



# Equity and sustainability in water-based ecotourism: An environmental justice perspective

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Received Date: November 10, 2025

Revised Date: February 9, 2026

Accepted Date: February 27, 2026

## ABSTRACT

**Background:** Water-based ecotourism is increasingly promoted as a pathway for sustainable local development, particularly in environmentally sensitive areas such as karst ecosystems. However, tourism expansion often prioritizes economic growth over ecological responsibility and moral accountability toward non-human nature. This study examines Paisupok Mirror Lake in the Banggai Islands as a case to explore how environmental justice in water-based ecotourism can be reframed through an eco-ethical perspective integrating social, ecological, and economic dimensions. **Methods:** The research employs a qualitative interpretive approach. It synthesizes secondary data from environmental assessments, policy documents, and previous field reports, complemented by primary insights from prior academic studies on Paisupok's socio-environmental conditions. The analysis is theoretically grounded in deep ecology and Levinasian ethics of responsibility to reinterpret environmental justice within tourism governance. **Findings:** The study identifies three interconnected dimensions of environmental justice: distributive justice (equitable access to natural resources), participatory justice (meaningful involvement of local communities in tourism planning), and recognition justice (moral acknowledgment of ecological interdependence). The findings indicate that current tourism practices risk marginalizing ecological integrity unless ethical responsibility is embedded in governance frameworks. **Conclusion:** Sustainable water-based ecotourism requires a shift from purely economic orientation toward an eco-ethical governance model. Embedding moral responsibility within tourism planning is essential to safeguard the long-term resilience of fragile karst ecosystems and local community well-being. **Novelty/Originality of this article:** This study offers a novel conceptual synthesis by integrating deep ecology and environmental justice theory to formulate an Eco-Justice Tourism Framework. It advances ecotourism discourse by repositioning tourism not merely as an economic strategy but as an ethical practice grounded in ecological responsibility and social justice, particularly within developing and ecologically fragile contexts.

**KEYWORDS:** eco-ethics; environmental justice; sustainable tourism governance.

## 1. Introduction

In the midst of intensifying climate emergencies, biodiversity loss, and widening socio-ecological inequalities, the concept of environmental justice has emerged as a moral compass for rethinking how humanity interacts with nature. The twenty-first century has witnessed not only unprecedented ecological degradation but also the moral discomfort of realizing that the pursuit of economic progress often comes at the expense of planetary well-being. Tourism holds a shaky place in this global conversation; it is hailed as a force for

### Cite This Article:

Nanita, E. T & Sharma, A. (2026). Equity and sustainability in water-based ecotourism: An environmental justice perspective. *Ecotourism and Environment Conservation*, 3(1), 83-100. <https://doi.org/10.61511/ecotour.v3i1.2026.3104>

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sustainable growth but also chastised for maintaining extractive relationships with the environment. As destinations increasingly adopt the rhetoric of “green” or “eco-friendly” tourism, the line between sustainability and commodification becomes blurred. What is often left unexamined is the ethical foundation of these initiatives: to what extent do they embody genuine ecological responsibility rather than performative sustainability.

In recent years, scholars have argued that sustainability must not be reduced to a technical project of balancing resource use and development, but rather understood as an ethical endeavor that redefines how humans coexist with the non-human world (Jamal, 2021). This moral shift reflects a growing recognition that ecological crises are not merely environmental failures, but symptoms of deeper ontological and ethical disconnections between human systems and natural ecosystems. Within this broader context, tourism becomes an arena where the ideals of justice, stewardship, and commodification are constantly negotiated. Ecotourism, in particular, often presents itself as a reconciliatory model, one that promises harmony between human well-being and environmental conservation, yet remains embedded in capitalist structures that prioritize consumption and spectacle over ecological care.

Tourism, especially ecotourism, is often seen as a way for reconciling economic growth with environmental preservation. However, empirical evidence and critical scholarship have revealed persistent paradoxes in its implementation (Gössling et al., 2020; Saarinen, 2021). While Gössling et al. (2020) highlights the contradictions between technological advancement and ecological limits, Saarinen (2021) argues that sustainability in tourism often becomes a moral rhetoric detached from genuine responsibility. In many developing regions, ecotourism projects introduced under the banner of conservation continue to reproduce social and environmental injustices. These injustices manifest through unequal access to natural resources, exclusion of local voices in decision-making, and the transformation of sacred or ecologically fragile spaces into marketable commodities. Consequently, tourism becomes a moral terrain where competing values profit, preservation, and participation intersect and often clash. This ethical tension underscores the need to reevaluate the normative principles of sustainability. Beyond economic indicators and ecological impact assessments, sustainability should be understood as an ethical relationship, a moral negotiation between humans and the more-than-human world.

This ethical perspective aligns with a growing body of research in environmental humanities that urges a re-examination of human responsibility toward ecosystems. The Anthropocene, as an era of planetary-scale human impact, calls for frameworks that integrate ecological integrity with moral consciousness. Within tourism studies, such integration remains scarce, particularly in contexts where economic aspirations overshadow ethical commitments. This gap reveals an urgent need to articulate sustainability not only as a management goal but as a philosophical practice rooted in empathy, humility, and interdependence (Rastegar, 2021). An ethical reorientation in sustainability studies, therefore, invites researchers and practitioners to recognize that environmental justice is not limited to social fairness but also includes moral accountability toward the natural world.

In this regard, environmental philosophy provides valuable insights into reimagining justice through an ecological lens. Deep ecology, first articulated by Naess (1989), challenges anthropocentrism by asserting the intrinsic value of all living beings and ecosystems, regardless of their utility to humans. It calls for an “ecological self” that recognizes interdependence and mutual respect across all forms of life. Complementing this view, Levinas’s ethics of responsibility (Levinas, 1981) redefines the moral relation between the self and the “Other.” While originally rooted in existential and phenomenological thought, Levinas’s notion of infinite responsibility has been interpreted as a foundation for ecological ethics, an idea further developed by Barzola-Elizagaray & Agoglia (2024) in linking biocentric responsibility to environmental justice. Together, these philosophical frameworks invite a deeper understanding of environmental justice not merely as distributive fairness or participatory inclusion, but as eco-ethical justice: a justice that acknowledges moral obligations toward the ecological “Other.”

While these philosophical foundations have inspired theoretical debates, their applicability in tourism studies is limited. Most environmental justice research continues to focus on distributional and procedural aspects, such as equitable resource access and public participation (Schlosberg, 2013; Walker, 2012), without adequately addressing the ethical dimensions of ecological relations. Existing research on ecotourism frequently focuses on community empowerment and economic feasibility (Simpson, 2008), but rarely examines the moral implications of turning nature into a recreational commodity. This gap does not address how environmental justice principles can be reinterpreted in ways that reconcile economic livelihood, cultural identity, and ecological ethics. Addressing this gap requires moving beyond managerial or policy-oriented frameworks toward a philosophically informed understanding of justice that integrates moral responsibility, ecological consciousness, and sustainable governance.

Despite the growing body of scholarship on environmental justice and ecotourism governance, relatively little attention has been given to how environmental justice can be interpreted through an explicitly eco-ethical lens that integrates philosophical perspectives with everyday tourism practices in fragile aquatic ecosystems. Existing studies tend to emphasize institutional participation, benefit distribution, or policy-based sustainability indicators, while the moral relationship between communities and ecologically sensitive landscapes remains underexplored in tourism research. In particular, empirical discussions of water-based ecotourism in karst environments rarely examine how local ecological meanings, cultural values, and ethical responsibility toward non-human nature intersect within emerging destination governance contexts. Addressing this gap is essential for developing a more relational and context-sensitive understanding of justice in community-based tourism settings such as Paisupok Mirror Lake.

In this sense, the intersection between tourism and environmental philosophy offers fertile ground for exploring new paradigms of sustainability. Integrating ethical reflection into tourism governance has the potential to strengthen resilience, foster intergenerational equity, and promote a more inclusive vision of coexistence (Dangi & Petrick, 2021). Therefore, an eco-ethical approach not only critiques the current anthropocentric tendencies in ecotourism but also provides practical pathways for embedding moral accountability in tourism practice. Recent critical tourism scholarship has also questioned the dominance of market-oriented sustainability models, arguing that tourism governance often reproduces structural inequalities and ecological exploitation despite the language of sustainability (Higgins-Desbiolles, 2020; Büscher & Fletcher, 2020).

Against this backdrop, the present study focuses on Paisupok Mirror Lake, located in Indonesia's Banggai Islands. The site represents a pristine karst ecosystem characterized by crystal-clear waters, subterranean channels, and endemic biodiversity. While discussions around the potential development of water-based glamping ecotourism have emerged in recent years, there is currently no formal directive or established plan from local authorities or tourism developers regarding such initiatives. At present, ecotourism activities in Paisupok primarily revolve around low-impact, nature-based recreation, including swimming in the lake's clear and refreshing waters, boating or paddling to explore its surface beauty, snorkeling or shallow diving to observe aquatic flora and fauna, and photography capturing the lake's mirror-like reflections. Visitors also engage in leisure activities such as relaxing by the lakeside gazebos, camping in designated areas (with self-provided equipment), and visiting the nearby Lukpaenteng Village to experience the local culture of the Sia-sia community.

However, despite these relatively small-scale activities, the increasing visitor interest and informal tourism practices have begun to raise ethical and environmental dilemmas, particularly concerning waste management, shoreline access, and ecological disturbance. The growing visibility of Paisupok as a tourist attraction underscores both its economic potential and its ecological fragility. Thus, Paisupok represents a living paradox: an ecosystem simultaneously valued as a natural sanctuary and as a commercial opportunity. This duality makes it an ideal case for exploring how environmental justice can be reframed to encompass both community empowerment and ecological responsibility.

This study aims to reframe the concept of environmental justice in the context of emerging water-based ecotourism by integrating philosophical insights from deep ecology and Levinasian ethics into the sustainability discourse. Accordingly, this study addresses the following guiding question: how can environmental justice in emerging water-based ecotourism be reinterpreted through an eco-ethical perspective that integrates distributive, participatory, and recognition-based dimensions within community-based tourism governance? By examining the case of Paisupok Mirror Lake, the study further explores how philosophical approaches to ecological responsibility can inform more inclusive and context-sensitive sustainability practices in fragile karst tourism environments.

Recent empirical research on water-based and lake-centered ecotourism further highlights the governance challenges associated with balancing conservation priorities and community livelihoods in environmentally sensitive destinations. Studies of freshwater tourism landscapes demonstrate that unmanaged visitor growth may alter shoreline ecosystems, disrupt local resource access, and generate tensions between conservation objectives and economic expectations (Peng et al., 2023). Similarly, research on community-based ecotourism governance emphasizes that participatory engagement and locally embedded stewardship practices are essential for maintaining ecological resilience in emerging rural destinations (Dangi & Petrick, 2021). In fragile karst environments in particular, tourism development requires careful integration of hydrological sensitivity, cultural meaning, and institutional coordination, as these landscapes are highly vulnerable to ecological disturbance yet increasingly targeted for nature-based tourism expansion (Washington et al., 2024). These studies indicate that sustainable water-based ecotourism cannot rely solely on infrastructure development or market growth but must be supported by governance approaches that integrate ethical responsibility, ecological awareness, and community participation.

Within this broader context, Paisupok Mirror Lake represents a locally grounded example of how emerging water-based ecotourism destinations in the Global South negotiate the intersection between ecological fragility, cultural meaning, and evolving tourism governance structures. Rather than focusing on large-scale tourism projects, this research takes Paisupok Mirror Lake as a microcosm of how environmental ethics and community values intersect within small, community-driven tourism activities. The study employs a qualitative interpretive approach that synthesizes secondary environmental and policy data with prior field insights and local narratives surrounding Paisupok's socio-ecological dynamics. Through this approach, the study identifies and analyzes three interrelated dimensions of eco-justice in the tourism context: (1) distributive justice, concerning fair access to ecological and economic benefits; (2) participatory justice, emphasizing inclusive decision-making involving local actors; and (3) recognition of justice, referring to the ethical acknowledgment of cultural and ecological interdependence.

By linking these dimensions to an eco-ethical framework, this research aims to advance a more holistic and context-sensitive understanding of justice in tourism governance, one that values both human and non-human stakeholders. The case of Paisupok serves not only as an empirical site but also as a philosophical lens through which we can observe the moral and ecological tensions that arise when natural sanctuaries become intertwined with tourism economies. In doing so, the paper contributes to the growing discourse on sustainability ethics in the Global South, particularly in contexts where economic aspirations and ecological vulnerabilities coexist within fragile ecosystems.

The theoretical contribution of this study lies in its attempt to bridge environmental philosophy and sustainable tourism research. By situating ethical concepts within a socio-ecological context, it demonstrates that environmental justice is not only a matter of governance and policy but also a moral practice rooted in compassion, humility, and accountability toward the natural world. In doing so, the study responds to the growing call for an "ethical turn" in sustainability thinking (Arias-Maldonado, 2020), which emphasizes that sustainability in the Anthropocene requires the integration of normative reasoning, ecological awareness, and empirical understanding.

At the empirical level, this study extends the discussion of eco-ethical justice to a community-based water ecotourism setting. Instead of examining a formally structured development project, it explores the moral and environmental implications emerging from small-scale and community-driven tourism practices at Paisupok Mirror Lake, such as swimming, boating, and camping which naturally evolve alongside the site's ecological and cultural dynamics. The novelty of this paper lies in its conceptual reconstruction of eco-ethical responsibility as a guiding principle for sustainable tourism governance in developing regions where economic aspirations and environmental vulnerabilities are inextricably linked. The remainder of this article is organized as follows. The next section outlines the qualitative interpretive methodology adopted to synthesize multiple data sources and contextual insights. This is followed by a detailed discussion of findings, which clarifies how the principles of environmental justice manifest in the socio-ecological context of Paisupok. Finally, the paper concludes with an Eco-Justice Tourism Framework, proposing actionable insights for embedding ethical responsibility within sustainable tourism governance.

## 2. Methods

### 2.1 Study area

The research was conducted at Paisupok Mirror Lake, located within the Banggai Islands, Central Sulawesi, Indonesia (Fig. 1). The site lies within a distinctive karst ecosystem characterized by exceptionally clear groundwater, limestone topography, and forested catchment zones. Rather than being a formally designated glamping site, Paisupok currently serves as an emerging community-managed water-based ecotourism area, where activities such as swimming, boating, snorkeling, and camping are informally organized by local residents. This context provides a compelling rationale for exploring how environmental justice can be interpreted in grassroots tourism practices that evolve organically in ecologically sensitive landscapes.

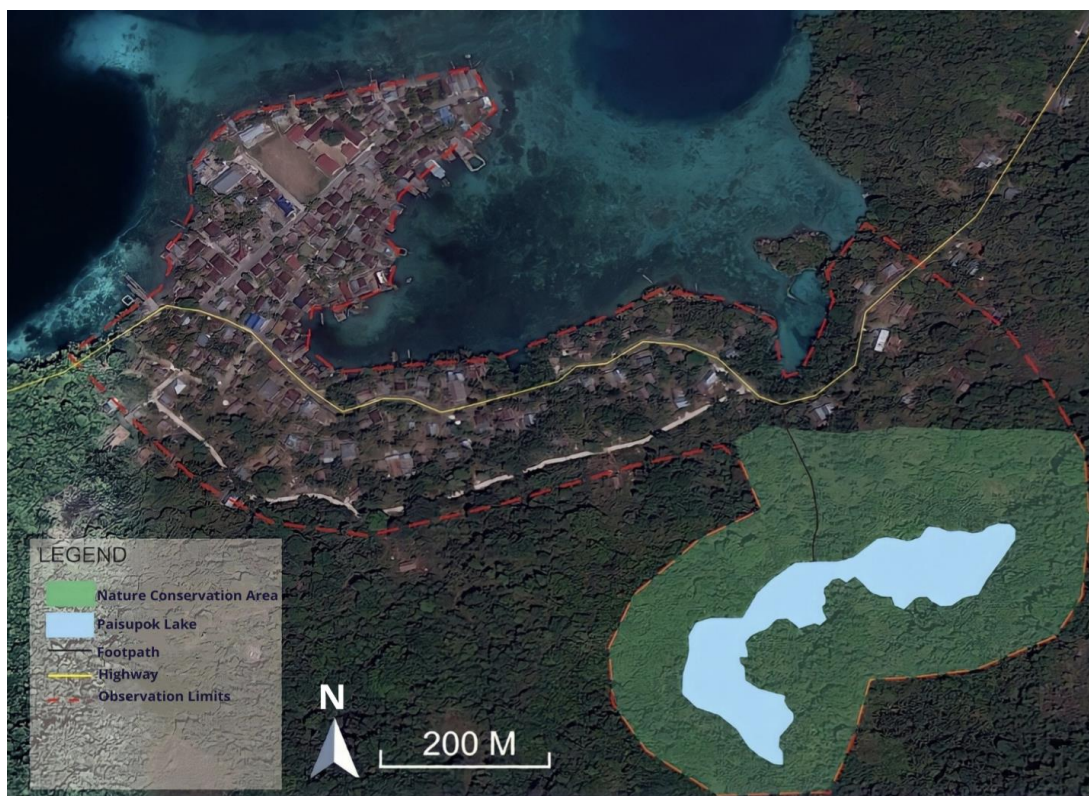


Fig.1. Map of Paisupok Mirror Lake, Banggai Islands, Indonesia.  
Note. Based on BPS Banggai Regency data and the RPJMD 2011–2016.

The spatial boundary of the research area, including the lake, surrounding settlements, and conservation zones, was delineated and visualized by the author using open-access administrative data provided by the Central Bureau of Statistics (BPS) and the Banggai Regency Development Plan (RPJMD 2011–2016). The map was redrawn and standardized following basic cartographic conventions to illustrate the socio-ecological interface relevant to tourism and conservation planning. Given the limited availability of international cartographic datasets for this remote region, these local administrative data offer the most reliable representation of the area's geographical and environmental configuration.

## *2.2 Research design*

This study adopts a qualitative interpretive approach to explore the philosophical and empirical dimensions of environmental justice within the context of water-based ecotourism. The ontological foundation of this approach assumes that reality is socially and ecologically constructed, emerging from the dynamic interactions between humans, communities, and their surrounding ecosystems. Epistemologically, the study aligns with a constructivist paradigm, emphasizing the co-creation of knowledge through interpretation, reflection, and contextual understanding rather than through measurement or causal prediction. This orientation is particularly relevant for examining ethical and justice-based phenomena, which are inherently subjective, value-laden, and situated within socio-environmental relations (Creswell & Poth, 2018).

## *2.3 Data collection methods and analysis*

The research builds a thorough interpretive synthesis by combining secondary and primary data to construct a comprehensive interpretive synthesis. Secondary data were obtained from environmental reports, local tourism profiles, and regional planning documents, including those from the Banggai Islands BPS and the RPJMD 2011–2016, which provided socio-ecological and policy context for the site. Meanwhile, primary data were derived from field documentation and observation notes collected by the research team in 2022, informal interviews with local residents and tourism stakeholders previously documented by the team, as well as internal reflections from researchers during the analysis and synthesis process. These data collectively support the interpretive goal of identifying how environmental justice principles are embedded or neglected within the socio-ecological governance of Paisupok. Overall, the research process follows three main stages, namely data condensation, data display, and conclusion drawing, as proposed by Miles et al. (2014).

To enhance methodological transparency, the interpretive synthesis followed an iterative analytical procedure integrating empirical materials with philosophical reflection. First, secondary environmental reports, regional planning documents, and previously documented field observations were carefully reviewed to identify recurring socio-ecological issues related to access, participation, and cultural meanings of the lake. These materials were complemented by informal stakeholder insights recorded during earlier field documentation activities conducted by the research team.

Second, open coding was applied to organize the data into preliminary analytical categories reflecting distributive justice, participatory justice, and recognition justice. Coding focused on identifying patterns of ecological access, governance interaction, and community narratives concerning the moral relationship between people and the lake environment. These categories were continuously refined through constant comparison across documentary sources, observation notes, and theoretical constructs from environmental justice literature.

Third, the analytical categories were interpreted through the philosophical lenses of deep ecology and Levinasian ethics to construct an integrated eco-ethical reading of tourism governance practices. Rather than treating theory as a testing framework, philosophical concepts functioned as interpretive guides that helped explain how environmental

responsibility is socially understood and negotiated within the Paisupok context. Finally, the emergent themes were synthesized into a conceptual framework linking distributive, participatory, and recognition dimensions of justice with ethical responsibility toward ecological systems. This interpretive synthesis ensured coherence between empirical insights and theoretical reasoning while strengthening the analytical rigor of the proposed Eco-Justice Tourism Framework.

### *2.3.1 Data Condensation*

Data from various sources were systematically reduced and organized into thematic clusters such as justice dimensions, ecological ethics, local participation, and tourism governance. The analysis process also involved continuous comparison between data categories to ensure conceptual consistency and interpretative depth. Coding was conducted manually using an open coding approach to capture emergent meanings related to environmental justice and ethical responsibility.

### *2.3.2 Data Display*

The organized data were synthesized into narrative matrices and conceptual diagrams that visualize the interrelationship between ecological, social, and moral dimensions. The synthesis process also facilitated the identification of recurring themes and contextual nuances across different data sources. This stage enables interpretive pattern recognition rather than numerical generalization.

### *2.3.3 Drawing conclusion and verification*

The final analytical process involved reflective interpretation, triangulating between theory (deep ecology and Levinasian ethics) and empirical insights from Paisupok. Coherence between conceptual reasoning and observed phenomena was ensured through constant comparison. Interpretive rigor was achieved through peer debriefing among co-authors and verification against relevant literature on environmental philosophy and tourism studies.

## *2.4 Analytical framework*

To align with the philosophical underpinnings of the research, data interpretation was guided by a threefold analytical lens adapted from Schlosberg's (2013) model of environmental justice: distributive, participatory, and recognition justice, enriched with principles of deep ecological ethics (Naess, 1989). This framework was applied to interpret patterns emerging from community-based water ecotourism practices in Paisupok. Distributive Justice explores the equitable distribution of tourism benefits and ecological burdens among stakeholders. Participatory Justice examines the inclusion of local communities in decision-making processes and governance structures. Recognition Justice considers the ethical acknowledgment of non-human beings, aligning with Levinas's notion of responsibility toward the "Other." This tripartite framework enables a multidimensional understanding of justice that transcends human-centered governance and integrates moral-ecological consciousness. The analysis focuses on interpreting ethical meaning within socio-environmental practices rather than quantifying impact.

## *2.5 Validity and reflexivity*

Given the interpretive nature of this study, credibility and reflexivity were prioritized over statistical validity. Researcher bias was minimized through iterative reflection and continuous dialogue between theoretical insights and contextual understanding of Paisupok's ecotourism setting. Triangulation across data sources, policy documents,

environmental reports, and prior field observations strengthened interpretive trustworthiness. Furthermore, ethical sensitivity was maintained throughout the analysis by respecting local knowledge systems and acknowledging the positionality of the researchers, recognizing that both human perception and ecological realities co-construct meaning within the research process (Denzin & Lincoln, 2018). Credibility was further strengthened through iterative comparison between documentary evidence, prior field observations, and theoretical interpretation, ensuring that emerging themes were grounded in both empirical context and conceptual reasoning. Peer debriefing between co-authors and repeated cross-checking with environmental justice literature supported interpretive consistency and minimized subjective bias during the synthesis process.

### *2.6 Methodological justification*

The decision to employ a qualitative interpretive design stems from the ontological alignment of the research with constructivism and deep ecology. Since environmental justice is not a fixed variable but a dynamic ethical relation, an interpretive lens enables a nuanced exploration of how justice and responsibility are experienced and expressed in practice. Quantitative or positivist methods would be insufficient to capture the moral and experiential dimensions of ecological responsibility. Therefore, the interpretive paradigm serves as both an epistemological commitment and a methodological necessity, allowing for a holistic understanding of how justice, ethics, and ecology intertwine within the lived reality of community-based water tourism development.

## **3. Results and Discussion**

### *3.1 Ecological and socioeconomic context of Paisupok Mirror Lake*

The ecological and social configuration of Paisupok Mirror Lake reveals the intricate coexistence between a fragile karst ecosystem and the livelihoods it sustains. The lake's crystal-clear water, fed by underground hydrological channels, supports endemic flora and fauna while also serving as a cultural landmark for surrounding communities. The nearby villages depend on mixed subsistence activities, such as fishing, small-scale farming, and seasonal tourism work which creates an economy that oscillates between ecological dependence and economic aspiration.

Over the past decade, the advent of water-based glamping ecotourism has generated optimism for rural revitalization. Yet it has simultaneously exposed the region to new pressures. Increased visitation and infrastructure expansion risk altering hydrological balance, causing vegetation disturbance and waste accumulation around limestone ridges. The juxtaposition of pristine ecology and emergent tourism infrastructure illustrates the moral paradox of sustainability: nature is both protected and commodified. In the philosophical sense, this tension mirrors what Naess (1989) described as the crisis of perception, the failure to perceive humans as integral to, rather than owners of, ecological systems.

Field documentation conducted during earlier site visits indicates that visitor activities are largely organized informally through community initiative rather than structured destination management systems. Temporary bamboo facilities, locally maintained access paths, and small-scale parking areas managed by residents illustrate how tourism services emerge organically in response to visitor demand. While these initiatives demonstrate local adaptability and entrepreneurial engagement, they also reveal the absence of formal environmental management mechanisms, particularly related to waste control and shoreline protection. Such conditions reflect the transitional character of Paisupok as an emerging community-based ecotourism site operating between informal stewardship and increasing tourism exposure.

Local residents often express ambivalence toward tourism development. While many welcome the new economic opportunities, others voice concern that the rapid

transformation threatens sacred sites and customary water rituals. The lake, historically regarded as a spiritual mirror that connects human and natural worlds, now faces the risk of symbolic erosion. Such narratives underscore those environmental challenges in Paisupok are not only material but also moral and relational, where ecological justice becomes inseparable from cultural recognition. Recent research emphasizes that achieving equilibrium between ecological conservation and local well-being requires adaptive and inclusive governance models that integrate moral responsibility into planning frameworks (Dangi & Petrick, 2021; Epifani & Valente, 2023). These insights further substantiate that Paisupok's challenges reflect broader ethical tensions found in emerging ecotourism destinations.

### *3.2 Dimensions of environmental justice in water-based ecotourism*

#### *3.2.1 Distributive justice: Equity in access and benefit*

Analysis of stakeholder perspectives indicates that the distribution of tourism benefits in Paisupok remains uneven. Local entrepreneurs and small households receive marginal income from guiding, parking, or food stalls, whereas the majority of financial flows circulate around external investors or middle-tier tour operators. For example, several households participate in small-scale tourism services such as providing food stalls, managing informal parking areas, or renting simple resting spaces near the lakeside. However, these income opportunities remain seasonal and unevenly distributed, as access to prime shoreline locations is gradually influenced by external investment interests and informal land-use negotiations. This situation illustrates how emerging tourism economies may simultaneously create livelihood opportunities while reshaping traditional access relationships between residents and ecological resources. The physical access of local residents to the lakefront has also gradually narrowed due to the privatization of shoreline areas for glamping facilities.

This pattern reflects what Schlosberg (2013) terms distributional inequity, where economic benefits accumulate among a privileged minority while environmental risks are borne by the community. Similar concerns were raised by Saarinen (2021), who argues that contemporary sustainability practices in tourism often mask existing structural inequalities under the rhetoric of responsibility. In the context of Paisupok, distributive justice is not solely about revenue sharing but about maintaining ecological access and stewardship rights. Parallel findings from Ristiawan et al. (2023) demonstrate that in Indonesian geoparks, patrimonial governance frequently reproduces asymmetries of power between investors and communities, reinforcing the importance of justice-oriented tourism management in Paisupok's context.

From a deep-ecological viewpoint, distributive imbalance also reflects a deeper ontological issue that the reduction of nature's intrinsic value into monetary worth. When the ecosystem is treated as a service provider rather than a moral co-existence partner, justice becomes limited to economic compensation. The empirical reality in Paisupok thus reveals the persistence of anthropocentric governance under the rhetoric of sustainability. Such anthropocentric tendencies have been increasingly challenged by scholars who advocate integrating ethical reflection and equity principles into the governance of sustainable tourism (Tolkach, 2024), reinforcing that distributive justice requires both moral and ecological awareness.

#### *3.2.2 Participatory justice: Representation and local agency*

Despite formal recognition of local involvement in tourism planning, participation remains mostly procedural. Community meetings are often dominated by government officials or investors who dictate project timelines and design decisions. Local residents are consulted after key decisions are made, and traditional ecological knowledge, such as water-flow rituals or karst-forest taboos which rarely informs policy. Community discussions

regarding tourism development are typically conducted through village-level meetings and informal coordination between residents and local facilitators. However, participation often occurs at the implementation stage rather than during early planning processes, limiting the integration of traditional ecological knowledge such as customary water-use practices and spatial taboos associated with karst forest areas. Despite these limitations, youth-led environmental clean-up activities and locally initiated awareness campaigns demonstrate emerging forms of grassroots participation that reflect growing ecological responsibility among younger community members.

This echoes Cole's (2006) critique of tokenistic participation, where consultation is conducted for legitimacy rather than empowerment. Similar concerns are also reflected in Tosun (2006), who distinguishes between genuine and coercive forms of participation in tourism development. The absence of meaningful dialogue undermines the transformative potential of community-based ecotourism. In Levinasian ethics, genuine responsibility begins with hearing the voice of the Other, an act of openness that precedes control or ownership. The failure to listen, therefore, constitutes an ethical violation, even if policy frameworks appear participatory.

In this sense, Tolkach (2024) highlights that ethical participation is central to the evolution of responsible tourism governance, where dialogical engagement replaces top-down management and promotes justice as a lived ethical practice. Nevertheless, some grassroots initiatives show counter-movements. Youth groups in the village have begun organizing environmental clean-ups and social media campaigns to promote "eco-care" values. These informal actions illustrate latent agency and collective moral awareness that could evolve into more formal governance mechanisms. Strengthening participatory justice in Paisupok thus requires not only procedural inclusion but also epistemic humility which recognizes that local ways of knowing are valid sources of sustainability insight. This observation aligns with Dangi & Petrick's (2021) argument that genuine community engagement transforms sustainability from a managerial obligation into an ethical dialogue between stakeholders. Similar findings have been observed in community-based ecotourism contexts where local participation is frequently constrained by unequal institutional structures and limited decision-making power (Wu et al., 2022; Ochieng et al., 2023).

### *3.2.3 Recognition justice: Acknowledging ecological and cultural interdependence*

Recognition of justice expands the moral boundary of environmental debate by including non-human entities and cultural values as legitimate subjects of justice. In Paisupok, the lake is not merely an ecosystem component; it is a spiritual mirror that mediates relationships between humans and nature. Interviews and field narratives reveal that elders consider the lake's clarity as a reflection of communal virtue; when the water becomes murky, it signals disharmony between people and their environment. These symbolic interpretations are reflected in everyday practices such as maintaining water clarity through collective cleaning activities and restricting certain disruptive behaviors near culturally sensitive areas of the lake. Local narratives describing the lake as a "mirror of harmony" between humans and nature continue to influence community attitudes toward tourism activities, reinforcing the idea that ecological protection is not only a technical responsibility but also a cultural obligation embedded within local environmental ethics.

However, modern tourism narratives often erase these symbolic meanings, rebranding the site as a recreational spectacle. This epistemic erasure reflects what Barzola-Elizagaray & Agoglia (2024) describe as the ethical amnesia of modern development, the forgetting of humanity's responsibility toward non-human existence. Restoring recognition justice therefore requires that tourism governance embrace the principle of ecological empathy, acknowledging that preservation entails moral reciprocity.

Epifani & Valente (2023) further emphasize that sustainable governance must integrate cultural and ecological recognition as interdependent values, where nature is not

merely a setting for tourism but an ethical co-actor within socio-ecological systems. In Levinasian terms, the lake embodies the face of the Other, a silent but compelling presence that demands care and restraint. Such recognition transcends utilitarian frameworks and calls for a relational ethic in tourism management. Empirically, this could manifest as zoning regulations that respect spiritual sites or benefit-sharing schemes that integrate traditional custodianship practices.

Table 1. Dimensions of environmental justice in water-based ecotourism governance at Paisupok Mirror Lake

Dimension of justice	Conceptual meaning	Empirical illustration from Paisupok	Governance implication
Distributive	Equity in access to ecological resources and tourism-related benefits	Uneven livelihood opportunities from small-scale tourism services such as parking management, food stalls, and shoreline access influenced by emerging external investment interests	Need for fair benefit-sharing mechanisms and protection of community access to lakeside resources
Participatory	Inclusive involvement of local communities in tourism decision-making processes	Community participation mainly occurs during implementation stages, while youth-led environmental initiatives demonstrate emerging grassroots engagement	Strengthening early-stage consultation processes and integrating local ecological knowledge into planning
Recognition	Ethical acknowledgment of ecological interdependence and cultural meanings attached to the landscape	Local narratives describing the lake as a “mirror of harmony” between humans and nature influence community attitudes toward conservation practices	Incorporating culturally informed zoning strategies and recognizing spiritual-ecological values in destination governance

Source: Field documentation, community narratives, and the environmental justice framework adapted from David Schlosberg (2013) and deep ecological ethics proposed by Arne Naess (1989).

### 3.3 Conceptual synthesis: The eco-justice tourism framework

The three justice dimensions identified in this study emerged from recurring patterns observed across environmental documentation, community narratives, and governance-related practices surrounding shoreline access, participation in tourism activities, and cultural interpretations of the lake’s ecological meaning. These empirical observations provided the interpretive basis for linking environmental justice theory with the lived socio-ecological realities of Paisupok. Integrating the three justice dimensions yields a broader conceptual understanding of how environmental ethics can inform sustainable tourism governance. The Eco-Justice Tourism Framework developed from this study positions justice not as an administrative endpoint but as a continuous ethical process grounded in relational interdependence. This synthesis resonates with recent contributions by Dangi & Petrick (2021), Tolkach (2024), Epifani & Valente (2023), and Ristiawan et al. (2023), who collectively argue that sustainable tourism governance must evolve toward a model of shared moral responsibility that integrates ecological empathy, distributive equity, and participatory inclusiveness as guiding principles for destination stewardship.

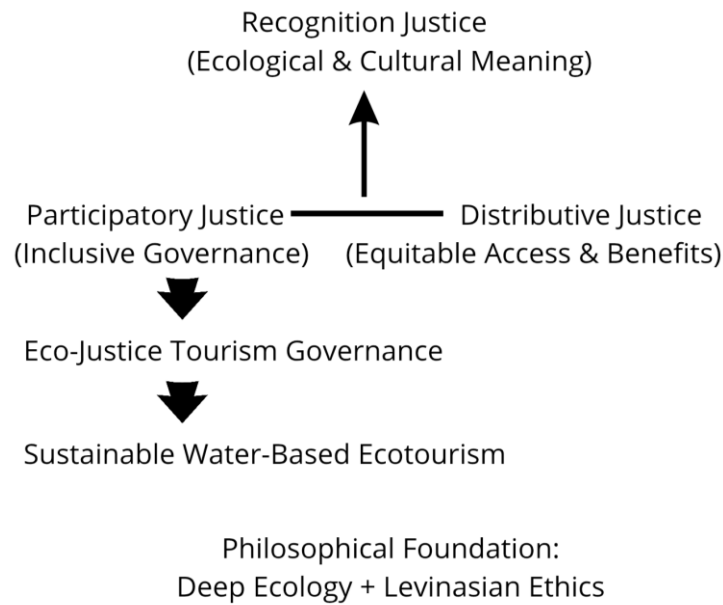


Fig. 2. The Eco-Justice Tourism Framework integrates distributive, participatory, and recognition dimensions of environmental justice within an eco-ethical governance approach for water-based ecotourism destinations. Source: Conceptual synthesis based on Schlosberg (2013), Naess (1989), and Levinas (1981).

The distributive dimension emphasizes sustainability equity, ensuring a fair distribution of benefits and responsibilities among stakeholders while safeguarding ecological resources. As Dangi & Petrick (2021) note, distributive equity represents the ethical foundation of destination justice, linking fairness with environmental integrity. In addition, the participatory dimension highlights ethical governance by encouraging inclusive decision-making processes that respect both formal institutions and informal ecological knowledge, whereby Epifani & Valente (2023) argue that ethical governance in tourism should integrate local epistemologies into policy frameworks to achieve authentic sustainability. Furthermore, the recognition dimension extends justice beyond human actors by embedding compassion and moral accountability toward non-human entities, which aligns with Tolkach (2024), who emphasizes that the future of tourism ethics depends on cultivating ecological empathy and recognizing the moral agency of nature itself.

These three dimensions converge within an ethical space where deep ecology and environmental justice intersect, forming a triadic model of sustainable practice. Unlike managerial sustainability models that emphasize metrics and performance, this framework proposes ethical reflexivity as the foundation of tourism governance. It treats the environment as a co-agent in decision-making rather than a passive backdrop for human activity, thereby reaffirming the need for moral consciousness and cooperative stewardship as essential pillars of eco-justice in tourism.

### 3.4 Theoretical reflection and comparative insights

Comparatively, similar tensions between economic aspiration and ecological ethics have been documented in eco-destinations across Southeast Asia, such as Ha Long Bay (Vietnam) and Raja Ampat (Indonesia). Yet what distinguishes Paisupok is the persistence of moral language in local environmental discourse. Whereas global frameworks often interpret justice through law or policy, local actors articulate it through spiritual harmony and community care.

Such context-driven moral expressions align with emerging discourses of “Southern environmental ethics,” where justice and ecology are co-produced within place-based cultural frameworks (Ristiawan et al., 2023; Epifani & Valente, 2023). This suggests that a

Southern epistemology of eco-justice that is rooted in relational ethics rather than institutional authority could enrich global sustainability debates. The findings from Paisupok affirm that justice must be re-understood as an ethic of coexistence. In line with Naess's (1989) ecological self, the study repositions the tourist, policymaker, and local resident as co-participants in a shared moral ecosystem. Ultimately, the case demonstrates that achieving sustainability is not merely about resource management but about ethical transformation learning to inhabit the world responsibly, with humility toward the Other. This philosophical re-orientation offers a vital contribution to the interdisciplinary field of environmental justice, aligning theory with lived experience. These dynamics also resonate with broader discussions in political ecology and critical tourism studies, which emphasize that tourism development is deeply intertwined with power relations, environmental inequalities, and questions of social justice (Mostafanezhad et al., 2016; Frenzel et al., 2022).



Fig. 3. Conceptual model integrating the distributive, participatory, and recognition dimensions of environmental justice into an eco-ethical tourism governance framework.

#### 4. Conclusions

This study set out to reframe the concept of environmental justice in the context of water-based ecotourism by integrating philosophical insights from Deep Ecology and Levinasian Ethics of Responsibility. The case of Paisupok Mirror Lake demonstrates that environmental challenges in developing regions extend beyond ecological degradation and economic inequality; they are also deeply moral and relational. By adopting a qualitative interpretive approach, this research reveals that justice in tourism governance cannot be fully achieved through distributive or procedural mechanisms alone. It must also embrace the ethical dimension of recognition: acknowledging that non-human nature is a legitimate subject of moral concern and that sustainable coexistence depends on reciprocity between humans and the environment. The findings highlight three interrelated dimensions of environmental justice: distributive, participatory, and recognition justice, each representing a distinct yet connected expression of fairness within the socio-ecological landscape of Paisupok. Distributive justice concerns the equitable sharing of benefits and burdens derived from ecotourism development, while participatory justice emphasizes inclusive governance and epistemic humility that recognizes the value of local knowledge systems. Recognition of justice, however, extends these debates toward a moral frontier, urging society to re-evaluate the intrinsic value of nature beyond economic or instrumental logic. Together, these dimensions articulate a form of justice that is not only managerial but eco-ethical, bridging the moral relationship between humans and their ecological others.

Building upon these dimensions, this study proposes the Eco-Justice Tourism Framework, which reconceptualizes sustainability as an ethical continuum rather than a managerial target. The framework integrates distributive equity, participatory ethics, and ecological responsibility into a cohesive governance model guided by moral reflexivity. Unlike conventional sustainability approaches that emphasize performance indicators, this model underscores the necessity of moral consciousness and compassionate responsibility in policy and practice. Recent scholarly perspectives also reinforce this ethical turn in tourism governance, emphasizing that justice and sustainability must evolve through shared moral awareness and inclusive stewardship (Dangi & Petrick, 2021; Tolkach, 2024; Epifani & Valente, 2023; Ristiawan et al., 2023). Such integration advances the field of environmental justice by introducing an ethically grounded paradigm for understanding tourism's role in ecological stewardship, particularly relevant for ecologically fragile and culturally embedded destinations such as Paisupok.

The Eco-Justice Tourism Framework proposed in this study offers several practical implications for local tourism governance in emerging water-based ecotourism destinations such as Paisupok Mirror Lake. First, destination planning should prioritize equitable access to shoreline resources by ensuring that community members retain meaningful participation in tourism-related land use and benefit-sharing mechanisms. Strengthening distributive justice can help prevent the concentration of economic opportunities among external actors while supporting locally grounded stewardship practices. Second, participatory governance mechanisms should be institutionalized through early-stage consultation processes that integrate local ecological knowledge into tourism planning. Rather than limiting participation to implementation stages, collaborative decision-making platforms involving village authorities, youth groups, and customary knowledge holders can enhance long-term sustainability outcomes. Third, recognition of justice requires tourism policy frameworks to acknowledge the cultural and spiritual meanings attached to ecologically sensitive landscapes. Integrating culturally informed zoning strategies and community-led conservation initiatives may support the protection of both ecological integrity and symbolic values associated with the lake environment. More broadly, embedding eco-ethical responsibility within destination governance can assist policymakers in designing tourism strategies that balance livelihood development with ecological resilience. These recommendations demonstrate how environmental justice principles can function not only as theoretical constructs but also as operational guidelines for sustainable tourism planning in fragile karst ecosystems. At the same time, implementing an eco-justice-oriented governance framework may face institutional and capacity-related challenges, particularly in remote destinations with limited administrative resources and fragmented tourism management structures. Addressing these constraints requires gradual policy integration, continuous community engagement, and adaptive governance approaches that remain responsive to local ecological conditions and social dynamics. Future destination planning initiatives may therefore benefit from pilot-scale implementation strategies that allow ethical principles to be translated into context-sensitive management practices. The significance of this study lies in its contribution to the interdisciplinary synthesis between environmental philosophy and sustainable tourism research. It advances the theoretical conversation on justice by positioning it within a relational ontology of coexistence. Practically, it offers policymakers and destination managers a conceptual lens to design tourism governance that respects both ecological integrity and cultural identity. Philosophically, it reminds scholars and practitioners alike that the pursuit of sustainability is ultimately a moral endeavor, one that demands humility, empathy, and responsibility toward the living world. Future research may build upon this foundation by empirically testing the eco-justice framework in other ecological settings, further enriching the dialogue between ethics, justice, and sustainability. Recent debates on climate justice and regenerative tourism further reinforce the need to reposition tourism within broader ethical and ecological responsibilities (Becken & Rastegar, 2025).

## **Acknowledgement**

The author would like to express sincere gratitude to the Cluster of Social Environment, Community Empowerment, and Environmental Economy, School of Environmental Science, Universitas Indonesia, for providing academic facilitation and research guidance during this assignment. Appreciation is also extended to the organizing committee of the 6th JESSD Symposium for the opportunity to develop and present this work.

The author gratefully acknowledges the contribution of Rian Abid, who provided valuable field observations and supporting documentation during the preliminary study of Paisupok Mirror Lake, which served as an empirical foundation for the present conceptual development. The author also thanks colleagues who provided constructive feedback, proofreading assistance, and moral support throughout the writing process. This study received no external funding, and the interpretations presented in this manuscript are solely those of the author.

## **Author Contribution**

Conceptualization, E.T.N.; Methodology, E.T.N.; Validation, E.T.N.; Formal Analysis, E.T.N.; Investigation, E.T.N.; Resources, E.T.N.; Data Curation, E.T.N.; Writing – Original Draft Preparation, E.T.N.; Writing – Review & Editing, E.T.N.; Visualization, E.T.N.; Supervision, E.T.N.; Project Administration, E.T.N. The author has read and approved the final version of the manuscript.

## **Funding**

This research received no external funding.

## **Ethical Review Board Statement**

Ethical review and approval were waived for this study due to the non-experimental nature of the research. The study did not involve human or animal experimentation, medical procedures, or the collection of sensitive personal data. All analyses were based on secondary sources, publicly available environmental reports, and non-identifiable community documentation obtained with verbal consent. The research was conducted in accordance with the Ethical Research Code of Universitas Indonesia (Peraturan Rektor No. 9 Tahun 2016) and adhered to general principles of academic integrity and responsible data use.

## **Informed Consent Statement**

Informed consent was obtained verbally from community members who contributed general information and contextual insights during informal discussions and local documentation activities. Participation was entirely voluntary, and no identifiable personal information was recorded or disclosed. Given the qualitative and non-invasive nature of the study, written informed consent was not required. The research was conducted in accordance with ethical principles for social research under the Ethical Research Code of Universitas Indonesia (Peraturan Rektor No. 9 Tahun 2016).

## **Data Availability Statement**

No new data were created or analyzed in this study. The study relied on publicly available environmental and policy documents issued by the Banggai Regency Government and supporting contextual data obtained through prior field documentation. Due to ethical and privacy considerations, community-level observations and informal discussion notes are not publicly archived. However, summarized information relevant to the research context is available from the author upon reasonable request.

## **Conflicts of Interest**

The author declares no conflict of interest. The research was conducted independently and without any commercial or financial relationships that could be construed as a potential

conflict of interest. The institutional facilitators from the Cluster of Social Environment, Community Empowerment, and Environmental Economy, School of Environmental Science, Universitas Indonesia, and the 6th JESSD Symposium had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

### Declaration of Generative AI Use

During the preparation of this work, the author used ChatGPT (OpenAI GPT-5) to assist in refining academic phrasing, improving language clarity, and structuring the manuscript according to international journal standards. The author reviewed and edited the entire content thoroughly to ensure accuracy, originality, and alignment with the research objectives. The author takes full responsibility for the final version of the manuscript and affirms that all conceptual ideas, analyses, interpretations, and conclusions are solely the author's own.

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