macaques in Their Natural Habitat

Community Capacity and Emerging Livelihood Diversification

Interview data revealed early-stage livelihood diversification linked to conservation and tourism-related activities. While fishing remains the dominant livelihood, several residents have begun supplementing their income through roles such as mangrove planting guides and facilitators for conservation visits. These opportunities, often initiated through collaboration with external actors, indicate the potential for tourism-related income generation, albeit on a limited scale. Women play a particularly significant role in these emerging economic activities. The most innovative development is the "batik mangrove" initiative. Ibu Sofiyan, a leader in this endeavor, explained how it transforms a natural resource, fallen mangrove fruit, into cultural and economic value. "*Bukan cuma tentang ekonomi, tapi juga jadi semacam identitas tersendiri desa ini*". Translation: "[It] has given residents not only an economic opportunity, but also a shared cultural identity tied to the village's environmental character." Batik mangrove, which uses natural dyes derived from mangrove materials, has gained formal intellectual property recognition and contributes both economic value and cultural identity to the community. Production processes involve intergenerational collaboration, with younger participants focusing on design and older women handling dyeing and sewing. Despite its promise, the batik initiative faces constraints related to marketing reach, production consistency, and infrastructure. Natural dye variability, limited product diversification, and the absence of a dedicated production space restrict both scalability and tourist engagement. Stakeholders noted that a dedicated workshop could serve dual purposes as a production facility and a visitor attraction, aligning economic development with experiential tourism.



Image 3. Local Batik Making Process

Stakeholder Collaboration and Pentahelix Dynamics

Interview findings further clarified the roles of key stakeholders within the emerging Pentahelix framework. Community organizations such as KEBAYA function as local coordinators and facilitators, while private-sector actors contribute primarily through CSR-driven conservation and capacity-building initiatives. Academic actors support research, mentoring, and co-design processes, whereas government involvement remains limited and largely consultative. While conservation efforts have successfully mobilized community participation, interviews suggest that tourism development has yet to achieve similar institutional coordination. The absence of structured tourism governance, limited hospitality capacity, and uneven tourism mindsets among residents continue to constrain progress. Nonetheless, many interviewees expressed optimism that conservation-based tourism could provide sustainable income if infrastructure, training, and market access are improved.



Image 4. Live Discussions Between Academics, Private CSR, and Local Community

Theoretical Discussion

The findings indicate that Pantai Bahagia village represents an early-stage Community-Based Tourism (CBT) context, where foundational social and environmental conditions exist, but institutional and infrastructural readiness remains limited. Strong community participation is evident through the activities of the KEBAYA network, women-led micro-enterprises, and resident involvement in

conservation programs. These elements align with core CBT principles emphasizing local ownership, participation, and benefit-sharing. However, CBT development in Muara Gembong is constrained by environmental vulnerability, limited tourism infrastructure, and uneven tourism awareness among residents. Rather than indicating failure, these constraints highlight the appropriateness of incremental, small-scale tourism development. The preference expressed by community members for controlled, conservation-oriented activities suggests that tourism packages focused on education, ecology, and culture represent a viable entry point for CBT without exposing the community to the risks associated with mass tourism.

From a Pentahelix lens, the findings reveal an emerging but imbalanced Pentahelix configuration. Community actors, particularly the KEBAYA group, play a central role in mobilizing participation and managing local initiatives. Academic actors contribute through facilitation, research, and co-design, supporting knowledge transfer and capacity building. Private-sector involvement, primarily through CSR initiatives, has been instrumental in initiating conservation programs and supporting innovation such as mangrove-based products. In contrast, government involvement remains limited, functioning mainly at a consultative or regulatory level rather than as an active implementer. The absence of sustained government leadership in tourism planning and infrastructure development creates dependency on external actors and constrains scalability. Media actors, while acknowledged as important within the Pentahelix framework, have not yet been systematically engaged, limiting destination visibility and branding potential. These dynamics reflect common challenges in Pentahelix-based development, where collaboration exists but power and responsibility are unevenly distributed.

The findings suggest that structured tourism packages offer a practical mechanism for operationalizing CBT within the existing Pentahelix context. Tourism packages require relatively low capital investment, can be managed at the community level, and allow for the integration of conservation, education, and livelihood activities. By formalizing existing practices such as mangrove walks, culinary demonstrations, batik workshops, and conservation participation packages can convert sporadic visits into coherent visitor experiences. Importantly, the design of tourism packages enables clearer role allocation among Pentahelix actors. Communities act as hosts and interpreters, academics support capacity building and monitoring, private actors contribute resources and innovation through CSR, and government agencies can focus on regulation and facilitation. In environmentally sensitive contexts such as Muara Gembong, tourism packages also provide a mechanism to control visitor numbers, regulate activities, and minimize ecological disturbance, thereby aligning economic development with conservation objectives.

Practical Contribution

As part of the researchers' effort to contribute to the development of Pantai Bahagia's tourism development, this research has proposed the following tourism package made in conjunction with the community of Pantai Bahagia:

Table 1. Proposed Travel Packages

Package	Activities	Location	Price
A: Akar Bahari	<ol style="list-style-type: none"> 1. Mangrove forest tour 2. Mangrove planting with local community 3. Conservation education 4. Mangrove leaf and fruit harvesting 5. Tour of the workshop that processes the mangrove into syrups and food 	Muara Gembong Mangrove Forest, Pantai Bahagia community center	Rp85,000/person (min. 10 people)
B: Ekspedisi	<ol style="list-style-type: none"> 1. Educational tour of the local river communities 	Pantai Bahagia, Muara Gembong, along the	Rp130,000/person

Bahagia	<ol style="list-style-type: none"> 2. River and estuary boat tour with guide narration 3. Coastal sunset viewing from boat 4. Chance to see rare species in habitats (e.g., Javan langur, milky stork, macaques) 5. Guided exploration of the local beach and estuarine ecosystem 	Citarum river	
C: Racikan laut	<ol style="list-style-type: none"> 1. Tour of the life and work of local fishermen 2. Chance to try mussels and crabs harvesting 3. Cooking class using mangrove and seafood ingredients 4. Traditional food-making workshop 5. Visit to local seafood MSMEs 	Pantai Bahagia Village	Rp120,000/person
D. Warna Dari Alam	<ol style="list-style-type: none"> 1. Tour of the batik and mangrove dye-making process 2. Batik-making demonstrations 3. Chance to try making batik 4. Education about the meaning and history behind the pattern 5. Storytelling about the local experiences and how they persevere in the face of hardship and tidal flooding 	Pantai Bahagia community centre	Rp110.000/person
E. Satu Hari, Satu Desa	<ol style="list-style-type: none"> 1. Mangrove planting and educational tour in the morning 2. Cooking and tasting session at noon 3. Boat wildlife tour + sunset at estuary 4. Batik display and souvenirs 	Muara Gembong	Rp180.000/person

The travel packages and pricing were developed based on several factors. An analysis of visitor data collected, combined with field observations and interviews, was the factor related to the design of the packages. There were several important points revealed by the visitor data gathered from the guest book. First, formal record keeping such as this was only started in 2023. Based on the data from 2023, 95 % of visitors to Muara Gembong came from the Jabodetabek area, with the further coming from Bandung. Secondly, the reason for the visit. The number one reason for visits are related to planting and monitoring of mangroves. The second reason is related to field surveys and research. The third is related to corporate social responsibility or university tri dharma activities. The fourth is related to video making and photography. The fifth reason is finally tourism, and the first explicit mention of tourism as a reason was on 8 June 2024. The biggest number of visitors in one group is 150 people, who came from a government institution for mangrove planting. For groups with recreational tourism as the reason for visiting, the biggest group is made up of 33 people. On average, the size of groups is around 14 to 15 people per group, though it needs to be noted that there is a big spread, which might skew the median.

The period with the most visitors was November and December, with visitor numbers increasing by at least 50% from the usual months, and the lowest was the period from January, February, and March.

Based on this information, the tourism packages and pricing were tailored to align with the needs and characteristics of the visitors, their preferences for tourism activities, consumption capacity, purchasing power, and activities in Muara Gembong Pantai Bahagia village. This approach ensures that the offered packages are not only engaging in content but also affordable and realistic for various segments of visitors. Prices were taken based on comparisons with other similar mangrove-centred tourism sites. The first package provides a cheaper mangrove-focused experience compared to PIK at Rp. 150,000 to compensate for amenities and access while offering unique activities compared to PIK's water sport focus. While perhaps not comparable to Bali's mangrove forest conservation area in terms of amenities and price at Rp. 10,000 entry fee per person, packages 2, 3, and 4 provide a comprehensive cultural experience on top of the mangrove theme, something that is not present in Bali. The same mindset is also applied against Tarumajaya, with a total of Rp. 35,000 entrance and transport fee. This is also while considering the spending power of the current visitor demographics, and the fact that Pantai Bahagia does not charge an entry fee currently.

CONCLUSION AND RECOMMENDATION

This study explored the potential for initiating community-based tourism (CBT) in Muara Gembong, West Java, through the development of tourism packages using a qualitative case study approach and the Pentahelix framework. The findings reveal that although Muara Gembong faces substantial challenges related to environmental vulnerability, limited infrastructure, and underdeveloped tourism services, it possesses strong foundational conditions for CBT. These include active community organizations, conservation-oriented initiatives, women-led micro-enterprises, and emerging local products rooted in mangrove ecosystems and coastal culture. The results show that tourism activities in Muara Gembong are currently dominated by research and corporate social responsibility visits rather than structured recreational tourism. In this context, tourism packages emerge as a feasible and low-risk entry point for CBT implementation, enabling the community to formalize existing conservation, culinary, and cultural activities into coherent visitor experiences without relying on large-scale infrastructure development. The participatory co-design process further demonstrates that community members are more receptive to tourism development when it is small-scale, environmentally sensitive, and aligned with local capacities and values. From a Pentahelix perspective, the study highlights the importance of multi-stakeholder collaboration in early-stage tourism development. Community actors play a central role in implementation, supported by academic facilitation and private-sector engagement through CSR initiatives. However, limited government involvement in operational tourism planning and the absence of systematic media engagement constrain destination visibility and long-term sustainability. Strengthening coordination among Pentahelix actors, clarifying roles, and ensuring sustained institutional support are therefore critical to advancing CBT in Muara Gembong.

The findings offer several policy-relevant insights. First, local and regional governments should prioritize enabling policies that support small-scale, community-led tourism initiatives rather than focusing solely on infrastructure-heavy development. This includes facilitating village-level regulations for conservation zoning, supporting community training in tourism and hospitality, and providing modest funding for low-impact infrastructure such as walkways, signage, and observation platforms. Second, policies that integrate CSR programs with local tourism planning can enhance synergy between private-sector initiatives and community development goals. Finally, government agencies can play a strategic role in activating the media sector to support destination branding and digital promotion, particularly for emerging CBT destinations.

This study is subject to several limitations. As a qualitative case study focused on a single coastal community, the findings are context-specific and may not be directly generalizable to other settings. Data collection was conducted over a limited period, which may not fully capture seasonal variations in environmental conditions, tourism activities, or community dynamics. Additionally, the study did not include systematic data on tourist satisfaction or demand, as tourism in the area remains at an early stage of development. Future research could address these limitations by conducting comparative studies across multiple coastal communities to examine different trajectories of CBT

implementation. Longitudinal research would be valuable in assessing how tourism packages evolve over time and whether they generate sustained economic and conservation outcomes. Further studies could also incorporate visitor-based research to evaluate tourist experiences, willingness to pay, and perceptions of conservation-oriented tourism, thereby informing more targeted product development and policy interventions.

REFERENCE

- Antara. (2020, July 10). *Pantai Muara Gembong Berpotensi Jadi Dewi Bahari Bekasi*. Tempo. <https://www.tempo.co/penulis/antara-105>
- Caraka, R. E., Noh, M., Chen, R.-C., Lee, Y., Gio, P. U., & Pardamean, B. (2021). Connecting Climate and Communicable Disease to Penta Helix Using Hierarchical Likelihood Structural Equation Modelling. *Symmetry*, *13*(4), 657. <https://doi.org/10.3390/sym13040657>
- Čavlek, N. (2016). Package tourism. In J. Jafari & H. Xiao (Eds.), *Encyclopedia of Tourism* (pp. 691–693). Springer International Publishing. https://doi.org/10.1007/978-3-319-01384-8_423
- Dłużewska, A., & Giampiccoli, A. (2021). Enhancing island tourism's local benefits: A proposed community-based tourism-oriented general model. *Sustainable Development*, *29*(1), 272–283. <https://doi.org/10.1002/sd.2141>
- Dolezal, C., & Novelli, M. (2022). Power in community-based tourism: Empowerment and partnership in Bali. *Journal of Sustainable Tourism*, *30*(10), 2352–2370. <https://doi.org/10.1080/09669582.2020.1838527>
- Fernández-Villarán, A., Guereño-Omil, B., & Ageitos, N. (2024). Embedding Sustainability in Tourism Education: Bridging Curriculum Gaps for a Sustainable Future. *Sustainability*, *16*(21), 9286. <https://doi.org/10.3390/su16219286>
- Fors, K. S., Kottorp, A., & Rämgård, M. (2021). Collaborating in a penta-helix structure within a community based participatory research programme: 'Wrestling with hierarchies and getting caught in isolated downpipes.' *Archives of Public Health*, *79*(1), 27. <https://doi.org/10.1186/s13690-021-00544-0>
- Gannon, M., Rasoolimanesh, S. M., & Taheri, B. (2021). Assessing the Mediating Role of Residents' Perceptions toward Tourism Development. *Journal of Travel Research*, *60*(1), 149–171. <https://doi.org/10.1177/0047287519890926>
- Hanan, A. F., Pratikto, I., & Soenardjo, N. (2020). Analisa Distribusi Spasial Vegetasi Mangrove di Desa Pantai Mekar Kecamatan Muara Gembong. *Journal of Marine Research*, *9*(3), 271–280. <https://doi.org/10.14710/jmr.v9i3.27573>
- Hapzi, H., Untari, D. T., & Khasanah, F. N. (2024). Implementasi Konsep Wisata Berbasis Masyarakat sebagai Usaha Pemberdayaan Masyarakat Muara Gembong. *Jurnal Pengabdian Kepada Masyarakat UBJ*, *7*(2), 185–190. <https://doi.org/10.31599/3rvfbb48>
- Herawati, A. R., Setianingsih, E. L., & Hariani, D. (2022). Penta Helix Model Tourism Development In The City of Palembang. *Devotion : Journal of Research and Community Service*, *3*(12), 2062–2067. <https://doi.org/10.36418/dev.v3i12.253>
- Ibargimov, K., Feruza, S., Aziza, S., & Sabina, N. (2025). Low Cost Travel Packages Drive Domestic Tourism Growth in Uzbekistan. *Academia Open*, *10*(2). <https://doi.org/10.21070/acopen.10.2025.11048>
- Jayawiguna, M. H. (2024). Analisis Penyebab Banjir Rob di Muara Gembong Teluk Jakarta dan Estimasi Dampak Kerugian Ekonominya Bagi Masyarakat Sekitar: Sebuah Bahan Masukan Kebijakan. *Jurnal Kelautan Nasional*, *19*(2), 159. <https://doi.org/10.15578/jkn.v19i2.14720>
- Lukman, K. M., Quevedo, J. M. D., Rifai, H., Alifatri, L. O., Ulumuddin, Y. I., Sofue, Y., Uchiyama, Y., & Kohsaka, R. (2025). Mangrove forest food products as alternative livelihood measures: Mangrove conservation by community in Muara Gembong, Bekasi Regency, Indonesia. *Discover Sustainability*, *6*(1), 237. <https://doi.org/10.1007/s43621-025-01049-4>
- Miralles, C. C., Roura, M. B., Salas, S. P., Argelaguet, L. L., & Jordà, J. C. (2024). Assessing the socio-economic impacts of tourism packages: A methodological proposition. *The International Journal of Life Cycle Assessment*, *29*(6), 1096–1115. <https://doi.org/10.1007/s11367-024-02284-z>
- Nagy, K. X. H., & Segui, A. E. (2020). Experiences of community-based tourism in Romania: Chances

- and challenges. *Journal of Tourism Analysis: Revista de Análisis Turístico*, 27(2), 143–163. <https://doi.org/10.1108/JTA-08-2019-0033>
- Novianti, K. R. (2020). The Penta-helix: A sustainable tourism strategy of Bali's villages. *Jurnal Inovasi Ekonomi*, 5(03), 125. <https://doi.org/10.22219/jiko.v5i03.10921>
- Nugraha, R. B. A., Syaharani, L., Iska, R., Mulyana, D., Wahyudin, Y., Purbani, D., Jayawiguna, H., Triyono, Setiawan, A., & Fajar, P. (2019). The impact of land used changes on mangrove forest and shoreline dynamic in Muara Gembong, Bekasi, West Java. *IOP Conference Series: Earth and Environmental Science*, 241, 012018. <https://doi.org/10.1088/1755-1315/241/1/012018>
- Pham Hong, L., Ngo, H. T., & Pham, L. T. (2021). Community-based tourism: Opportunities and challenges a case study in Thanh Ha pottery village, Hoi An city, Vietnam. *Cogent Social Sciences*, 7(1), 1926100. <https://doi.org/10.1080/23311886.2021.1926100>
- Prabawa, F. Y., Purbani, D., Sukoraharjo, S. S., Jayawiguna, M. H., & Triwibowo, H. (2021). Mapping the abrasion on Sederhana Beach, Muara Gembong, Bekasi, West Java province for the coastal mitigation purpose. *IOP Conference Series: Earth and Environmental Science*, 925(1), 012042. <https://doi.org/10.1088/1755-1315/925/1/012042>
- Prayitno, G., Auliah, A., Ari, I. R. D., Effendi, A., Hayat, A., Delisa, A., Siankwilimba, E., & Hiddlestone-Mumford, J. (2024). Social capital for sustainable tourism development in Indonesia. *Cogent Social Sciences*, 10(1), 2293310. <https://doi.org/10.1080/23311886.2023.2293310>
- Priatmoko, S., Kabil, M., Purwoko, Y., & Dávid, L. D. (2021). Rethinking Sustainable Community-Based Tourism: A Villager's Point of View and Case Study in Pampang Village, Indonesia. *Sustainability*, 13(6), 3245. <https://doi.org/10.3390/su13063245>
- Purnomo, E. P., Fathani, A. T., Setiawan, D., Fadhlurrohman, M. I., & Nugroho, D. H. (2021). Penta-Helix Model in Sustaining Indonesia's Tourism Industry. In T. Antipova (Ed.), *Advances in Digital Science* (Vol. 1352, pp. 477–486). Springer International Publishing. https://doi.org/10.1007/978-3-030-71782-7_42
- Rahman, A. F., & Wardana, A. A. (2025). Successful Model of Implementation of the Pentahelix Concept in Developing Cultural-Based Tourism Destinations in Aeng Tong – Tong Village. *Jurnal Abdimas Pariwisata*, 6(1), 99–107. <https://doi.org/10.36276/jap.v6i1.712>
- Roxo, L., Santos, A., Girvalaki, C., Geantă, M., 4P-CAN WP2 study team, & Sousa-Uva, M. (2025). Characterizing stakeholders in cancer primary prevention in European countries: An exploration of challenges and opportunities using a penta-helix framework. *Frontiers in Public Health*, 13, 1550712. <https://doi.org/10.3389/fpubh.2025.1550712>
- Saepudin, E. (2022). Pemberdayaan Masyarakat Melalui Pengembangan Desa Wisata. *Dharmakarya*, 11(3), 227. <https://doi.org/10.24198/dharmakarya.v11i3.27569>
- Salampeppy, M. L., Febryano, I. G., & Ichsan, A. C. (2021). Community knowledge and involvement in mangrove ecosystem management in the coastal of Muara Gembong Bekasi. *IOP Conference Series: Earth and Environmental Science*, 891(1), 012024. <https://doi.org/10.1088/1755-1315/891/1/012024>
- Shkarupeta, E., & Babkin, A. (2024). Eco-innovative development of industrial ecosystems based on the quintuple helix. *International Journal of Innovation Studies*, 8(3), 273–286. <https://doi.org/10.1016/j.ijis.2024.04.002>
- Skočajić, I., Pavković, V., Krstić, J., Kostić-Stanković, M., Vlastelica, T., & Rajić, T. (2024). Urban Tourism Appeal: The Effectiveness of Communication Channels and Multimedia Formats in Creating Tourists' Expectations. *Sustainability*, 16(11), 4552. <https://doi.org/10.3390/su16114552>
- Supermana, R. (2024, December 15). *Empat Desa di Muara Gembong Terdampak Banjir Rob*. Radio Republik Indonesia. <https://tri.co.id/daerah/1192567/empat-desa-di-muara-gembong-terdampak-banjir-rob>
- Suwito, R., & Yusuf, A. (2020). Pemberdayaan Ekonomi Masyarakat Melalui Badan Usaha Milik Desa di Desa Wisata Lerep. *Journal of Nonformal Education and Community Empowerment*, 4(1), 88–101.
- Witchayakawin, P., Abdul Aziz, Y., Mahomed, A. S. B. B., & Abdullah, N. H. B. (2024). Mediating role of community participation and benefit on factors influencing community-based tourism

- (CBT) development. *Asia Pacific Journal of Tourism Research*, 29(2), 161–176. <https://doi.org/10.1080/10941665.2024.2316595>
- Yahya, A. N., & Carina, J. (2024, December 17). 4.184 KK Terdampak Banjir Rob di Pesisir Bekasi, Paling Banyak di Muara Gembong. Kompas. <https://megapolitan.kompas.com/read/2024/12/17/12502601/4184-kk-terdampak-banjir-rob-di-pesisir-bekasi-paling-banyak-di-muara>
- Yanes, A., Zielinski, S., Diaz Cano, M., & Kim, S. (2019). Community-Based Tourism in Developing Countries: A Framework for Policy Evaluation. *Sustainability*, 11(9), 2506. <https://doi.org/10.3390/su11092506>
- Yunas, N. S., Susanti, A., Nadya Izana, N., & Widyawati, W. (2023). The Pentahelix Model in the Development of Agro-Culture-Based Edutourism in the Taman Nasional Bromo Tengger Semeru Buffer Village Area (A Study in Tosari Village, Pasuruan Regency and Sapikerep Village, Probolinggo Regency). *Sodality: Jurnal Sosiologi Pedesaan*, 11(1), 76–85. <https://doi.org/10.22500/11202344218>
- Zielinski, S., Jeong, Y., Kim, S., & B. Milanés, C. (2020). Why Community-Based Tourism and Rural Tourism in Developing and Developed Nations are Treated Differently? A Review. *Sustainability*, 12(15), 5938. <https://doi.org/10.3390/su12155938>
- Zielinski, S., Jeong, Y., & Milanés, C. B. (2021). Factors that influence community-based tourism (CBT) in developing and developed countries. *Tourism Geographies*, 23(5–6), 1040–1072. <https://doi.org/10.1080/14616688.2020.1786156>
- Zielinski, S., Kim, S., Botero, C., & Yanes, A. (2020). Factors that facilitate and inhibit community-based tourism initiatives in developing countries. *Current Issues in Tourism*, 23(6), 723–739. <https://doi.org/10.1080/13683500.2018.1543254>