Chapter 1
Fostering Transboundary Cooperation Through Other Effective Area-based Conservation Measures (OECMs) in the Eastern Himalaya

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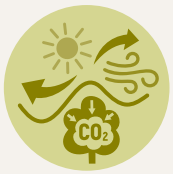
Figure 1: Major river basins and four global biodiversity hotspots in the Hindu Kush Himalaya (Source: Chaudhary et al., 2023)



Climate Resilience & Carbon Storage

Community Benefits & Co-Leadership

Cultural & National Identity

Innovation & Knowledge Sharing

Species Recovery

Introduction

The Hindu Kush Himalaya (HKH) extends 3,500 kilometres and covers all or parts of eight countries: Afghanistan, Bangladesh, Bhutan, China, India, Nepal and Pakistan (Figure 1). The HKH region is situated at the top of the world and has the largest reserves of ice after the polar regions. Often called the 'water tower of Asia', the region contains the headwaters of ten major river systems of Asia.

Within the HKH region lies a transboundary region along the Nepal-India border that is of conservation concern. The Panchthar-Ilam-Taplejung (PIT) corridor in eastern Nepal and the adjoining government-managed forests and agricultural landscapes on the Indian side (Figure 2) are part of the larger Kangchenjunga-Singalila Complex in the Eastern Himalaya, one of the most biologically diverse regions on Earth.

OECMs are areas outsides protected areas that are managed in ways that deliver lasting biodiversity conservation, along with ecological, cultural and socio-economic benefits (Jonas et al., 2024). This transboundary region on the Indo-Nepal border is well-suited for the OECM designation. It is an ecologically significant landscape known for its rich biodiversity and unique habitats and serves as core habitat for the red panda (*Ailurus fulgens*), listed as endangered on the IUCN Red List of Threatened Species. The species is legally protected under Appendix I of Nepal's National Parks and Wildlife Conservation Act (1973), and Schedule I of India's Wildlife Protection Act (1972). This transboundary area hosts the densest population of red panda in Nepal, accounting for around 25 per cent of the country's total population. The corridor is also home to several other threatened species such as clouded leopard (*Neofelis nebulosa*), Himalayan black bear (*Ursus thibetanus laniger*), and hundreds of bird species. The diverse habitats ranging from forests and grasslands to wetlands are critical for maintaining ecological integrity and supporting a diversity of wildlife.

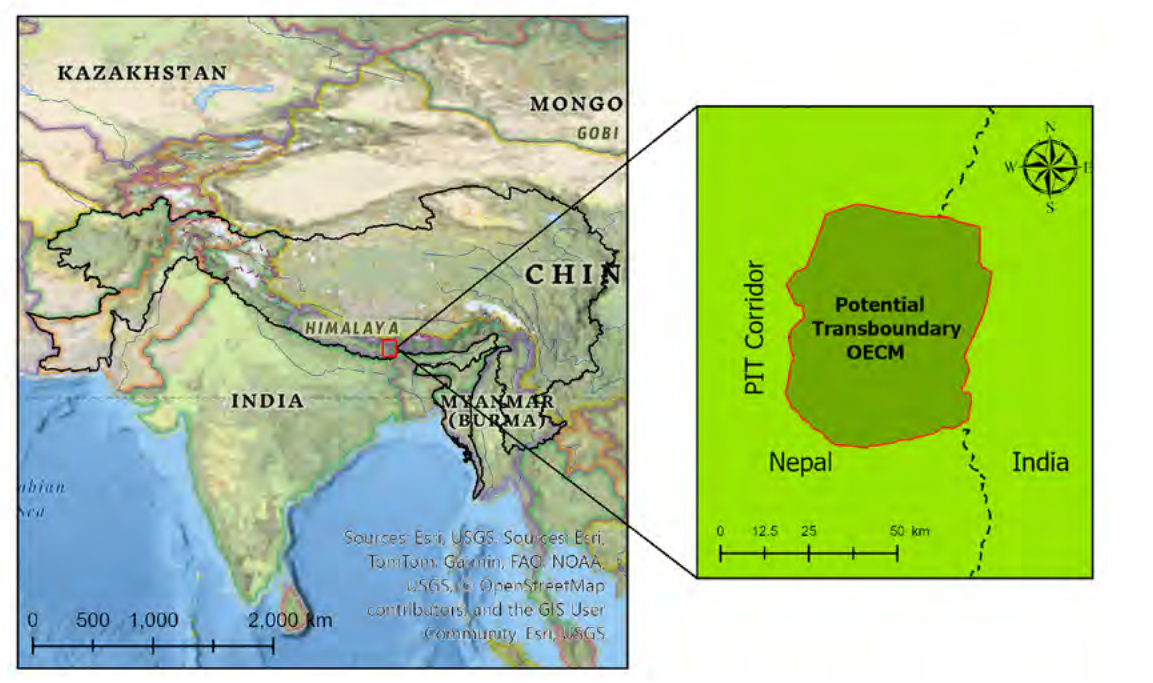


Figure 2: The transboundary area across Nepal and India in the Eastern Himalaya. (Source: ICIMOD)

The region is under increasing pressure from climate change, pollution, and biodiversity loss. Rapid warming, deforestation, water insecurity, pollution, and land degradation are accelerating the loss of ecosystems and species. Since 1500, the HKH has lost an estimated 70–80 per cent of its original habitat, and projections suggest that a quarter of endemic Himalayan species could face extinction by the end of this century (Wester et al. 2019).

The area is inhabited by Indigenous peoples and local communities (IPLCs) who rely heavily on forest resources for their livelihoods. They engage in traditional activities such as firewood collection, livestock grazing, and harvesting medicinal herbs and non-timber forest products. Conservation initiatives in the region have played a transformative role in the lives of these communities, empowering them to become forest guardians and conservation ambassadors. Their involvement has strengthened red panda conservation efforts and cultivated a deeper sense of ownership and stewardship over local natural resources.

Many IPLCs in the HKH have experienced the adverse impacts of exclusionary approaches where decision-making and access to resources by local communities is denied. This often conflicts with traditional conservation ethics and livelihoods. As conservation evolved, it moved beyond exclusionary approaches and recognized that for many of these communities, conservation is not new—it is a way of life.

The vision of this transboundary OECM is to conserve the area as an ecologically connected landscape, recognizing and valuing Indigenous-managed sites and traditional practices that play a vital role in sustaining red panda habitats. The approach integrates biodiversity conservation with the preservation of Indigenous knowledge, culture, and stewardship. Key goals include:

- Recognition of Indigenous stewardship: Identifying and supporting Indigenous-managed lands that contribute to red panda conservation.
- Landscape-level conservation: Maintaining ecological connectivity through habitat restoration and management across the transboundary region.
- Community empowerment: Strengthening the role of Indigenous Peoples and local communities as conservation leaders and guardians.
- Knowledge and awareness: Promoting conservation education rooted in traditional ecological knowledge.
- Sustainable livelihoods: Supporting eco-tourism and other nature-based livelihoods to diversify livelihoods and reduce pressure on forest resources.

This large-scale conservation vision is rooted in the long-standing efforts of IPLCs, who have used traditional practices, deep ecological knowledge, and cultural values to contribute significantly to the conservation of biodiversity, including the red panda. Despite

Suspension Bridge in Passu Cones Mountain Range, Pakistan, Hindu-Kush Himalaya landscape. © Adobe Stock

increasing threats such as deforestation, habitat degradation, and illegal wildlife trade, IPLCs have continued to protect and sustainably manage their lands. Building on this legacy, the vision seeks to recognize and support IPLCs as key stewards of the landscape. It aims to create a model of conservation that honours their coexistence practices and integrates community-led approaches. The Kunming-Montreal Global Biodiversity Framework (GBF) offers an opportunity to formally recognize and support community-led conservation practices. It serves not as a new directive but as a framework to legitimize and scale what IPLCs have been practicing for generations—conserving biodiversity through knowledge, cultural stewardship, and sustainable interaction with nature.

Leadership and Participation

The International Centre for Integrated Mountain Development (ICIMOD), a regional intergovernmental organization promotes sustainable development and mountain ecosystem resilience in the HKH. It supports regional cooperation, integrates science with policy, and empowers local communities to address challenges like climate change and biodiversity loss. ICIMOD is leading and facilitating regional cooperation for this potential transboundary OECM across Nepal and India. It works with both central and state/provincial governments to advance sustainable and inclusive conservation.

In Nepal, the Red Panda Network is leading red panda conservation efforts in the landscape. In India, ICIMOD is partnering with the Ashoka Trust for Research in Ecology and the Environment, a leading Indian environmental research and conservation organization. The initiative also brings together a diverse group of partners with clearly defined roles:

- Local communities: At the heart of the initiative, IPLCs serve as forest guardians, actively monitoring and protecting red panda habitats through traditional knowledge and community-based conservation practices.
- Government agencies: The Government of Nepal, particularly the Ministry of Forests and Environment, plays a key role in policy support and implementation. Partnerships with Indian government bodies are also being developed.
- International Convention and Conservation Organizations: Secretariat of the Convention on Biological Diversity (CBD), World Commission on Protected Areas of the International Union for Conservation of Nature through funding, technical expertise, and global advocacy.
- Academic institutions: Universities and research centres provide critical scientific input, supporting biodiversity monitoring and ecological research in the region.

ICIMOD's conservation efforts in the region prioritize equity and inclusivity, with dedicated programmes that actively engage women and marginalized groups, equipping them with skills and supporting alternative livelihood opportunities. Moreover, the initiative emphasizes the importance of respecting Indigenous knowledge by integrating traditional

Table 1. Contribution of the envisioned transboundary OECM to global biodiversity targets

GBF Target	Project Contribution
Target 2: Restore 30% of all Degraded Ecosystems	Enhancing community stewardship in the transboundary OECM area to restore degraded and bare areas.
Target 3: Protected Areas and OECMs	Establishing the area as a transboundary OECM that will contribute to achieve the target of conserving at least 30% of terrestrial areas by 2030.
Target 21: Indigenous Peoples and Local Communities	The involvement of IPLCs in conservation efforts will ensure their rights are recognized and their traditional knowledge is integrated into conservation practices.
Target 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all	Building the capacity of women, youth and IPLCs to lead policy development and decision making.

ecological practices into conservation strategies, while recognizing and upholding the rights and cultural heritage of IPLCs.

Because the initiative is still in the planning phase, efforts are being made to ensure that a full range of stakeholders are meaningfully involved from the outset. This includes government institutions from Nepal and India, IPLCs, NGOs, research organizations, and international partners.

A regional task force comprising government institutions from both Nepal and India will oversee landscape-level coordination, with ICIMOD facilitating regional cooperation and dialogue. At the local level, the approach will be inclusive, decentralized, and community-based, engaging Indigenous Peoples and local communities as key partners in managing and conserving the transboundary area.

Impact

The envisioned transboundary OECM will enhance both human and ecological resilience in the face of climate change through a multi-faceted approach. By protecting biodiversity, particularly the red panda and its habitat, the initiative helps preserve ecosystem functions that are vital for climate adaptation and ecological stability. Promoting sustainable livelihoods, based on eco-tourism and sustainable use of non-timber forest produce, reduces pressure on natural resources and supports economic resilience for local communities. Additionally, empowering IPLCs, especially youth as forest guardians fosters local stewardship, strengthens social cohesion, and builds the capacity to respond to climate-related challenges collectively and effectively.

Our envisioned work will contribute to climate resilience primarily through large-scale habitat restoration in the PIT corridor (Figure 2). By restoring forests and planting native species, we aim to enhance carbon sequestration, which helps mitigate climate change. The creation of connected and continuous habitats supports species movement and adaptation to shifting environmental conditions, strengthening ecological resilience. Additionally, the use of adaptive management at local and transboundary scales ensures that conservation strategies are responsive to climate impacts and evolving conditions. Together, these efforts not only safeguard biodiversity but also support the long-term resilience of local communities and ecosystems in the face of climate change.

Enabling Conditions

Strong collaboration among diverse stakeholders, including governments at the local, state, and national levels, strong support of IPLCs, NGOs, academic institutions, and international conservation partners could form a strong foundation for these efforts. The willingness and support of local and state governments are especially crucial in facilitating policy implementation and resource allocation.

Community engagement is central to success; the active participation of local communities as forest guardians and conservation ambassadors ensures that conservation initiatives are inclusive, grounded in local knowledge, and sustainable. Funding and support from international conservation organizations, government agencies, and donors provide essential resources for habitat restoration, community training, and awareness campaigns.

A red panda (*Ailurus fulgens*) in the forests of the Hindu Kush Himalaya. This charismatic and endangered species depends on intact high-altitude ecosystems, and over a quarter of Nepal's entire red panda population is found within this vast transboundary landscape. © Adobe Stock

Nepal and India have aligned their national priorities with the GBF, which is increasingly reflected in each country's National Biodiversity Strategies and Action Plans. Both countries are in the process of launching their national guidelines on OECMs, which will provide further support for landscape-level conservation initiatives. National policies that promote climate resilience, sustainable development, and the recognition of the rights and contributions of IPLCs create a strong and enabling policy environment for our work.

Additional enabling conditions include growing regional cooperation and political commitment, technical and financial support from international partners, and heightened global focus on biodiversity and climate challenges. Just as importantly, the traditional ecological knowledge and conservation values of IPLCs continue to be a powerful force driving long-term, landscape-level conservation in the HKH.

Lessons Learned, Successes, and Challenges

The project has successfully engaged IPLCs in conservation efforts, ensuring that strategies are culturally appropriate and sustainable. It has fostered strong community ownership and stewardship. Additionally, capacity-building initiatives have strengthened the skills and awareness of local communities, government agencies, and partner organizations, enabling them to better understand OECMs. A key milestone was bringing together diverse stakeholders to collaboratively propose the transboundary OECM, laying a solid foundation for long-term, cross-border conservation success.

Key barriers are fragmented policies, limited funding, and initial mistrust due to exclusionary conservation histories. These should be addressed through inclusive planning processes, cross-border cooperation, and long-term capacity building among stakeholders.

There is a need for formalised transboundary governance structures (Jonas et al., 2024), sustained and diversified financial mechanisms, and greater integration of Indigenous knowledge systems into national and regional conservation frameworks.

Key challenges remain in formalizing transboundary governance and fully integrating Indigenous knowledge and rights into national policies on OECMs. Habitat degradation from illegal activities and unsustainable resource use continues to threaten the area. Climate change impacts demand ongoing monitoring and flexible management. Securing long-term, diversified funding is critical. Overcoming these barriers will require continued cooperation among governments, communities, and partners, along with strong policy support and innovative financing.

Long-Term Financial Sustainability and Durability

Long-term financial sustainability should be ensured through diversified funding sources, including international organizations, government grants, private donors, and corporate partners. Community-based eco-tourism such as guided red panda tracking and birding tours, and cultural tourism will be promoted and gradually handed over to local communities, supporting local enterprises and providing sustainable income while strengthening their role in conservation. Sustainable livelihood programmes, including agriculture, handicrafts, and value-added non-timber forest products could help reduce dependency on forest resources. Incentive mechanisms like biodiversity or carbon credits could be explored for long-term financial support.

Policy Recognition and Implications

This initiative contributes directly to the Nationally Determined Contributions of both Nepal and India under the United Nations Framework Convention on Climate Change by promoting forest restoration, biodiversity conservation, and climate resilience. It aligns with and supports the implementation of GBF Targets (Table1). At the national level, the work is increasingly reflected in both countries National Biodiversity Strategy and Action Plans (NBSAP) under the CBD. Regionally, the initiative supports policy dialogue and cooperation in the HKH.

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Disclaimer

The views expressed in this report are those of the authors and do not necessarily reflect the views of ICIMOD or its partners.

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