



Community-based ecotourism in rural landscapes: Integrating global sustainability frameworks with local environmental governance

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ABSTRACT

Background: This study investigates the implementation of community-based ecotourism as a strategy for advancing the United Nations Sustainable Development Goals (SDGs), focusing on its dual role in promoting environmental conservation and strengthening local economic resilience. A fundamental disconnect persists between universal sustainability principles and their practical application within complex local governance systems, creating a critical research gap. **Methods:** Employing a qualitative case study approach grounded in Ribot & Peluso's (2003) Theory of Access, this research analyzes the intricate power dynamics and access mechanisms within a community-based ecotourism initiative in Sanghyang Kenit, Indonesia. The study deconstructs interactions across a multi-stakeholder network involving PT X, Karang Taruna youth organization, Village Government, and the Citarum Harum Task Force. **Findings:** The analysis reveals that benefit streams and control over ecotourism commons are governed by dynamic "bundles of power" technology, capital, labor, knowledge, authority, social identity, and relations. These mechanisms create asymmetric governance structures where effective multi-stakeholder collaboration emerges as crucial for balancing conservation and community welfare objectives. The study demonstrates how global sustainability frameworks are reconfigured through local power contests, creating both constraints and opportunities for sustainable outcomes. **Conclusion:** The research proposes recalibrating institutional arrangements toward polycentric governance models that ensure equitable benefit distribution, enhance managerial flexibility, and standardize conservation practices. Achieving ecotourism's potential requires coordinated action among landholders, policymakers, managers, and tourists to embed global sustainability norms into localized governance structures. **Novelty/Originality of this article:** This article makes a distinctive contribution to political ecology by applying Access Theory to tourism governance, offering nuanced understanding of how power asymmetries shape the localization of global sustainability frameworks in rural landscapes.

KEYWORDS: access theory; community-based ecotourism; political ecology; stakeholder collaboration; sustainable development goals (sdgs); sustainability governance.

1. Introduction

The Anthropocene epoch is characterized by unprecedented environmental crises, with climate change and biodiversity loss representing existential threats to global ecological stability (IPBES, 2019). The recent IPCC (2023) reports emphasize that the window for meaningful climate action is rapidly closing, while the Living Planet Report (WWF, 2022) documents an average 69% decline in global wildlife populations since 1970. Within this

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precarious context, the global tourism sector—historically a significant contributor to environmental degradation through carbon emissions, resource depletion, and habitat fragmentation faces mounting pressure to fundamentally transform its operational paradigms. The tension between tourism's economic imperatives and ecological limits has never been more acute, catalyzing what is now widely recognized as the "sustainability imperative" in tourism development (Bramwell et al., 2017).

Ecotourism has emerged as a dominant response to this imperative, positioned within policy discourses as a potential panacea that reconciles conservation objectives with poverty alleviation and community development (Fletcher, 2023). Theoretically rooted in the principles of sustainable development, ecotourism promises to generate financing for protected areas, create economic alternatives for local communities, and foster environmental stewardship through experiential education (Butcher, 2023). However, the implementation of ecotourism models has revealed fundamental contradictions and implementation challenges that problematize this optimistic narrative. Three interrelated crises currently plague the global ecotourism sector: First, the pervasive phenomenon of "greenwashing," where tourism operators employ sophisticated environmental marketing to conceal business-as-usual practices, fundamentally misleading consumers and undermining the concept's credibility (Cheng et al., 2022). Second, the ecological strain of "overtourism" in fragile ecosystems, where visitor numbers exceed carrying capacity, resulting in habitat degradation, wildlife disturbance, and cultural commodification (Oklevik et al., 2019). Third, the transboundary problem of plastic pollution, with tourism infrastructure generating waste streams that often overwhelm local management capacities, particularly in developing nations with limited waste processing facilities (UNEP, 2023).

Table 1. Global ecotourism challenges and their local manifestations

Global challenge	Theoretical concern	Manifestation in Indonesian context	References
Greenwashing	Credibility gap between sustainability claims and actual practices	Certification systems not widely adopted; minimal verification of sustainability claims	(Cheng et al., 2022)
Overtourism	Exceeding ecological carrying capacity	Visitor management plans absent in 72% of tourist villages	(Nurjanah & Saepudin, 2021)
Plastic Pollution	Mismatch between tourism consumption and local waste management	Indonesia ranked 2nd globally for plastic marine leakage; tourism compounds this	United Nations Environment Programme (UNEP, 2023)
Community Marginalization	Benefit capture by external actors	Only 35% of tourism revenues retained locally in community-based tourism	(Fauzi et al., 2022)
Deforestation Pressure	Habitat loss for tourism infrastructure	1.2 million ha forest loss annually affecting ecotourism potential	(Gaveau et al., 2022)
Regulatory Fragmentation	Policy implementation gaps	Weak enforcement of Tourism Law No. 10/2009 at local level	(Kemenparekraf, 2023)

These global challenges manifest with particular urgency in Indonesia, a megabiodiversity nation whose conservation significance is matched only by the magnitude of its environmental threats. As home to 17% of the world's wildlife species and the world's third-largest tropical forest expanse, Indonesia's ecological stewardship carries global implications (Gaveau et al., 2022). Nevertheless, persistent deforestation driven primarily by agricultural expansion along with rapid land-use change and inadequate waste management infrastructure continue to threaten the ecological foundations of Indonesia's burgeoning ecotourism sector (Austin et al., 2023). The statistical proliferation of "tourist villages" (*desa wisata*) growing from 3,613 in 2022 to 4,714 in 2023 (Kemenparekraf, 2023)

signals a promising policy commitment to community-based tourism. However, this quantitative expansion has frequently outpaced the implementation of crucial environmental safeguards, including carrying capacity assessments, environmental impact evaluations, and integrated waste management systems (Nurjanah & Saepudin, 2021). The result is an emerging paradox: ecotourism development intended to conserve ecosystems may inadvertently be accelerating their degradation through unregulated growth and inadequate governance frameworks.

The governance of the Sanghyang Kenit ecotourism area in West Java presents a critical and illuminating case study within this complex landscape. Situated within the Citarum River Basin frequently characterized as one of the world's most polluted river systems, the site's ecological context immediately implicates it in pressing national and regional environmental restoration agendas. The explicit involvement of the Citarum Harum Task Force as a key governance actor underscores this direct linkage between local tourism management and broader watershed rehabilitation imperatives. More intriguingly, the central management role accorded to PT X, a state-owned enterprise in the energy sector, introduces a compelling paradox that merits critical investigation. This configuration presents a fundamental governance puzzle: how does an entity whose core operations are historically associated with significant environmental externalities (carbon emissions, habitat alteration) navigate the governance of a purportedly sustainable ecotourism venture? This apparent contradiction reflects broader tensions within Indonesia's sustainable development trajectory, where economic development imperatives and environmental conservation goals frequently exist in uneasy tension.

To deconstruct these multi-scalar governance complexities, this study adopts the theoretical framework of "access" as advanced by Ribot & Peluso (2020). This framework provides a sophisticated analytical lens that moves beyond conventional focus on property rights to examine the dynamic mechanisms including technology, capital, knowledge, authority, and social relations through which actors derive, maintain, and control benefits from resources. The theory's central concept of "bundles of power" offers a nuanced vocabulary for analyzing how inequality is produced and reproduced in environmental governance, making it particularly suited to examining the power-laden interactions between state, corporate, and community actors at Sanghyang Kenit. While Access Theory has been productively applied to forest governance (Sikor & Lund, 2020) and water conflicts (Boelens et al., 2023), its application to ecotourism governance remains limited, representing a significant theoretical gap in the literature.

This research consequently makes three distinct contributions to knowledge. First, it provides a critical empirical investigation of how global sustainability imperatives are translated, contested, and renegotiated within the specific political ecology of Indonesian ecotourism. Second, it advances theoretical understanding by applying and refining Access Theory within the understudied context of multi-stakeholder tourism governance, revealing how power operates through diverse mechanisms beyond formal authority. Third, it generates practical insights for policymakers and practitioners seeking to navigate the complex terrain of sustainable tourism development in contexts characterized by power asymmetries and competing institutional logics. By elucidating how configurations of access mechanisms ultimately shape socio-ecological outcomes, this study aims to contribute to more equitable and effective governance models for community-based ecotourism in Indonesia and beyond

2. Methods

2.1 Research design and approach

This study employed a qualitative case study approach to conduct a comprehensive investigation of the complex socio-ecological dynamics in Sanghyang Kenit's ecotourism governance, selected for its capacity to examine contemporary phenomena within real-life contexts where boundaries between phenomenon and context are blurred (Yin, 2018). This

approach allows for an in-depth understanding of the interactions between multiple stakeholders, including local communities, government institutions, and private sector actors, within a specific environmental setting. Furthermore, the qualitative design enables the exploration of perceptions, experiences, and power relations that shape decision-making processes and resource access. By focusing on a single case, the study is able to capture the uniqueness and contextual richness of ecotourism governance practices, while also generating insights that may be transferable to similar socio-ecological contexts.

2.2 Research location and time

The study was conducted from November 2024 to April 2025 in Rajamandala Kulon Village, West Bandung Regency, Indonesia. The research utilized purposive sampling to select this critical case, where community-based tourism intersects with corporate management and environmental restoration agendas. This location was considered particularly relevant due to its unique socio-ecological characteristics and the presence of multiple stakeholders involved in ecotourism development. Furthermore, the site reflects ongoing efforts to balance economic development with environmental sustainability, making it an appropriate context for examining governance dynamics in ecotourism.

2.3 Sampling technique and participants

The study employed purposive sampling to select relevant informants. A total of 25 key informants were involved, representing various stakeholder groups, including PT X, Karang Taruna, the Village Government, community leaders, and the Citarum Harum Task Force. These participants were chosen based on their direct involvement and knowledge of ecotourism governance in the study area. This selection ensured the inclusion of diverse perspectives necessary to comprehensively understand the dynamics of multi-stakeholder governance.

2.4 Data collection methods

Data collection was conducted using methodological triangulation through three main techniques: passive participant observation, semi-structured interviews, and document analysis. Observations were carried out to understand real-life interactions and governance practices. Semi-structured interviews provided in-depth insights from stakeholders, while document analysis included 15 secondary sources relevant to ecotourism governance and environmental management.

2.5 Data analysis

The analysis followed systematic qualitative procedures (Miles et al., 2014) and applied grounded theory techniques (Strauss & Corbin, 2003). The process involved three stages of coding: open coding, which identified 187 initial codes; axial coding, which grouped these codes into thematic clusters aligned with Access Theory frameworks; and selective coding, which integrated the findings into a core category, namely “negotiating access in multi-stakeholder ecotourism governance.” This iterative analytical process enabled the researchers to refine emerging patterns and ensure that the resulting interpretations were firmly grounded in the empirical data.

2.6 Research validity and ethics

Research trustworthiness was ensured through methodological and source triangulation, member checking, and maintaining audit trails. Ethical considerations were strictly observed, including obtaining informed consent from participants and ensuring confidentiality protection. These measures enabled a nuanced and credible exploration of

how access mechanisms—such as technology, capital, authority, knowledge, and social relations—are mobilized and contested within this socio-ecological context.

2.7 Research location map

Sanghyang Kenit is geographically situated along the Citarum River basin, an area that has undergone significant environmental restoration efforts under national programs such as Citarum Harum. The site is characterized by its karst landscape, river ecosystems, and increasing ecotourism activities, making it a strategic location for examining the interaction between environmental conservation and tourism development. Its accessibility from major urban centers in West Java also contributes to its growing role as a community-based ecotourism destination. Therefore, this location provides a relevant spatial context for analyzing how multi-stakeholder governance, environmental rehabilitation, and local economic initiatives intersect within a dynamic socio-ecological system.



Fig. 1. Location map of Sanghyang Kenit, Rajamandala Village, West Bandung Regency (Google Earth, 2025)

3. Results and Discussion

3.1 Interrogating sustainable development paradoxes: Hydrsopower, ecotourism and the politics of access in Sanghyang Kenit's contested landscape

The global pursuit of sustainable development has positioned community-based ecotourism as a strategic approach to reconcile biodiversity conservation with rural livelihoods (UNWTO, 2022). However, the implementation of such initiatives in developing economies frequently encounters complex challenges when intersecting with large-scale infrastructure projects, particularly in energy sectors prioritized for national development (Cheng et al., 2022) This research examines Sanghyang Kenit, an emerging ecotourism destination in West Bandung Regency, Indonesia, that exemplifies these tensions through its complex relationship with hydropower development. Located administratively in Rajamandala Kulon Village, Cipatat District, this site presents a compelling case of how global sustainability frameworks interface with local environmental governance amid competing resource claims.

Sanghyang Kenit's geographical and geological significance extends beyond its tourism potential. The area constitutes part of the ancient Citarum River system, characterized by unique limestone formations and millennia-old rock structures that hold both ecological

and cultural value (Siswanto et al., 2021). Etymologically, "Sanghyang" derives from local vernacular meaning "grand and noble," while "Kenit" describes the circular water flow patterns that define the cave hydrology. This geological uniqueness once supported pristine water quality that sustained local communities in Cisameng Village for domestic and agricultural purposes, establishing the area's historical significance within the socio-ecological system (Fauzi et al., 2022).



Fig. 2. Sanghyang Kenit Ecotourism Location
(Detik.com, 2024)

The transformation of Sanghyang Kenit's ecological character began with the development of hydropower infrastructure in the Citarum River Basin. PT X, as the primary operator, has developed cascading hydropower projects including the Saguling plant and the newer Rajamandala Hydropower Plant. While these projects contribute to Indonesia's renewable energy targets and emission reduction commitments (Ministry of Energy and Mineral Resources, 2023), their operation has fundamentally altered the hydro-ecological regime of Sanghyang Kenit. Research indicates that hydropower operations can significantly modify river morphology and water quality through flow regulation and sediment trapping (Kurniawan et al., 2018).

The ecological impacts manifest through two primary mechanisms: water quality degradation and discharge manipulation. Post-development monitoring has documented increased water turbidity and foam formation attributable to hydropower operations, restricting the water's suitability for recreational activities like swimming (Pratama et al., 2023). More significantly, the diversion of water flows to supply the Rajamandala Hydropower Plant has created periods of severely reduced discharge, sometimes resulting in near-complete drying of the Sanghyang Kenit watercourse. This hydrological intervention represents a fundamental shift from the area's historical function as a consistent water source for community needs.

The case demonstrates how infrastructure development creates new ecological constraints that challenge the sustainability premises of community-based ecotourism. The dependency of Sanghyang Kenit's tourism viability on hydropower operation schedules creates a power asymmetry that marginalizes local community interests by Peluso & Ribot, (2020). This configuration illustrates what scholars term "accumulation by dispossession" in political ecology, where community access to environmental resources is constrained by larger development priorities (Harvey, 2003; Robbins, 2020).

The situation at Sanghyang Kenit reflects broader global patterns where renewable energy infrastructure, despite its sustainability credentials, can generate localized socio-ecological conflicts (Smit & Pilifosova, 2003). The case underscores the imperative for

integrated watershed governance that acknowledges the interconnectedness of energy security, ecological conservation, and community welfare (Brown et al., 2021). Current management approaches that prioritize hydropower operations risk undermining both the ecological foundation of the tourism attraction and its potential contributions to local sustainable development.



Fig. 3. Water conditions in Sanghyang Kenit showing reduced water levels due to discharge requirements for the Rajamandala Hydropower Plant

This research contributes to understanding the complex interplay between global sustainability frameworks represented by both renewable energy transitions and ecotourism development and their local implementation challenges. It highlights the need for polycentric governance approaches that can mediate between competing resource uses while ensuring meaningful community participation in environmental decision-making (Armitage et al., 2023). The Sanghyang Kenit case offers critical insights for policymakers seeking to implement the Sustainable Development Goals in contexts characterized by multiple, and sometimes conflicting, sustainability objectives.

3.2 Deconstructing the political ecology of access: Corporate resource control versus community benefit flows in Sanghyang Kenit's ecotourism governance

The implementation of global sustainability frameworks within local environmental governance contexts represents one of the most pressing challenges in contemporary development praxis, particularly evident in the contested landscape of Sanghyang Kenit, West Java, where the theoretical promise of integrated environmental governance collides with the material realities of corporate power and resource control. This critical analysis employs Ribot & Peluso's (2003) Access Theory as an analytical lens to deconstruct how ostensibly neutral sustainability initiatives become reconfigured through existing power structures, revealing the fundamental tensions between Indonesia's renewable energy transition and its community-based tourism aspirations. The case exemplifies what scholars term the "localization paradox" of global sustainability frameworks where well-intentioned policies designed to promote ecological conservation and community welfare become systematically undermined by pre-existing institutional arrangements and power asymmetries that privilege certain actors while marginalizing others.

At the heart of this analysis lies the hegemonic control exerted by PT X, whose legal designation as a national vital object operator under Ministerial Decree No. 270/2022 creates an institutional architecture that fundamentally shapes the mechanisms of access in Sanghyang Kenit. This legal framework transforms the corporation from merely a resource

user into a de facto sovereign authority, wielding what Ribot & Peluso (2003) term "access through authority" the ability to control resources through legal and bureaucratic means. The implications of this designation extend far beyond technical management, creating what political ecologists characterize as a "state-corporate nexus" where environmental governance becomes subsumed within broader national development priorities, particularly energy security and infrastructure expansion. This configuration demonstrates how legal instruments, while appearing neutral, can function as mechanisms of exclusion that systematically disadvantage local communities while consolidating corporate control over ecological resources.

The application of Access Theory reveals how PT X control operates through multiple, interconnected mechanisms that collectively reconfigure the socio-ecological landscape of Sanghyang Kenit. First, "access through technology" manifests through the corporation's monopoly over hydropower infrastructure, which enables direct control of hydrological regimes determining when water flows, in what quantities, and with what quality characteristics. This technological control creates a fundamental dependency relationship, where the ecological conditions necessary for ecotourism become subject to the operational requirements of energy production. Second, "access through capital" allows the corporation to dictate the terms of tourism development, investing in infrastructure that serves its corporate interests while neglecting community priorities. Third, "access through knowledge" operates through the corporation's technical expertise and monitoring capabilities, which position it as the primary authority on environmental management while marginalizing local ecological knowledge.

The structural consequences of this access configuration are profound and paradoxical. Local communities, who possess historical relationships with the Sanghyang Kenit ecosystem, find themselves transformed from potential co-managers into what the corporation frames as "illegal users" of their own ecological resources. This reclassification represents what political ecologists term "accumulation by dispossession" the process through which common resources become enclosed and communities alienated from their traditional resource bases. The situation exemplifies the contradictions inherent in what scholars have identified as "green neoliberalism," where environmental initiatives become harnessed to market-oriented development models that prioritize corporate control over community welfare.

The hydrological manipulation central to this case demonstrates how environmental governance becomes instrumentalized for corporate interests. The diversion of water flows to supply the Rajamandala Hydropower Plant has created conditions of artificial scarcity in Sanghyang Kenit, producing what Brown et al. (2021) characterizes as "slow violence"—the gradual, attritional environmental damage that disproportionately affects marginalized communities. This hydrological restructuring has fundamentally altered the area's ecological character, transforming what was once a consistent water source supporting community livelihoods into a landscape of intermittent flows dictated by energy production schedules. The resulting ecological uncertainty undermines the very foundation of ecotourism while demonstrating how renewable energy infrastructure, despite its "green" credentials, can generate new forms of environmental injustice.

The case further reveals how global sustainability frameworks become locally reconfigured through what scholars term "governance assemblages", the complex arrangements of actors, institutions, and discourses that shape environmental management. The rhetoric of sustainable development gets deployed strategically by different actors: PT X emphasizes its contribution to renewable energy targets and emission reduction, while community groups highlight the ecological and social dimensions of sustainability. This discursive struggle over the meaning of sustainability reflects broader tensions in environmental governance, where technical definitions often prevail over more holistic understandings that incorporate social justice and community welfare.

The implications extend beyond Sanghyang Kenit to illuminate broader patterns in sustainability governance. The case demonstrates how sectoral approaches to sustainable development—with separate policies for energy, tourism, and environmental protection

create institutional silos that produce contradictory outcomes when implemented in shared landscapes. This fragmentation enables what scholars term "policy incoherence," where progress in one sustainability dimension (renewable energy) undermines progress in others (community development and ecological conservation). The situation calls for more integrated, watershed-scale governance approaches that acknowledge ecological interconnectedness and create mechanisms for mediating between competing resource claims.

Furthermore, the analysis reveals the limitations of technical solutions to what are fundamentally political challenges. Proposals for improved water management or tourism infrastructure, while potentially useful, fail to address the underlying power asymmetries that shape resource access and control. This suggests the need for more transformative approaches that engage directly with the political processes through which environmental decisions are made. As Ribot & Peluso (2003) argue, understanding access requires examining not just who has formal rights, but who actually controls the mechanisms that enable benefit flows precisely the dynamic so starkly illustrated in Sanghyang Kenit.

In conclusion, the Sanghyang Kenit case represents a microcosm of broader challenges in sustainable development governance. It demonstrates how global sustainability frameworks, when implemented within unequal power structures, can reproduce rather than transform patterns of marginalization. The Access Theory analysis reveals the multiple mechanisms through which corporate control operates, and how these mechanisms collectively reshape socio-ecological relationships in ways that prioritize energy security over community welfare. The case underscores the urgent need for governance approaches that directly address power asymmetries and create meaningful spaces for community participation in environmental decision-making. Only through such transformative approaches can sustainable development fulfill its dual promise of ecological integrity and social equity, moving beyond technical management to engage with the political foundations of environmental justice.

3.3 Interrogating the architecture of access: Power asymmetries and contested benefit flows in Sanghyang Kenit's community-based ecotourism governance

The emergence of Sanghyang Kenit as a community-based ecotourism initiative represents a complex negotiation between local livelihood strategies and global sustainability paradigms, yet critical analysis reveals how this seemingly organic development has become ensnared within hegemonic power structures that reproduce existing inequalities. The visual representation in Figure 1 delineates a governance architecture where PT X operates as the sovereign authority, wielding what Ribot & Peluso (2003) would characterize as "access through legal means and infrastructure control," while local actors the Tourism Awareness Group (*Kelompok Sadar Wisata*) and Rajamandala Kulon Village Government occupy subordinate positions as mere implementing agents rather than genuine decision-makers. This hierarchical configuration fundamentally problematizes the rhetoric of community-based management, exposing how global sustainability frameworks become locally reconfigured through existing power geometries that privilege corporate interests over community autonomy.

The transformation of Sanghyang Kenit from an agricultural landscape to a tourism site following its "discovery" during the 2018 Asian Games exemplifies what critical scholars term the "commodification of nature for development" a process where ecological resources become revalued through external recognition rather than community needs. This shift from farming to tourism represents not merely an economic transition but a fundamental reordering of socio-ecological relationships, where local communities must now negotiate their access to resources through corporate gatekeepers. The geological significance of Sanghyang Kenit's ancient rock formations and historical narratives, while providing marketable attractions, simultaneously becomes what political ecologists call "enclosed commons" resources that communities can access only through corporate permission.

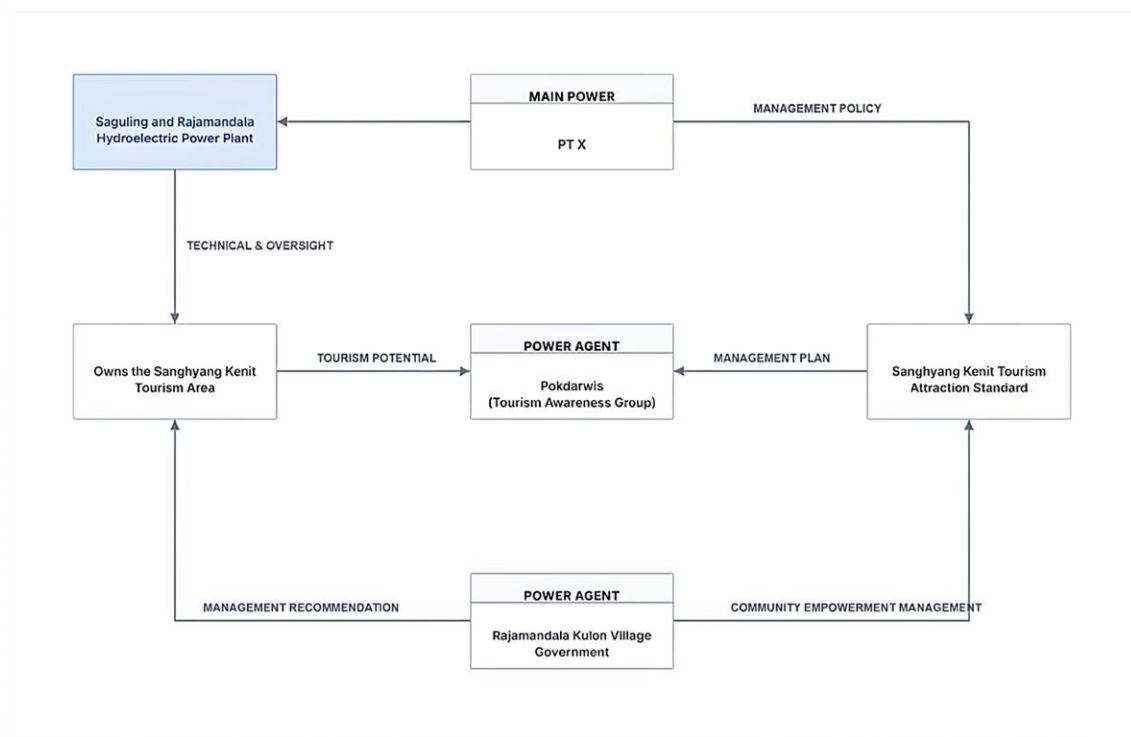


Fig. 4. Outline of the Sanghyang Kenit ecotourism management power model

Applying Ribot & Peluso's (2003) access framework reveals three critical tensions in this governance arrangement. First, the "potential resources" identified the geological formations and hydrological features that exist within PT X operational territory, creating what amounts to a corporate monopoly over the very ecological foundation of the tourism initiative. Second, the "benefits" generated through tourism economic opportunities, conservation awareness, and community development flow through channels tightly regulated by the corporation's technical supervision and management policies. Third, the "benefit flows" become structured through what the diagram depicts as technical recommendations and standardizations, effectively transforming community participation into implementational rather than decisional roles. The incorporation of the Citarum Harum Task Force adds another layer to this governance assemblage, introducing state environmental authority that further complicates community access while ostensibly addressing watershed conservation. This multi-scalar governance arrangement of corporate control, state environmental oversight, and local implementation creates what interpretive policy analysts might characterize as a "participatory facade," where community involvement is permitted in operational matters while strategic decisions remain with powerful external actors.

The hydrological dependency illustrated in the management framework represents perhaps the most profound power asymmetry. Community access to the tourism resource remains contingent on PT X's water release schedules from the Saguling Hydropower Plant, creating a relationship of structural dependency that mirrors broader patterns of resource control in Indonesia's development landscape. This arrangement demonstrates how renewable energy infrastructure, despite its sustainability credentials, can function as what Kinseng et al., (2018) terms "infrastructural power" the ability to shape social and economic possibilities through control of essential flows and systems. The budgetary constraints facing the village government, as mentioned in the source text, further illuminate how decentralized governance often operates within what critical scholars call "the austerity state" where local authorities bear responsibility for development initiatives without adequate fiscal autonomy. This fiscal limitation reinforces the power asymmetry, ensuring that even as the village seeks to enhance its original income through tourism, it remains dependent on corporate goodwill and technical oversight.

In conclusion, the Sanghyang Kenit case demonstrates how the implementation of community-based ecotourism within the framework of global sustainability paradigms becomes mediated through existing power structures that systematically advantage corporate and state actors over local communities. The governance architecture depicted in figure 1 reveals not an egalitarian partnership but a hierarchical arrangement where community participation occurs within strictly delineated corporate parameters. This analysis suggests that without fundamental restructuring of access mechanisms and benefit distribution, community-based ecotourism risks becoming what critical development scholars term an "anti-politics machine" depoliticizing resource conflicts through technical management while reproducing existing power asymmetries. For global sustainability frameworks to genuinely integrate with local environmental governance, they must engage more critically with the political economy of resource access and the power dynamics that shape benefit flows in contested landscapes.

3.4 Negotiating power, contesting access: The Transformation of local environmental governance in Sanghyang Kenit's community-based ecotourism

The implementation of global sustainability frameworks within local environmental governance contexts consistently reveals a chasm between participatory rhetoric and the entrenched realities of power distribution, a dynamic critically illuminated by the evolving governance of Sanghyang Kenit's community-based ecotourism initiative. This case exemplifies what scholars term the "localization paradox," where well-intentioned global norms are reinterpreted and reshaped by pre-existing local power hierarchies, often subverting their original emancipatory goals (Ojha et al., 2021). To deconstruct this phenomenon, our analysis employs Ribot & Peluso's (2003) Theory of Access, which provides a robust analytical lens for examining how "bundles of power" comprising technology, capital, authority, and knowledge are strategically reconfigured. In Sanghyang Kenit, this reconfiguration is starkly visible across two distinct historical phases: the pre-2018 embryonic stage, characterized by organic community stewardship, and the current institutionalized framework established post-Presidential Regulation No. 15/2018 on Citarum Watershed management. The transformation demonstrates that global sustainability imperatives are not simply adopted but are actively mediated and often captured by dominant local actors, leading to a condition of "participatory exclusion." In this state, community involvement is ceremonially acknowledged to legitimize governance processes, while substantive decision-making authority remains monopolized by state and corporate (Kurniawan et al., 2022). This creates a façade of inclusion that effectively neutralizes community agency, allowing powerful actors to maintain control over resource access and benefit flows while adhering to the procedural aesthetics of participation. The Sanghyang Kenit case thus serves as a microcosm of a broader global pattern, underscoring that without deliberate mechanisms to redistribute power, the institutionalization of sustainability can inadvertently reinforce the very inequalities it purports to resolve, a challenge noted in other contexts of community-based resource management in the Global South (Saito-Jensen & Klocker, 2021).

3.5 The evolution of access mechanisms: A comparative analysis of power bundles

Of particular analytical significance is the comparative framework delineated in Table 2, which meticulously charts the profound reconfiguration of what Ribot & Peluso (2003) term "bundles of power" within the ecotourism governance of Sanghyang Kenit, marking a decisive transition from a community-centric initiative to a state-corporate dominated institutionalized model. This reconfiguration is not merely operational but represents a fundamental restructuring of the very mechanisms of access and control, effectively redistributing the capacity to derive benefits from the ecological resource. The pre-2018 phase was characterized by a governance ecology where identity was rooted in cultural stewardship and local ecological knowledge, technology consisted of community-controlled

appropriate tools, and authority was derived from customary structures and horizontal social networks. However, the post-2018 institutionalization, catalyzed by frameworks like Presidential Regulation 15/2018, systematically dismantled this architecture, replacing it with a techno-bureaucratic regime. In this new order, community identity is reconstituted from cultural stewards to mere implementers, while corporate and state actors assume the roles of resource controller and environmental regulator, respectively.

Table 2. Reconfiguration of power bundles in Sanghyang Kenit ecotourism governance

Bundle of Power	Pre-2018 (Local initiative phase)	Post-2018 (Institutionalized phase)	Governance implications
Identity	Community as cultural stewards; PT X as energy operator	Community as implementers; PT X as resource controller; Citarum Task Force as environmental regulator	Shift from cultural to technical identities diminishes community's moral authority
Technology	Community-controlled appropriate technologies (rafting equipment, flashlights)	PT X-dominated hydro-infrastructure; Task Force monitoring systems; limited community access	Technological dependency creates structural inequality in resource management
Knowledge	Local ecological knowledge; historical narratives	Technical knowledge privileged; regulatory compliance knowledge	Epistemic injustice where local knowledge becomes subordinated to technical expertise
Capital	Community social capital; limited financial resources	State and corporate capital dominance; restricted community access to formal funding	Financialization of conservation marginalizes community-based resource management
Labor	Voluntary community labor; shared responsibilities	Bureaucratized division of labor; community as operational workforce	Labor commodification transforms communal practice into service provision
Market	Community-controlled local market access	Corporate-mediated market relations; restricted community market autonomy	Market subordination to corporate and state interests limits local economic empowerment
Social Relations	Horizontal community networks	Vertical accountability to PT X and Task Force; instrumentalized community relations	Social reciprocity replaced by hierarchical reporting relationships
Authority/Policy	Customary authority; local governance structures	Formal legal authority (Presidential Regulation 15/2018); corporate resource control	Legal pluralism gives way to state-corporate policy dominance

This shift precipitates a form of epistemic injustice where locally generated knowledge is subordinated to privileged technical and regulatory knowledge, thereby diminishing the community's moral authority and legitimacy in the governance process. Concurrently, the monopolization of hydro-infrastructure technology by PT X creates a structural dependency, cementing an asymmetric power relationship where the very viability of the ecotourism venture is contingent upon corporate operational schedules. This is further exacerbated by the financialization of conservation, where state and corporate capital dominance marginalizes community-based management and restricts local access to formal funding streams. The commodification of labor transforms voluntary communal practice into a bureaucratized workforce, while market relations become corporately mediated, severely constraining local economic empowerment. Ultimately, the vertical accountability to PT X and the Citarum Harum Task Force instrumentalizes community relations, replacing social reciprocity with hierarchical reporting, and formal legal authority supersedes legal

pluralism, culminating in a state-corporate policy dominance that exemplifies the paradoxical outcomes of institutionalizing sustainability within pre-existing power asymmetries.

3.6 *The paradox of institutionalized sustainability*

The comparative analysis reveals a fundamental paradox in Sanghyang Kenit's governance evolution: while the post-2018 institutionalization ostensibly strengthens environmental protection through formal frameworks, it simultaneously weakens community autonomy through what political ecologists term "bureaucratic territorialization." The incorporation of the Citarum Harum Task Force, while addressing watershed-scale environmental concerns, introduces an additional layer of state supervision that further distances local communities from meaningful decision-making power. This configuration exemplifies what is identified as the "will to improve," where well-intentioned state interventions systematically undermine local resource management systems (Cheng et al., 2022).

The technological dimension demonstrates particularly stark power asymmetries. While communities retain operational technologies for tourism activities, PT X maintains ultimate control over the hydro-ecological conditions that determine the very viability of ecotourism through water discharge regulation. This creates what energy scholars term the "production of scarcity" where corporate control over essential resources (water flows) ensures continued community dependency despite apparent operational autonomy. The knowledge sphere reveals equally troubling patterns. The privilege of technical knowledge about water management and regulatory compliance marginalizes the community's historical and ecological knowledge about Sanghyang Kenit's cultural significance. This epistemic injustice represents what Sikor & Lund, (2020) calls "cognitive injustice" the systematic devaluation of alternative knowledge systems in environmental governance.

3.7 *Structural access mechanisms: The architecture of exclusion and opportunity*

The structural dimension of access in Sanghyang Kenit manifests through what Ribot & Peluso (2003) identify as technology, capital, market, and authority—mechanisms that collectively create an institutional architecture privileging corporate interests while simultaneously opening limited spaces for community engagement. PT X Indonesia Power's control over hydrological infrastructure represents a quintessential example of "access through technology," where the corporation's monopoly over water regulation determines the very ecological conditions that enable tourism activities. This technological dominance creates a fundamental dependency relationship, as articulated by a Karang Taruna member: "*The water that goes down is regulated by PT X, but as a result of our negotiations, we are given the opportunity to manage the water that is down. Hopefully in the future PT X will pay more attention to activities in Sanghyang Kenit*" (N, Member of the Sanghyang Kenit Karang Taruna Rajamandala Kulon Village). This statement reveals the paradoxical nature of structural access: communities can participate in tourism management, but only within parameters defined by corporate control of essential resources.

The capital and market dimensions further illustrate how structural mechanisms shape community access. While Karang Taruna has developed market access through tourism networks and local enterprise development, their economic agency remains constrained by what political economists term "circumscribed autonomy" the ability to operate within defined boundaries without challenging underlying power structures. As one community leader noted, "We have built relationships with tour operators and the local tourism office, but ultimately our activities must align with PT X's operational requirements."

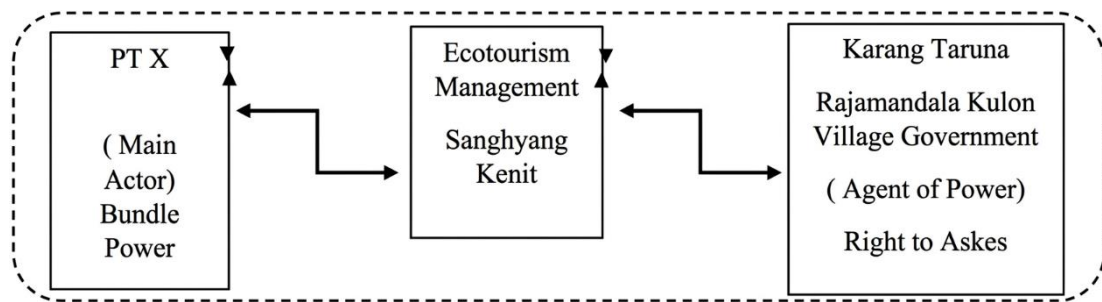


Fig. 5. Power access in ecotourism management between PT X and Karang Taruna with the Rajamandala Kulon village government

3.8 Relational access mechanisms: The social fabric of negotiated governance

Complementing structural mechanisms, relational access operates through social identity, trust, and patronage networks that enable communities to navigate formal constraints. The emergence of what local actors term "trust-based cooperation" between PT X and Karang Taruna represents a critical relational mechanism that mitigates the rigidity of structural hierarchies. This patronage relationship, while unequal, creates spaces for negotiation and benefit distribution that would otherwise be unavailable within purely formal governance arrangements.

The interview data reveals how social identity functions as a relational access mechanism: "As local youth organization members, we have credibility in negotiating with both the company and the village government. Our position as bridge-builders allows us to secure management rights that might not be available to external actors." This statement illustrates how community actors leverage their social positioning to create what social movement scholars term "tactical agency": the strategic use of available resources to advance collective interests within constrained environments.

3.9 Power integration: The dialectics of corporate-community governance

The integration of structural and relational access mechanisms produces a complex governance dialectic in Sanghyang Kenit. While PT X maintains ultimate authority as the "main actor" controlling key resource bundles, the delegation of management responsibilities to Karang Taruna creates what governance theorists term "interdependent autonomy" where community actors exercise operational independence while remaining ultimately accountable to corporate priorities. This configuration challenges conventional understandings of community-based ecotourism, suggesting a more nuanced interpretation of what Boelens et al., (2023) terms "environmentality" the process through which communities become incorporated into environmental governance systems while simultaneously reshaping those systems through everyday practices. As evidenced in the Sanghyang Kenit case, the community has not merely accepted corporate hegemony but has actively negotiated spaces for autonomy through strategic engagement with both structural and relational access mechanisms.

4. Conclusions

This study has critically examined the complex interplay between global sustainability frameworks and local environmental governance through an in-depth case study of Sanghyang Kenit's community-based ecotourism initiative. By applying Ribot & Peluso's (2003) Theory of Access, the research reveals how power asymmetries and access mechanisms fundamentally shape the implementation of sustainable tourism paradigms in Indonesia's contested rural landscapes. The findings demonstrate that the integration of global sustainability principles with local governance arrangements is not merely a

technical challenge but a deeply political process mediated through existing power structures and resource control dynamics.

The research contributes theoretically by demonstrating the utility of Access Theory in analyzing multi-stakeholder tourism governance, showing that power operates through formal authority, technological control, knowledge privileging, market access, and social relations. For policymakers and practitioners, the study offers practical insights that effective integration of sustainability frameworks requires polycentric governance models, equitable benefit-sharing mechanisms, and meaningful community participation in strategic decisions, moving beyond technical management to address the political foundations of resource access and benefit distribution. While the single-case study design limits generalizability, future comparative and longitudinal research across multiple community-based ecotourism initiatives is recommended. Ultimately, the Sanghyang Kenit case underscores the urgent need for transformative approaches that directly engage with power dynamics and access mechanisms, creating institutional spaces where global sustainability frameworks can be genuinely co-produced through meaningful dialogue among corporate, state, and community actors to fulfill ecotourism's dual promise of environmental conservation and social equity.

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Author Contribution

The author was involved in formulating the research idea, designing the study, collecting and analyzing the data, and preparing the manuscript. The author took part in writing, revising, and giving final approval for the manuscript to be published.

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Conflicts of Interest

The author declare that there are no financial conflicts of interest. However, the data used in this study were obtained from a company (anonymized as PT X) to maintain confidentiality. The author confirm that this does not influence the objectivity of the research.

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