Indonesian Journal of Chemistry and Environment
Vol. 8, No. 2, December 2025, pp. 78~88
e-ISSN: 2599-3186

The Potential of Riparian Ecosystems for Ecotourism Development in The Ilomata Village Forest Area, Bone Bolango Regency, Gorontalo, Indonesia

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Article Info

Article history:

Received Nov 6th, 2025
Revised Dec 6th, 2025
Accepted Dec 31st, 2025

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ABSTRACT

This study aimed to analyze the potential and feasibility of ecotourism development within the riparian ecosystem of the Ilomata Village Forest Area, Bone Bolango Regency. A quantitative descriptive method was applied. Data on vegetation and fauna were collected through an exploratory survey conducted along the riparian zone of the Ilomata tourism site. Ecotourism feasibility was assessed using the Evaluation Instrument for Natural Tourism Objects and Attractions (ODO-ODTWA). The results showed that the riparian area hosts 13 plant species, dominated by *Piper aduncum*, *Arenga pinnata* Merr., and *Ficus septica* among the higher plant category, while the lower vegetation layer was dominated by ferns such as *Phymatosorus scolopendria*, *Chromolaena odorata*, and *Dryopteris filix-mas* (L.) Schoot. The fauna identified was predominantly from the Class Insecta, including the butterfly *Vindula dejone* as the most frequently observed species. The ecotourism feasibility index for the Ilomata riparian ecosystem was recorded at **59.3%**, indicating a moderately feasible category. The attraction, environment and community, and management and services components received relatively high scores, whereas accessibility and tourism facilities were rated low. Therefore, improving accessibility and tourism infrastructure is necessary to support the development of sustainable ecotourism in the area.

Keyword: Ecotourism, Gorontalo, Ilomata Village, Riparian ecosystem,

1. INTRODUCTION

Riparian ecosystems—those linear habitats along riverbanks and floodplains—function as indispensable ecological buffers that mediate exchanges between terrestrial and aquatic systems. They perform critical services including sediment filtration, nutrient retention, bank stabilization and provision of habitat for diverse flora and fauna, thereby contributing to biodiversity conservation and watershed health (Napoletano et al., 2025). In tropical forest regions, riparian zones additionally moderate microclimate, support hydrological resilience (e.g., groundwater recharge and dry-season base flows), and serve as carbon sinks, aligning them with contemporary nature-based solutions for climate adaptation and mitigation (Balke et al., 2021; Burandt et al., 2023). Beyond

these ecological functions, riparian landscapes often possess high aesthetic and recreational value—scenic river corridors, structurally complex vegetation, and accessible water features—that make them natural candidates for nature-based tourism and environmental education (Sari & Utami, 2025).

Concurrently, ecotourism has emerged globally as a rapidly expanding segment of sustainable tourism, driven by rising public interest in biodiversity, experiential travel, and low-impact recreation. Over the last two decades the sector has demonstrated strong growth (estimated at 10–15% per annum) and an increasing policy profile in many countries, including Indonesia, where national frameworks now explicitly position ecotourism within green economic and rural development strategies (Surya, 2024). Empirical studies document that well-designed ecotourism can generate livelihood benefits for rural households, foster environmental stewardship among residents and visitors, and finance local conservation actions when coupled with participatory governance and benefit-sharing mechanisms (Suresh et al., 2025). These dual ecological and socio-economic attributes suggest that riparian zones—if managed appropriately—could deliver synergistic outcomes: conservation of fluvial ecosystems alongside sustainable community development via ecotourism.

Despite this potential, realizing riparian ecotourism in practice faces persistent obstacles. In Indonesia and comparable tropical contexts, infrastructural constraints (limited access roads, poor visitor amenities), fragmented governance arrangements, unclear tenure and land-use rights, and insufficient community involvement commonly impede the conversion of ecological assets into lasting tourism benefits (Djuwendah et al., 2023; Kia, 2021). Moreover, many riparian areas remain scientifically under-documented as tourism resources; most academic attention has been concentrated on protected forests, coastal mangroves and national parks, leaving a knowledge gap on riparian-centered tourism typologies such as river-side camping, river trekking and interpretive river trails (Tiegs et al., 2019). This combination of practical and informational deficits hampers evidence-based planning and makes it difficult to predict whether tourism development will enhance local welfare without degrading ecosystem integrity.

General solutions proposed in the literature advocate integrated approaches that couple rigorous ecological assessment with participatory planning and appropriate infrastructure design. Multi-criteria feasibility assessments (for example, the ADO–ODTWA framework and Analytic Hierarchy Process variants) have been used to synthesize environmental, social and infrastructural dimensions of potential tourism sites, producing actionable indices and prioritization outputs for management. Complementary governance solutions emphasize community-based ecotourism (CBE) models, in which local institutions, customary norms and profit-sharing arrangements are central to legitimacy and long-term stewardship (Astara, 2025).

More specifically, applied studies demonstrate several successful design and management elements relevant to riparian ecotourism. First, ecological restoration and buffer zone enforcement (using native species) reliably improve water quality and habitat complexity, thereby enhancing both conservation and visitor interpretive value (Osure et al., 2023). Second, capacity building for local guides, community enterprises (homestays, handicrafts) and interpretive programming increases local capture of tourism revenue while strengthening environmental education outcomes (Tadesse, 2024). Third, adaptive watershed-scale management—integrating riparian monitoring, stakeholder feedback loops and phased infrastructure investments—has been shown to reconcile upstream land use pressures with downstream tourism objectives (Noviana et al., 2025). Case studies from Indonesian riverine landscapes indicate that coupling grassroots governance with targeted public funding and NGO technical support produces positive conservation and socio-economic results (Sari & Utami, 2025).

A focused review of closely related literature therefore highlights two interlinked gaps motivating the present study. First, while multi-criteria tools and community-based approaches have been validated in various contexts (mangrove, coastal, protected forest systems), their empirical

application to riparian zones in tropical community-managed forests—especially using an integrated ADO–ODTWA plus ecological survey protocol—remains limited (Halim & Setiawan, 2023). Second, there is scarce localized evidence from the Gorontalo region that documents species composition, water quality, community readiness, and infrastructure deficits together in a single feasibility assessment, thereby constraining place-based planning for riparian ecotourism (Gray et al., 2014). Addressing these gaps is crucial to ensure that riparian tourism development is grounded in robust ecological data and socially legitimate governance arrangements.

Accordingly, this study investigates the ecological and socio-infrastructural feasibility of developing riparian ecotourism in the Ilomata Village Forest (Bone Bolango Regency, Gorontalo Province). Using field-based bio-physical surveys, water quality measurements, and the ADO–ODTWA assessment framework integrated with participatory stakeholder consultations, the research aims to (1) characterize the riparian bio-physical conditions and biodiversity values of the Ilomata corridor and (2) evaluate the site's overall feasibility for community-based ecotourism development. The novelty of the work lies in applying a combined ecological-ADO–ODTWA methodology within a riparian, community-managed tropical forest context—thereby providing empirical evidence and practical recommendations for local planners, conservation practitioners and policymakers seeking to balance conservation and sustainable rural tourism in similar landscapes.

2. RESEARCH METHOD

This research was conducted from June to September 2024. The study site is located in the Ilomata Village Forest Area, situated in Bulango Ulu Subdistrict, Bone Bolango Regency. The method used in this study was a quantitative descriptive research approach, which aims to describe facts and findings related to various field conditions and parameter variables. The research design employed a survey/exploratory approach to identify and assess the biophysical potential of the riparian ecosystem within the Ilomata Village Forest. The population of this study is the entire Ilomata Village Forest Area, while the sample consists of several observation and data collection sites selected using the purposive sampling method. The selection of locations was based on specific criteria for ecotourism destinations, namely: 1) possessing natural tourist attractions; 2) having existing tourism facilities; 3) having a management system in place; and 4) being visited by tourists.

Data Collection Techniques. First, Observation – this method involved the direct observation of phenomena and conditions within the study area. Observations included systematic recording to obtain a comprehensive overview of both physical and non-physical aspects of the Riparian Ecosystem in the Ilomata Village Forest. Second, Interviews – data collection through direct verbal interaction was conducted with respondents and relevant parties, including stakeholders, local community leaders, and managers of the Ilomata Village Forest riparian area. The interviews aimed to gather information aligned with the objectives of the research.

Flora and fauna data collection was conducted at the Ilomata Village River ecotourism site by exploring along the river, covering a distance of 50 meters from the riverbank on both sides. Identification was carried out by observing the morphological characteristics and growth forms of the species, followed by species identification with reference to *Flora of Sulawesi* (Steenis, 2008). Data collection on the potential and attractiveness of tourism objects referred to the *Guidelines for the Assessment of Tourism Object and Attraction Development*, which include the following criteria: attraction; accessibility; tourism facilities; environment and community; and management and services. Environmental factor data collection included measurements of temperature, river pH, dissolved oxygen (DO), water clarity, and current velocity.

The data analysis methods used in this study were as follows: 1) descriptive Analysis - This analysis was employed to examine and explain the condition of the research object based on specific criteria in order to provide an accurate and comprehensive depiction of reality. It was used to describe the existing conditions of the research site, land cover, environmental factors, and the potential for ecotourism development. 2) Ecotourism Development Feasibility Analysis -

This analysis aimed to evaluate the feasibility of an area or location for development as a tourism destination. The assessment utilized the *Tourism Attraction Assessment Guidelines* issued by the Directorate General of Tourism Destination Development, Ministry of Culture and Tourism. Each criterion in the assessment was assigned a specific weight, which was multiplied by the value obtained for each element. The total score for a particular criterion of tourism attraction assessment was calculated using the following formula:

$$S = N \times B$$

Where:
S = Score or value for a specific criterion
N = Total value of the elements within the criterion
B = Weight value assigned to the criterion

The obtained scores were then compared to the total possible maximum score for each criterion. After comparison, the feasibility index (in percentage) could be determined. The feasibility level of an ecotourism area was categorized as follows:

- Feasibility level > 66.6%: Suitable for development
- Feasibility level 33.3% – 66.6%: Moderately suitable / Not yet feasible for development
- Feasibility level < 33.3%: Not suitable for development

3. RESULTS AND ANALYSIS

3.1. Biophysical Conditions of the Riparian Ecosystem

The plant species found in the riparian area of Ilomata Village Forest are presented in Table 4.1. For the higher plant category, the vegetation is dominated by *Piper aduncum*, *Arenga pinnata Merr.*, *Ficus septica*, *Pometia pinnata*, *Nephelium lappaceum L.*, and *Chromolaena odorata*. Meanwhile, the lower plant category is dominated by various fern species, namely *Phymatosorus scolopendria*, *Nephrolepis biserrata*, *Balanticum antarcticum*, and *Dryopteris filix-mas (L.) Schoot*. The fauna species identified in the riparian area were predominantly from the Class *Insecta* (Table 2). The dominant species recorded included the butterfly *Vindula dejone*, the cicada *Cryptotympana facialis*, *Chorthippus biguttulus*, and *Eutropis* sp. The results of the physicochemical water parameter measurements in the riparian area of Ilomata Village are presented in Table 3.

Table 1. Riparian Plant Species in the Ilomata Village Forest

No.	Species	Family	Number of individuals
1.	*Piper aduncum*	Piperaceae	56
2.	*Arenga piñata* Merr	Arecaceae	46
3.	*Ficus septic*	Moraceae	45
4.	*Pometia pinnata*	Sapindaceae	36
5.	*Nephelium lappaceum* L.	Sapindaceae	35
6.	*Chromolaena odorata*	Asteraceae	33
7.	*Rhapidophora crassicaulis*	Araceae	17
8.	*Garuga floribunda*	Burseraceae	8
9.	*Gliricidia sepium*	Fabaceae	6
10.	*Lansium domesticum*	Meliaceae	4
11.	*Musa paradisiacal* L.	Musaceae	4
12	*Phymatosorus scolopendria*	Polypodiaceae	56
13	*Nephrolepis biserrata*	Dryopteridaceae	43
14	*Balanticum antarcticum*	Dicksoniaceae	32
15	*Dryopteris filix-mas* (L) Schoot	Dryopteridaceae	29
16	*Angiopteris evecta*	Angiopteris	14
17	*Thelypteris unita*	Thelypteridaceae	9
18	*Lygodium circinnatum*	Lygodiaceae	2
19	*Diplazium esculentum*	Athyriaceae	1

Table 2. Riparian Fauna Species in the Ilomata Village Forest

No.	Species	Family	Number of individuals
1.	*Vindula dejone*	Nymphalidae	24
2.	*Cryptotympana facials*	Cicadidae	18
3.	*Chorthippus biguttulus*	Acrididae	17
4.	*Eutropis* sp	Scincidae	14
5.	*Tabanus lineola*	Tabanidae	11
6.	*Ptilocerus spangenbergi*	Reduviidae	8
7.	*Bracon zeuzerae*	Braconidae	7
8.	*Aulachopora foveicollis*	Chrysomelidae	6
9.	*Rhyzobius litura*	Coccineliidae	4
10.	*Statilia maculate*	Mantidae	3
11.	*Pyrgotella chagnoni*	Pyrgotidae	3
12.	*Repipta taurus*	Reduviidae	2
13.	*Arigomphus* sp	Gomphidae	1

Table 3. Physical and Chemical Water Parameters of the Ilomata Riparian Area

Parameter	Score	Quality Standard*	Description
temperature	26^0C	25-30^0C	Normal
pH	8,29	6,5-8,5	Netral
Humidity	82%	55-90%	Normal
DO (Dissolved Oxygen)	0,5		
Water tranparency	45 cm	-	Cerah
Current velocity	1,29 m/detik	0,5-1,5 m/detik	Normal

*Quality Standard: PP N0.82/2001

The findings of this study demonstrate that the Ilomata Village Forest riparian ecosystem possesses high ecological diversity and substantial potential for sustainable ecotourism development. The diversity of vegetation observed in the area, represented by both upper and lower plant strata, reveals the ecological complexity that underpins the stability of riparian environments. The dominance of *Piper aduncum*, *Arenga pinnata Merr.*, *Ficus septica*, and *Pometia pinnata* indicates a composition typical of tropical forest vegetation with strong ecological functions such as water filtration, erosion control, and microclimate regulation. Similar findings have been reported in other tropical riparian zones, where heterogeneous plant communities maintain sediment balance and nutrient cycling (Gray et al., 2014). The presence of lower vegetation such as *Phymatosorus scolopendria* and *Nephrolepis biserrata* reflects the moist, shaded microhabitats characteristic of healthy riparian ecosystems. These conditions enhance habitat complexity and resilience, which are essential for sustaining biodiversity and ecological integrity (Napoletano et al., 2025).

The ecological composition of the Ilomata riparian vegetation also provides an important foundation for educational and conservation-based ecotourism. Diverse riparian vegetation not only supports hydrological stability but also creates opportunities for environmental education, interpretation, and recreation. The aesthetic value of species such as *Nephelium lappaceum* L. and *Lansium domesticum* enhances visual appeal, aligning with the criteria for tourism attractiveness, who emphasized that natural landscape uniqueness and ecological integrity are crucial determinants of tourist destination potential (Zong et al., 2017). The visual appeal of diverse and vibrant vegetation contributes to visitors' sense of immersion in nature, increasing satisfaction and promoting awareness of conservation issues (Graziano et al., 2022).

The diversity of fauna in the Ilomata riparian area, dominated by insect species such as *Vindula dejone*, *Cryptotympana facialis*, and *Chorthippus biguttulus*, underscores the ecological health of the ecosystem. Insects serve as critical bioindicators of environmental quality due to their sensitivity to microclimatic fluctuations and habitat disturbances. The microclimate, influenced by factors such as vegetation cover and topography, significantly affects insect distribution and behavior (Pincebourde et al., 2007). A high diversity of insect species often correlates with good water quality, vegetation diversity, and balanced nutrient cycling. Research indicates that riparian zones with

complex vegetation structures support greater insect diversity, which plays a significant role in nutrient cycling and maintaining ecosystem health (Musisi et al., 2025). Additionally, the discovery of small vertebrates such as *Eutropis sp.* confirms that the riparian forest provides refuge and foraging habitats essential to maintaining ecological function. These faunal components support wildlife-based tourism activities, such as bird watching, macro photography, and biodiversity education, which align with global ecotourism trends emphasizing interpretive and participatory visitor experiences (Gültekin, 2022).

The physicochemical parameters of the Ilomata River reinforce its suitability for ecotourism and conservation. The temperature (26°C) and pH (8.29) fall within the acceptable ranges for aquatic ecosystem stability, indicating low levels of anthropogenic pollution, although comprehensive pollution assessments are required to confirm this claim. However, the reported dissolved oxygen (DO) concentration of 0.5 mg/L is critically low for aquatic life, necessitating immediate monitoring and intervention measures (Hénault-Éthier et al., 2019). The overall hydrological conditions—particularly the reported flow velocity of 1.29 m/s—are generally supportive of aquatic life and could facilitate recreational activities such as river trekking and eco-camping. The physical stability of the Ilomata riparian system suggests that water-based recreation can coexist with biodiversity conservation when managed according to eco-hydrological principles, thereby promoting the sustainable use of natural resources while maintaining ecological integrity (Žák et al., 2019). This synergy facilitates a dual benefit of supporting both recreational opportunities and healthy ecosystems within the region.

3.2. Results of Ecotourism Feasibility Assessment

The feasibility assessment was conducted based on five main criteria: attraction, accessibility, facilities, environment and community, and management and services. Table 4 presents the results of the ecotourism feasibility index for the Ilomata Village Forest riparian area, which was recorded at 59.3%, placing the area in the category of "not yet feasible for development." Furthermore, as shown in Figure 4.1, the highest-scoring component was environment and community (77.36%), followed by attraction (69.04%) and management and services (62.16%), while the lowest-scoring components were tourism facilities (36.1%) and accessibility (51.85%).

Table 4. Ecotourism Feasibility Index of the Ilomata Village Forest Area

Assessment Criteria	Total Score (S)	Maximum Score	Feasibility Index (%)
Attraction	870	1250	69,04
Accessibility	700	1350	51,85
Tourism facilities	325	950	36,1
Environment and community	735	950	77,36
Management and services	456	555	62.16
Total	3100	5065	**59,3**

The results of the ADO–ODTWA feasibility assessment indicate an overall index of 61.55%, classifying the site as moderately feasible for ecotourism development. The highest-scoring component was the environmental and community aspect (77.36%), followed by attraction (69.04%), while facilities scored the lowest (36.1%). These findings reveal that the Ilomata riparian ecosystem possesses a strong ecological foundation and community readiness but requires significant improvement in infrastructure and service provision. The moderate score for attractiveness underscores the inherent potential of Ilomata's natural landscape, echoing previous studies that link scenic diversity and biological richness with higher tourist appeal (Graziano et al., 2022). The riparian forest's visual and ecological integrity can be further leveraged through the development of interpretive trails, observation decks, and guided tours focusing on flora and fauna conservation.

Accessibility remains a critical limiting factor for the Ilomata site, with a score of 51.85%, reflecting the inadequacy of road networks and public transportation. Similar issues have been reported in other rural ecotourism destinations, where poor infrastructure hinders tourist mobility, reduces visit frequency, and limits local economic benefits (Repi et al., 2023). Enhancing accessibility, therefore, requires a balanced approach that prioritizes eco-friendly transportation systems, such as electric shuttles or bicycle routes, to minimize environmental impact while increasing visitor flow (Behrendt et al., 2021). Such improvements would align with sustainable tourism principles that advocate for infrastructure development compatible with ecosystem conservation (Das, 2021).

The lowest component score, facilities (36.1%), highlights the lack of essential tourism amenities such as accommodations, sanitation facilities, and food services. Inadequate facilities can negatively affect visitor satisfaction and limit the potential for extended stays, thereby reducing economic returns for local communities (Bristow & Jenkins, 2018). However, opportunities exist to develop small-scale, community-operated facilities such as eco-lodges and riverfront camping areas that adhere to green building principles. Investment in environmentally friendly infrastructure—including energy-efficient lodges, composting toilets, and waste management systems—not only improves visitor comfort but also reinforces ecological sustainability (Soliku et al., 2021). Investing in such facilities could transform Ilomata into a model of low-impact, community-centered ecotourism.

Community and environmental aspects scored the highest in the feasibility assessment, emphasizing the crucial role of social capital in supporting conservation-oriented tourism. The strong local support for conservation and the alignment of livelihoods with sustainable agriculture mirror the key characteristics of successful community-based ecotourism (Pratiwi et al., 2024). The community's willingness to engage in eco-friendly economic activities enhances the feasibility of collaborative management models, which integrate local knowledge into decision-making and strengthen environmental stewardship (Kurniawati et al., 2022). The Ilomata community's readiness provides a foundation for implementing participatory governance frameworks involving local institutions such as LPHD (Lembaga Pengelola Hutan Desa – Community Forest Management Council) and Pokdarwis (Kelompok Sadar Wisata – Tourism Awareness Group), both of which can serve as key actors in coordinating tourism activities and ensuring equitable benefit-sharing (Widowati et al., 2025).

The management and service component achieved a score of 62.16%, suggesting a need to strengthen institutional and financial mechanisms for effective ecotourism governance. The involvement of multi-stakeholder partnerships, including local government, NGOs, and the private sector, could help address resource limitations and enhance capacity-building efforts (Angessa et al., 2022). Public-private partnerships (PPPs) have proven successful in other ecotourism contexts by combining conservation expertise with financial resources to develop sustainable tourism infrastructure (Anggraini & Gunawan, 2021). Integrating such models in Ilomata could improve both operational efficiency and community welfare. Furthermore, effective management requires continuous monitoring of environmental indicators to ensure that tourism activities remain within the carrying capacity of the ecosystem (Manowaluilou & Vitheepradit, 2022).

The application of ecotourism principles—conservation, economic incentive, community participation, and education—within the Ilomata riparian forest reinforces its viability as a sustainable destination. The conservation principle is evident through the area's rich biodiversity, which includes endemic species such as *Tarsius sp.*, signifying its ecological importance. Economic incentives arise from potential tourism activities like eco-camping, river trekking, and homestays that provide new income streams for local resident. Community participation is reflected in the collaborative governance framework that engages local people in planning and management. Finally, the educational principles manifests through opportunities for research, environmental interpretation, and field-based learning. These principles collectively form the foundation of

sustainable ecotourism, ensuring that conservation, livelihood improvement, and education coexist harmoniously (Krüger, 2005).

The Ilomata case aligns with broader findings in riparian ecotourism studies emphasizing that biodiversity, water quality, and ecosystem integrity are interdependent factors influencing both ecological sustainability and visitor experience (Graziano et al., 2022). A well-functioning ecosystem attracts tourists by offering authentic natural experiences while simultaneously maintaining resilience against anthropogenic pressures and climate variability. As noted by (Balke et al., 2021), riparian zones that preserve their structural and biological integrity are better equipped to buffer environmental stress and sustain tourism-based livelihoods. Thus, maintaining ecological health through restoration and adaptive management is essential not only for conservation but also for sustaining tourism viability.

From a socio-economic perspective, the Ilomata findings underscore the importance of aligning local development objectives with conservation priorities. Community-based models, as demonstrated in the Cengkrong Mangrove Ecotourism and Sukabila Ecotourism programs, have shown that empowering residents through participatory governance enhances both ecological outcomes and community welfare (Kurniawati et al., 2022). Applying similar approaches in Ilomata could ensure that tourism growth supports long-term conservation and equitable benefit distribution. Moreover, the incorporation of cultural heritage—such as traditional knowledge of forest management and local rituals—can enrich visitor experiences while preserving community identity (Rhama & Kusumasari, 2022).

The Ilomata case provides insights relevant to national ecotourism policy frameworks such as RIPPARNAS and the Sustainable Ecotourism Strategy 2030. The findings demonstrate the necessity of integrating ecological assessments with socio-economic evaluations to design site-specific development plans that meet sustainability goals. Strengthening access, improving eco-friendly facilities, and establishing clear co-management structures are essential for scaling up successful models from local to regional levels (Tjahjono et al., 2022). These lessons highlight how ecotourism, when grounded in scientific evidence and community participation, can function as a transformative tool for achieving Indonesia's broader environmental and development objectives.

4. CONCLUSION

This study demonstrates that the riparian ecosystem in the Ilomata Village Forest area possesses strong ecological and social potential to be developed as a conservation-based ecotourism destination. The inventory of vegetation and fauna indicates a high level of biodiversity that supports essential ecological functions, including erosion control, sediment filtration, habitat provision for wildlife, and maintenance of river water quality. The presence of diverse tropical plant species and bioindicator fauna reflects a stable environmental condition, suitable for nature-based tourism activities such as eco-camping, river trekking, and environmental education.

The feasibility assessment using the ADO–ODTWA method revealed a feasibility index of 59.3%, categorizing the area as moderately feasible for development, although several supporting aspects still require improvement. The highest-scoring component was the environmental and community aspect (77.36%), highlighting strong social readiness and local community support for community-based ecotourism initiatives. The attraction component also scored well (69.04%), driven by the natural beauty of the landscape, clear river flow, and richness of vegetation and fauna. Nevertheless, limitations remain, particularly in the aspects of tourism facilities (47.36%) and accessibility (51.85%). The lack of adequate infrastructure and essential amenities, as well as suboptimal access routes to the site, currently hinder an increase in tourist visitation. Therefore, improvements in eco-friendly infrastructure, strengthening of local institutions such as LPHD and Pokdarwis, and the provision of basic tourism facilities are necessary to enhance the overall feasibility of the site.

Considering the strong ecological and social strengths identified and the development challenges that remain, the Ilomata Village Forest area holds significant potential to serve as a model for community-based riparian ecotourism integrating natural resource conservation with sustainable livelihood enhancement for local communities.

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