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Erasing Indigenous Topography: Colonial Aestheticization, Land Appropriation, and Ecological Afterlives in the Eastern Himalayas

Abstract: *This paper examines the historical and ongoing effects of colonial and postcolonial land appropriation on the ecological and cultural landscapes of the Eastern Himalayas, focusing on Darjeeling and Sikkim. These mountain ecosystems, essential for biodiversity and environmental balance, have undergone significant changes due to two centuries of extraction and development activities. Using postcolonial ecocriticism and Indigenous knowledge systems within Cultural Geography, the study examines how colonial practices of aestheticisation and commodification turned Himalayan landscapes into leisure destinations and various other sites of extraction. It examines how hill stations, administrative infrastructures, and missionary institutions altered the way Indigenous people interacted with the land, resulting in long-lasting ecological effects such as deforestation, loss of biodiversity, and glacial lake outburst floods. The paper also examines how monocultural tea plantations in Darjeeling and hydropower projects in Sikkim maintain exploitative land use models, leading to the displacement of Indigenous ecological relations. Using Tim Ingold's concept of the "dwelling perspective," it highlights Lepcha, Bhutia, and Limbu views of land as sentient and interconnected, emphasising the need to recognise Indigenous landscapes as sites of resistance and resilience amid ongoing ecological and cultural challenges.*

Keywords: Land Appropriation, Indigenous Topography, Eastern Himalayas, Ecological Disruptions, Colonial Aestheticization

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Erasing Indigenous Topography: Colonial Aestheticization, Land Appropriation, and Ecological Afterlives in the Eastern Himalayas

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Introduction

Mountain ecosystems like the Eastern Himalayas are vital for biodiversity conservation and the provision of essential ecosystem services. This region is particularly significant due to its rich biodiversity and the intricate interdependence between human activity and natural systems. As Das et al. (2023) emphasize, the Eastern Himalayas' varied climatic zones enhance their capacity to support diverse ecosystem services, underscoring the urgency of safeguarding their ecological integrity. Historically, the region has sustained a fragile equilibrium between indigenous communities and their environment, rooted in sustainable land-use practices and deep ecological knowledge. With its steep altitudinal gradients and ecological diversity, the Eastern Himalayas offer critical services including water regulation, soil conservation, and cultural sustenance. However, this balance has been increasingly disrupted over the past two centuries by colonial land appropriation, deforestation, and rapid urban development processes later amplified by post-colonial development policies. To understand the present scenario of land, it is crucial to go back to colonial times from where land was transformed to serve the interests of the colonizers. These transformations have compromised both ecological resilience and cultural heritage, making the region more vulnerable to climate-induced hazards. This paper examines how land appropriation, environmental degradation, and developmental pressures of the colonial era has specifically impacted the ecological integrity and indigenous topographies of Darjeeling and Sikkim. Although such changes are evident across the broader Eastern Himalayas, these two regions offer distinct yet interconnected insights into the historical and contemporary consequences of land-use transformations. Notably, there remains a gap in research that bridges the historical evolution of land-use change with its present-day ecological and cultural repercussions and land appropriation in these specific contexts. This paper is structured in two parts: the first examines how colonial presence in the Eastern Himalayas facilitated the appropriation of land through the establishment of administrative infrastructures, hill stations, and extractive economies that reconfigured both territorial boundaries and Indigenous relationships to land. It investigates how the colonial aestheticization of the landscape as a site of picturesque retreat served to legitimize these spatial and environmental interventions. The second part explores the long-term ecological consequences of such appropriations, focusing on issues such as deforestation, biodiversity loss, glacial lake floods and

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environmental imbalance, while also considering how these outcomes continue to marginalize Indigenous ecological knowledge and practices in the present day.

Darjeeling, a mountain town in the state of West Bengal, in the Himalayan foothills offers one of the earliest and most striking examples of colonial land appropriation in the Himalayas. Under British rule, large tracts of indigenous land were converted into commercial tea plantations, displacing agro forestry practices that were ecologically embedded and locally managed. This shift not only altered the regional economy but also triggered deforestation, soil erosion, and the erosion of traditional ecological knowledge (Ray & Chowdhury, 2023). In subsequent decades, population growth and unregulated urban expansion have compounded these effects. Continued deforestation and haphazard construction have destabilized hydrological systems, leading to biodiversity loss and an increase in landslides and water scarcity (Chettri et al., 2018).

In contrast, Sikkim though relatively insulated from colonial land policies has undergone rapid environmental changes in recent decades due to infrastructural expansion and climate change. Among the most urgent concerns is the retreat of glaciers and the growing number of unstable glacial lakes, direct outcomes of global warming. Studies of South Lhonak Lake indicate a significant rise in Glacial Lake Outburst Flood (GLOF) risks, endangering downstream settlements (Sattar et al., 2021). The October 2023 Sikkim floods, triggered by a glacial lake burst, highlight how climate variability, compounded by developmental encroachment, has intensified environmental hazards in the region (Sikkim Floods Briefing Note, 2023). Recent studies reinforce the rising frequency and severity of GLOFs across the Eastern Himalayas. Kaushik et al. (2024) identifies South Lhonak and Khanchung Lakes as high-risk sites, with potential peak discharges exceeding 8000 m^3/s in worst-case scenarios. Their models reveal that over 10,000 people and critical infrastructure including hydropower stations and settlements like Chungthang are highly vulnerable. They advocate for urgent early warning systems and context-sensitive mitigation strategies grounded in local geography and social risk profiles.

Similar assessments by Rinzin et al. (2023) in Bhutan's Lunana glacier complex highlight transboundary dimensions of the GLOF threat. Lakes like Thorthormi Tsho and Lugge Tsho are projected to release over 300 million m^3 of floodwater, threatening populations up to 150 kilometers downstream. These findings underscore how glacial retreat, unstable moraines, and developmental intrusions into fragile zones amplify regional vulnerability. Contemporary disaster planning often ignores indigenous ecological knowledge, reproducing a form of epistemic violence. Sacred no-go zones, ritual warning signs, and community governance systems which was once central to ecological balance remains excluded from formal environmental policy. As a result, even well-meaning conservation efforts risk replicating colonial paradigms of exclusion. Additionally, hydropower projects and road development have accelerated deforestation, destabilized river systems, and raised the risk of landslides, deepening local vulnerability (Arora, 2009).

The cases of Darjeeling and Sikkim together reveal how both colonial and contemporary land transformations have generated enduring ecological instability in the Eastern Himalayas. Darjeeling exemplifies how colonial land reordering disrupted indigenous tenure and resource systems, while Sikkim illustrates how modern development imperatives continue to degrade ecologies. In both contexts, the loss of indigenous topographies has not only altered landscapes but also eroded traditional knowledge systems that once sustained ecological harmony (Ray & Chowdhury, 2023; Arora, 2006). This paper contends that while separated by historical moment, these processes converge in shaping today's ecological crises. By focusing on Darjeeling and Sikkim, this research highlights the intersections between historical land transformations and contemporary ecological disruptions, emphasizing the urgent need to reconsider land-use policies that prioritize ecological resilience. The impacts of colonial land appropriation, deforestation, and rapid urbanization cannot be viewed in isolation but must be understood as part of a larger historical trajectory that continues to influence environmental stability and human livelihoods. As extreme weather events and climate-induced disasters become more frequent, the erasure of indigenous landscapes not only threatens biodiversity but also places local communities at increasing risk. Recognizing the intricate relationship between land, history, and ecology is essential for rethinking conservation strategies and advocating for policies that restore, rather than further disrupt, the delicate balance of the Eastern Himalayas. The paper also argues how the colonial practice of land appropriation is evident even in the present times as the world continues to de-colonize from the past. To understand this argument it is important to draw attention to the British Raj and their obsession with mountains and their nostalgia to recreate a space in the highlands that closely bears a resemblance to their home, for it is their nostalgia that paved way to reiterate and compromise the topography of the mountain towns which is seen even today.

Methodology: The research employs the methodologies of Cultural Geography (Oaks 2008), (Cosgrove 2008), (Bayers 2003) to examine how individuals live in, experience, and shape specific environments. Focusing on the majestic Himalayan landscape of India, the paper explores how this region has historically served as a site for the colonizer's diasporic imagination and is depicted as a mountainous terrain that closely resembles their homeland. The significance of the Himalayas is framed through two contrasting perspectives: that of the colonizer as the outsider, and the indigenous communities as insiders. For the colonizers, the mountains held multifaceted value. They were initially perceived in two primary ways: as a commodified resource that bolstered the colonial economy, and as an aesthetically pleasing refuge that offered physical recuperation from the tropical climate and a secluded space for social retreat. In contrast, for the indigenous people, the mountains continue to be far more than inert geographical entities; they are the embodiment of a lived religion, where nature is revered as a manifestation of the divine. Therefore indigenous understanding of the Himalayas stand in

contrast to the colonial abstraction of the mountains and this dichotomy reveals deeper ideological differences in how environments are understood, valued, and lived in. To further facilitate the arguments Behavioral geographers like Garling (1993) and Pile (2010) have stressed on the importance of connecting and studying spaces in relation to what people feel for the environment, for each other, for objects in landscapes and in specific situations. Even as Indigenous scholarship gains visibility and influence as seen in the works of Pradhan (2007) Chaturvedi (2011), Ray (2023), Subba (2023) much of the existing research on the Himalayas continues to be shaped by dominant Western narratives. To address this imbalance and fill the existing gaps, it is essential to integrate Indigenous perspectives and epistemologies into the discourse and also understand the colonial presence and post colonialism not as some 'abstract theoretical concept' but as the very landscape upon which the lives of individuals and societies are shaped (Ryan 2004). To address the paper's central concern that is, the impact of land appropriation and ecological disruption on Indigenous topographies the methodology integrates oral history collection**,** community engagement**,** and archival research**.** In small mountain states like Sikkim, which shares borders with Tibet and China, oral stories related to sacred mountain spaces are deeply intertwined with geopolitical histories, spiritual cosmologies, and cultural memory. These stories are shaped not only by the legacy of the region's status as a closed Buddhist kingdom, but also by ongoing territorial aggression and historical militarization**.** Oral narratives in this context function as mnemonic codes of everyday spirituality**,** embedding ethical relationships to land in story, prayer, taboo, and ritual. Therefore, drawing on Cosgrove's (2008) theory of landscape as cultural image and Pile's (2010) emphasis on emotional geographies**,** this study interprets Indigenous accounts of land loss not merely as documentation of environmental degradation, but as affective expressions of dispossession, cultural rupture, and ecological mourning**.** These frameworks enable a reading of oral testimonies as both emotional geographies, anchored in memory, loss, and identity, and as resistance narratives that assert Indigenous presence and epistemology in the face of colonial and developmental erasures. It is important to note the contribution of the elderly in the collection and transmission of these oral stories, as they are often the primary custodians of intergenerational knowledge and how the death of these indigenous elders and storytellers doesn't just mean the loss of individuals, but the loss of entire ecological and spiritual knowledge systems. Such instances underscore the urgency of recording and preserving oral narratives that have been passed down through generations. As Indigenous scholars from the Himalayas, it becomes not only our responsibility but our epistemic duty to safeguard these stories to ensure they are not only remembered but also understood from within our own perspectives, grounded in place, language, and lived experience.

Erasing Indigenous Presence, Claiming Land: Colonial Knowledge and the Construction of an 'Uninhabited' Himalaya

The Eastern Himalayan regions, such as Darjeeling and later Sikkim, presented an exciting opportunity for discovery to ambitious colonizers. The Himalayan landscape was perceived not as thriving spaces of indigenous life but as empty, unclaimed territories awaiting their intervention. Various representatives of the empire be they historians, mountaineers, botanists, and photographers have documented the region with little or no acknowledgment of the people who had long inhabited and shaped it. Hooker (1854), Kincaid (2005), and Banerjee (2014) provide extensive accounts of the Eastern Himalayas, but their records primarily focus on the physical geography or depict the region as a picturesque destination whose land could be appropriated to recreate the nostalgia of a European home. This colonial framing was not merely a passive oversight but an active strategy of erasure, one that justified both the monopolization of natural resources and the subjugation of indigenous communities who possessed deep knowledge of the land. By rendering these spaces "uninhabited" in their narratives, the British administration could more easily expand its authority, controlling not only the terrain but also the people whose lives and livelihoods depended on it. This assertion of power was not confined to the establishment of sanatoriums alone but extended into every aspect of governance, resource extraction, and cultural dominance. The colonial construction of the Eastern Himalayas, as Didur (2013) argues, not only framed the region through the lens of retreat and leisure but also enacted a systematic appropriation, comodification, and instrumentalization of land and environment. This gaze effectively marginalized Indigenous topographies, contributing to both economic disenfranchisement and the erasure of Indigenous narratives.

In this context, it is crucial to recognize the role of missionaries who were instrumental in the physical and ideological transformation of indigenous spaces and as they acted as active agents of the Empire, who accelerated land appropriation by reshaping indigenous spaces to align with colonial interests. British Raj in India has been characterized with a number of colonial architects and institutions that were instrumental in the overall functioning of the Raj. Apart from headquarters and clubs from where the Raj operated, other colonial spaces have also accelerated and consolidated their overall presence. As such, convents went on to serve the religious and evangelist purpose of the Empire, catering to ameliorate the prevailing conditions of people of India. Regarded as colonial architectural marvels, convents played a pivotal role in shaping the discourse of education and Victorian morality from 17th century onwards. They initially served as enclosed spaces exclusively for girls, aiming to instill Victorian notions of modesty and behavioral norms and gradually went on to become the representatives of the Empire promoting the Christian enterprise and laying foundation of evangelism in colonial India. The establishment of convents by Christian missionaries in the colonial era were marked as sites of domination and symbols of colonial power that were instrumental in bringing people

under the control of the Empire. This control was exerted culturally through the imposition of a homogenous religion and language. The prime objective of getting the natives converted by making them engage with various aspects of modernity included the setting up of convents in mountainous regions, sacred sites as replicas of European diasporic imagination. The necessity to facilitate this desire meant moving beyond urban lowlands to hitherto 'unexplored' highlands which ultimately led to the establishment of convents in the mountainous region of the Eastern Himalayas. As the Christian presence required to be felt all across the colony with the establishments of churches and convents, it was the imperial duty of the missionaries to take their religion to the mountains and use the Himalayan spaces to set up convents and schools to mark their territorial expansion. The presence of convents in the indigenous landscape of the Eastern Himalayas served two distinct purposes. First, in the European imagination, they were religious institutions that offered modernity to the so-called "awkward" people of the colonies through the colonial tools of education and healthcare. Second, they functioned as political and economic extensions of the Empire in India. Besides offering a respite from the tropical heat of the plains, the Eastern Himalayan town of Darjeeling provided a strategic space from which missionaries could pursue their mission and reconfigure the indigenous topography to suit their purposes. By setting up these structures in Darjeeling and other Himalayan regions, missionaries claimed and redefined the land by replacing indigenous spatial practices and belief systems with Christian morality, Victorian discipline, and colonial infrastructure. Nuns were expected to do pioneering works in the wilderness and distant lands and this could be achieved only through established and functioning convents. The convents apart from being a model of education also went on to become concrete spaces from where the Himalayan region could be kept under the surveillance of the Empire. As such the indigenous spaces were appropriated and reshaped to align with colonial architecture. However, it is important to note that the Himalayan terrain did not allow for a straightforward replication of the convents found in the plains. The geographical challenges, extreme climate, lack of proper road connectivity, and uneven terrain made the construction and operation of such institutions in the indigenous lands pave especially difficult. This complexity is reflected in several missionary novels set in Darjeeling. For instance, in Anglo-Indian novelist Rumer Godden's *Black Narcissus* (1939) widely read as a missionary novel, the convent differs significantly from those in the plains. The obstacles faced by the nuns in the novel highlight how the realities of topography and geographical resistance impeded their mission. This geographical resistance underscores how land appropriation in the mountains was both a physical and ideological struggle, revealing the limits of colonial power. Even as missionaries sought to civilize and modernize, the land itself acted as an obstacle, complicating their mission and subverting the easy transplantation of imperial structures.

Through the Utilitarian ideology that extended to who they considered to be underdeveloped and uncivilized, their civilizing mission has been expansively re-signified in terms of its terrain as they

went on to expand their base from the harsh tropical climates laden with diseases and dirt to much cooler places in the hills. From exhibiting control and religious seclusion in the plains to identifying marginalized spaces that were exoticized, the setting of convents at these high places (Cosgrove 2008) questions the definition of space and its territorial ownership. Even today the convents have been absorbed in the Indian landscape and haven't totally de-colonized in the contemporary times as it is still functioning and run by nuns who continue to project the importance of women education, stress on neatness, cleanliness, obedience and modesty and at the same time spread the word of God. By aestheticizing indigenous spaces as picturesque and idyllic landscapes, colonial agents imposed a romanticized vision that rendered these regions passive and consumable. This aesthetic framing not only facilitated the transformation of the Eastern Himalayas into sites of leisure and retreat for both temporary visitors and permanent settlers, but also justified interventions that ultimately disrupted the region's ecological balance and marginalized indigenous presence and knowledge systems, even in contemporary times.

Transforming Sacred Landscapes: Ecological Consequences of Land Appropriation in the Indigenous Himalayas

Colonial and postcolonial land appropriation in Darjeeling and Sikkim did not merely transfer ownership; it restructured the ecological foundations of the region. Indigenous landscapes once governed through community-based stewardship embedded in spiritual and cultural frameworks were dismantled to serve extractive political and economic agendas. These transformations triggered cascading environmental disruptions that continue to threaten both biodiversity and the indigenous communities who once safeguarded it. Communities such as the Lepcha, Bhutia, and Limbu historically practiced intricate land-use systems grounded in reciprocal relations with nature. This was made evident in the exchange of oral history dialogues which explores the traditional, ecological of scared landscapes and intergenerational memory of environmental change. Shifting cultivation, sacred groves, and altitudinal zoning were not only ecological techniques but cosmological expressions treating mountains, rivers, and forests as sentient beings. Land was not a commodity, but a relational space governed through ritual, taboo, and collective responsibility. But colonialism disrupted these relational ecologies by commodifying land and converting it into extractive frontiers.

The spiritual and ecological worldviews of Himalayan communities resonate with what Tim Ingold terms the *dwelling perspective*: humans live not apart from the land but through active, embodied engagement with it. In this framework, landscapes are not passive backdrops but *taskscapes*—dynamic fields of activity shaped by memory, movement, and skilled practice (Ingold, 2000). Sacred mountains such as Khangchendzonga, along with ritual groves and riverine sites, are examples of topographies shaped through what Ingold calls *enskillment* a knowledge grown through direct, embodied

participation. These lived and storied landscapes are often erased by colonial and developmental paradigms that reduce land to a static, mappable, and extractable object. In contrast, indigenous epistemologies reflect *sentient ecologies*: systems of moral and perceptual attunement to the land, where subsistence, spirituality, and kinship are deeply intertwined. Such relational ecologies are fundamentally at odds with state-led infrastructure initiatives, which fragment and commodify sacred geographies, recasting vibrant, living ecosystems as mere zones of risk or sites for developmental exploitation.

In Darjeeling, large-scale conversion of forested lands into tea plantations drastically disrupted ecological equilibrium. Biodiverse forests were replaced with monocultures, erasing habitat variety, altering pollination dynamics, and allowing invasive species to outcompete native flora. Deforestation associated with tea cultivation reduced soil moisture retention and heightened erosion and landslide risks in an already fragile terrain. Oriented toward profit, these plantations severed sacred ecological ties, transforming forested lands into extractive labor zones. These ecological ruptures did not end with colonialism. Post-independence development in Sikkim, through hydropower, road expansion, and militarization has involved indiscriminate blasting, tunneling, and river diversions, fragmenting alpine and riverine ecosystems. River rerouting, compounded by glacial retreat under climate change, has destabilized water availability and harmed aquatic biodiversity across both human and non-human life worlds. The 2023 Sikkim floods, triggered by a glacial lake outburst, exemplify how altered land-use regimes and climate volatility converge with devastating effects in a region increasingly stripped of its ecological buffers.

Moreover, the ideological erasure of indigenous ecological knowledge has intensified these disruptions. Colonial narratives that constructed Himalayan landscapes as “empty” justified not only physical appropriation but epistemic violence, rendering local knowledge systems illegible to state planning and conservation paradigms. Consequently, contemporary environmental policies often ignore traditional warning signs, sacred no-go zones, and indigenous indicators of ecological stress. The marginalization of this knowledge has led to mismanaged afforestation schemes, poorly sited infrastructure, and conservation efforts that alienate communities from their own land.

The ecological ruptures unfolding in Darjeeling and Sikkim are not merely the result of material transformations, but also of a profound epistemological dislocation. As Gadgil, Berkes, and Folke (1993) emphasize, indigenous communities possess diachronic ecological knowledge accumulated through generations of observation, ritual, and practice that fosters biodiversity and reinforces ecosystem resilience. Their concept of the “knowledge-practice-belief complex” highlights how land was not simply used but spiritually inhabited and regulated through communal governance systems such as sacred groves, rotational harvests, and species-specific taboos. These culturally rooted ecological safeguards, often dismissed as unscientific by colonial and postcolonial authorities, in fact

align closely with modern ecological principles of sustainability. The erasure of these frameworks in the Eastern Himalayas has led to a weakening of natural buffers and increased vulnerability to hazards such as landslides, water scarcity, and glacial lake outburst floods. Reintegrating indigenous ecological knowledge into conservation and land-use policy is thus not just a cultural imperative but a vital ecological strategy for restoring the region's resilience in the face of accelerating climate and developmental pressures (Gadgil et al., 1993).

Ultimately, the appropriation of indigenous topography in Darjeeling and Sikkim has rewritten the ecology of the region where landslides, species loss, water scarcity, cultural dislocation are not isolated symptoms, but interconnected effects of an enduring disjunction between imposed development models and localized ecological wisdom. The current ecological crisis is, therefore, not simply a result of environmental mismanagement but of the historical erasure of indigenous ecological agency. Land appropriation in the indigenous Himalayas has significant ecological consequences, affecting biodiversity, ecosystem services, and local livelihoods. Indigenous communities play a crucial role in sustainable land management and biodiversity conservation, but their practices are often poorly documented and undervalued (Reang et al., 2024). The Himalayan region, known for its rich biodiversity and fragile ecosystems, is particularly vulnerable to anthropogenic pressures and climate change (Sandhu & Sandhu, 2014; Xu et al., 2009). Indigenous agricultural practices, such as Piper agro forestry in the Indian Eastern Himalayas, demonstrate the potential for sustainable land management that conserves biodiversity while improving livelihoods (Reang et al., 2024). However, land-cover changes in the region, driven by various factors including land appropriation, pose severe threats to ecosystem integrity and increase ecological risks (Cui et al., 2022). The interconversion of cropland and forestland is a distinctive feature of land-cover changes in the Himalayas, with high ecological risk areas primarily distributed in high elevation mountains (Cui et al., 2022). The ecological consequences of land appropriation are further exacerbated by climate change, which disproportionately affects indigenous communities dependent on natural resources (Aryal et al., 2014). The cascading effects of rising temperatures and loss of ice and snow in the region impact water availability, biodiversity, and ecosystem boundaries (Xu et al., 2009). These changes, coupled with land appropriation, threaten the economic viability of indigenous villages and lead to asymmetric pressures on resident populations, particularly women, elderly, and young people (Everard et al., 2018). To address these challenges, there is a need for integrated approaches that combine biodiversity conservation with livelihood security, such as the development of managed bioprospecting, guided ecotourism, and payment for ecosystem services schemes (Dhiman & Muthanarasimha, 2023; Everard et al., 2018).

Fikret Berkes' *Sacred Ecology* (2012) provides a crucial theoretical lens through which to understand the erasure of Indigenous topographies in Darjeeling and Sikkim. Berkes conceptualizes Traditional Ecological Knowledge (TEK) not merely as a body of facts but as a dynamic knowledge–

practice–belief system rooted in long-term, place-based observation and spiritual relationships with the land. Such systems, as he argues, foster ecological resilience by embedding ethical obligations, sacred boundaries, and adaptive practices into everyday interactions with the environment. In the Eastern Himalayas, Lepcha and Bhutia cosmologies similarly encoded ecological stewardship through sacred lakes, no-go zones, and seasonal mobility patterns. These were not primitive or romanticized traditions, but what Berkes calls "culturally transmitted systems of sustainability." However, colonial and postcolonial land appropriation efforts through plantations, militarization, and tourism infrastructure have fractured these epistemologies, replacing them with utilitarian models of land management and top-down development. Drawing on Berkes' critique of the science–TEK binary, this paper argues for a dialogic approach to conservation, where Indigenous knowledge systems are recognized not as supplemental but as essential to both ecological restoration and climate adaptation in the Himalayan context.

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