Biodiversity finance in Nepal

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A fair share of biodiversity finance? Perspectives from developing countries

Key messages

Developed countries have committed to provide at least $20 billion of biodiversity finance a year by 2025, increasing to at least $30 billion a year by 2030. While achieving this quantitative target is important, so is the quality of that finance. This overview of Nepal’s experience with biodiversity finance is one of three studies examining the experience of recipient countries, which must finance pressing development priorities and biodiversity action at the same time.

Nepal’s location and rugged geography make it extraordinarily biodiverse, with six distinct biomes ranging from the Great Himalayas to the Terai, sub-tropical lowland plains. A quarter of the country’s territory is in protected areas, and local communities are engaged in conservation, especially through community forest user groups. However, human-wildlife conflicts are also increasingly common.

International finance for biodiversity in Nepal totalled just under US$119 million in 2012–2021 – almost all grants from bilateral or multilateral sources, mainly the United States, with large fluctuations from year to year. Nepal has struggled to raise the funds needed to achieve its biodiversity goals – domestically or internationally – but it has provided sustained budget support, over US$50 million per year in the past five years. Private-sector investments in biodiversity mainly involve tourism and are concentrated around Chitwan National Park and Annapurna Conservation Area.

Two other key challenges for Nepal are that most international biodiversity finance flows through entities outside the government. This leaves large gaps that must be funded with domestic resources and creates significant coordination challenges.
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About this publication

In 2022, the countries that are Party to the Convention on Biological Diversity, the main multilateral governance entity for biodiversity, adopted the Kunming-Montreal Global Biodiversity Framework to address the growing challenges posed by biodiversity loss. The Framework commits Parties to a list of specific targets, one of which is for developed countries to provide at least $20 billion a year for biodiversity by 2025, increasing to at least $30 billion a year by 2030. ODI has produced a report seeking to strengthen accountability and raise awareness by apportioning responsibility for the delivery of the $20 billion a year among developed countries (Pettinotti et al., 2024).

While the quantity of biodiversity finance is important, so is its quality. Not meeting the yearly $20 billion goal, or meeting it with unpredictable, fragmented or expensive finance, has very real implications for developing countries. This overview of Nepal's experience with biodiversity finance is therefore one of three studies examining the experience of recipient countries, which must finance pressing development priorities and biodiversity action at the same time. The other country studies in this series look at the experiences of Mexico (Guzmán et al., 2024) and Namibia (Brown and Amutenya, 2024).

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The state of biodiversity in Nepal

Nepal is part of the eastern Himalayan biodiversity hotspot, a land of sharp contrasts at the transition point between the Palearctic and Indo-Himalayan realms. Its high mountain region, at elevations between 4,877 and 8,848 metres, holds eight of the world’s 14 highest summits, including Mount Sagarmatha (Everest). Beneath the snowy, icy Great Himalayas lie the more temperate Mahabharat and Churia ranges and their valleys, which make up almost two-thirds of the country. The southernmost part of Nepal is a thin belt of lowland plains called the Terai, with sub-tropical climate.

On less than 0.1% of the Earth’s land surface, Nepal contains six biomes, as many as 35 forest types and 118 distinct ecosystems, hosting almost 12,000 species of plants, 208 mammals, 867 birds, 651 butterflies and almost 4,000 moths, among others (MoFSC, 2014). The mountain region is particularly species-rich, with large numbers of endemic species (Joshi and Joshi, 2022), while Bengal tigers, one-horned rhinoceros and elephants can be found in parts of the Terai. Medicinal and aromatic plants are also plentiful, with over 220 species identified in Khaptad National Park alone, in the west. Nepal is rich in crop biodiversity as well, with 400 species and sub-species of horticultural crops, including 45 fruits, and many wild relatives of cultivated crops.

Yet Nepal also has 131 species that are listed as threatened, 23 of which are critically endangered (IUCN, 2024, Table 5). The biggest threat to Nepal’s biodiversity is habitat loss and degradation, mainly linked to human encroachment (MoFSC, 2014). As of 2021, Nepal was home to 29.2 million people, with a population growth rate of 0.92% per year, and an estimated 62% of the workforce was employed in agriculture. Nepal is a Least Developed Country, one of the poorest in the world, and large shares of the population not only grow their own food, but also depend on forests for fuelwood (MoFSC, 2014). By 1992, deforestation had left Nepal with tree cover on just about 26.2% of its land area (Fox, 2019). By entrusting many forests to communities while also creating protected areas, Nepal nearly doubled its forest cover by 2016, to 44.9% (Cassidy, 2023).

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1 This description draws on the detailed overview provided by the National Trust for Nature Conservation on its website: www.ntnc.org.np/about-us.
2 Also see overview on the CBD website: www.cbd.int/countries/profile?country=np.
3 See 2021 national census data: https://censusnepal.cbs.gov.np/results.
4 See World Bank data, based on International Labour Organization estimates: https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=NP.
5 Gross national income (GNI) per capita in 2022 was just US$1,340, just over one-tenth that of China and well below India’s; see World Bank data: https://data.worldbank.org/indicator/NY.GNP.PCAP.CD?locations=NP-IN-CN.
Biodiversity stewardship in Nepal

Nepal has a long history of conservation, starting with laws in 1957 and 1962 that nationalised forests and put them under state protection and, in 1973, the National Parks and Wildlife Conservation Act.\(^6\) With the Forests Act 1993, the government adopted a new approach that centred the needs and responsibilities of local communities, launching a community forestry programme that is credited with a large share of the gains in forest cover and density since (Pandey and Pokhrel, 2021; see also Smith et al., 2023). About three-fifths of Nepal’s forest area, some 3.5 million ha, had been identified as suitable for this approach, and today, more than 22,000 local groups manage a combined 2.3 million ha, mainly in the Mid-Hills – over a third of Nepal’s total forest cover (Fox, 2019).\(^7\)

Nepal also has 20 protected areas – 12 national parks, six conservation areas, a wildlife reserve and a hunting reserve – as well as buffer zones around protected areas. Together, these areas represent about 80 out of 118 ecosystems found in the country and cover almost a quarter of the total land area (DNPWC, 2023), at all elevations: from Sagarmatha National Park, a UNESCO World Heritage Site that includes the 8,848-metre-tall Mount Everest,\(^8\) to Annapurna Conservation Area in the mountains, which spans 7,629 km\(^2\) across five districts, to Bardia and Banke national parks in the Terai, home to Bengal tigers and rhinoceroses (NTNC, 2023).

Nepal has prioritised conservation since ratifying the UN Convention on Biological Diversity (CBD) in 1993. It adopted its first national biodiversity strategy in 2002, followed by an implementation plan in 2006 and then the National Biodiversity Strategy and Implementation Plan 2014–2020 (MoFSC, 2014), which also includes a longer-term vision. It focused on six themes: protected areas, forests outside protected areas, rangelands, wetlands, agriculture and mountains, and also covered 15 cross-cutting themes, including gender and social inclusion and climate change impacts and adaptation. Nepal is currently preparing a new National Biodiversity Strategy and Action Plan (NBSAP) aligned with the Kunming-Montreal Global Framework on Biodiversity, with support from the United Nations Development Programme (UNDP).\(^9\)

Nepal’s Constitution, adopted in 2015, calls for a series of policies to protect the environment and ensure the sustainable use of natural resources for present and future generations (Government of Nepal, 2015). The Constitution also created a federal system, and since then, responsibility for biodiversity stewardship has been shared across levels of government (MoFE, 2018a). The national forest policy, national parks and wildlife reserves, wetlands and carbon trade are under federal oversight, while the states manage national forests, and different aspects of conservation

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6 This section is based on a retrospective in MoFE (2018a).
7 A 2016 satellite imaging study estimated total forest cover at 6.63 million ha; the Forest Resource Assessment of Nepal, estimated 5.96 million ha of forest and 0.65 million ha of shrubland.
8 See https://whc.unesco.org/en/list/110/.
and wildlife management are handled by the federal, state and local authorities. Even at the federal level, biodiversity governance spans multiple institutions, and non-governmental organisations (NGOs) and international organisations and the private sector are active as well.

Protected areas are established and managed through systematic processes outlined in legislation, and they are managed by multiple entities under the Ministry of Forests and Environment (MoFE), including the Department of National Parks and Wildlife Conservation (DNPWC) and the Department of Forest and Soil Conservation. The National Trust for Nature Conservation (NTNC), established by law in 1982 as an autonomous, non-profit organisation, manages three major protected areas as well as numerous biodiversity projects across the country and plays key roles in research, cultural heritage protection, ecotourism, education and sustainable development. Under the National Parks and Wildlife Conservation Act, 30–50% of revenues from protected areas are shared with local communities to support conservation and improve livelihoods, with particular attention to marginalised groups (MoFE, 2018a).

Conservation in Nepal combines top-down and bottom-up approaches. The government plays a central role, setting policies, regulations and frameworks and enforcing laws on conservation, but it also works closely with local communities and the private sector to achieve conservation goals. The private sector is most involved through tourism in protected areas; revenues are often reinvested in conservation activities and community development projects. Local communities are engaged in conservation in multiple ways, but most notably through community forest user groups (CFUGs).

CFUGs operate under agreements with the government that grant them legal rights and responsibilities for managing designated forest areas (MoFE, 2018a). Community participation is essential for the success and sustainability of conservation interventions, so they can draw on local knowledge and also ensure that people can use natural resources sustainably to support their livelihoods. However, there have been several challenges, often linked to limited financial resources and technical capacity. There is also a need to strengthen the institutional capacities of domestic organisations.

Indeed, while – as noted above – community forestry has greatly increased Nepal’s tree cover and forest carbon stock, it is now widely seen as falling short of its potential to improve livelihoods (Paudel et al., 2022). The emphasis on managing forests to meet human needs has also led to large-scale planting of monocultures, mainly pines, for timber (Joshi, 2023a). That has created ‘green deserts’ with little undergrowth vegetation, without the food that wildlife needs to survive. With millions of people living close to wildlife in search of food, human–wildlife conflicts have significantly increased, particularly near community forests and protected areas (Paudel et al., 2022).

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10 See https://ntnc.org.np/about-us.
People are legally entitled to compensation when wildlife damage crops or injure or kill livestock or humans. The losses add up quickly. In 2022 alone, for example, more than US$12,000 was paid out to households near the Gaurishankar Conservation Area as relief for the loss of 174 animals to common leopards, two human injuries by Himalayan black bears, and some crop damages (NTNC, 2023). Overall, between fiscal 2019 and 2023, US$5.16 million was paid out in compensation for losses to wildlife (DNPWC, 2019; 2020; 2021; 2022; 2023). Despite years of efforts to reduce these conflicts, the costs continue to rise, creating substantial financial burdens. Anger and resentment also build up, undermining conservation efforts. New guidelines introduced in July 2023 aimed to reduce bureaucratic hurdles by allowing affected people to claim compensation from provincial forest offices, but they have yet to be fully implemented due to funding issues (Joshi, 2024).

At the same time, there have been several successful community-based conservation initiatives (Joshi, 2023b). For example, in the Annapurna Conservation Area, positive relationships with local communities have led to reduced poaching, biodiversity preservation, community-based resource management plans and the establishment of forest and nurseries. In Project Punde Kundo, in eastern Nepal, local communities took responsibility for protecting red pandas and their habitat, leading to the establishment of the red panda corridor (Williams et al., 2011). Communities have also played a key role in creating wildlife corridors in southeastern Nepal and protecting the habitats of species including Bengal tigers, Asian elephants, pangolins and sloth bears. The NTNC plays a pivotal role in fostering community-based conservation through Conservation Area Management Committees, Buffer Zone User Committees, anti-poaching groups and other activities (NTNC, 2023).

In contrast, the government has raised significant concerns by taking militarised approaches to conservation in many protected areas, deploying thousands of soldiers (see, e.g., Ghale, 2018; Dhakal, 2023). Indigenous communities have been particularly affected. A report by Amnesty International (2021) focused on Chitwan and Bardiya National Parks showed forced evictions, denial of ancestral land rights, arbitrary arrests and use of lethal force by the Army within protected areas, violating human rights. The military presence in these areas, which began with the government’s efforts to re-establish control in rural areas after the civil war of 1996–2006, has led to an increased securitisation of conservation, with significant impacts on local communities’ traditional practices of forest resource use (Dongol and Neumann, 2021).

11 See www.ntnc.org.np/project/annapurna-conservation-area-project-acap.
12 See https://communityconservation.org.
Financing biodiversity in Nepal

Domestic spending on biodiversity

For a Least Developed Country like Nepal, financing biodiversity conservation with domestic resources creates an enormous burden. The cost of implementing the 2014–2020 NBSAP was estimated at US$673 million (MoFSC, 2014), with 51% (US$370 million) expected to come from the government, 25% from donors, 10% from NGOs, and the rest from the private sector and other sources. However, only US$171 million had been spent as of 2023 (BIOFIN, 2023), and the NBSAP targets were only partly achieved. The intention to mobilise financial resources from various sources has not been realised.

Nepal’s Sixth National Report under the CBD (MoFE, 2018b) showed only 22 out of 77 targets (28%) were on track to be achieved by 2020, while there was insufficient progress on another 39 (51%), and no overall progress for 14 (18%). Funding was a major constraint for implementing the Nepal Biodiversity Strategy (2002) and the government anticipated the same problem with the NBSAP (MoFE, 2018a). The National Biodiversity Trust Fund – not to be confused with the NTNC – which the NBSAP said would be established by 2016 (MoFSC, 2014), still does not exist.

More recently, Nepal has created a Biodiversity Finance Plan for 2022–2030, with a view to achieving the country’s vision to 2050; it estimates finance needs at US$83.7 million per year and has a target to raise $51.4 million per year (BIOFIN, 2023). Figure 1 presents budget allocations for biodiversity-relevant government units and programmes for the past five fiscal years.

Figure 1 Government of Nepal’s biodiversity-relevant budget allocations under the Ministry of Forests and Environment, fiscal years 2019/20 to 2023/24

Source: Authors’ analysis of budget data (‘Red Book’) for each fiscal year (MoF 2019; 2020; 2021; 2022; 2023).

Note: This budget is the combination of budget head relevant to biodiversity that includes DNPWC, botany research and watershed protection for the respective fiscal years).
The data show an overall decline in biodiversity finance – including government funds, grants and loans – over the five-year period, from about US$123 million in 2019/20 to US$91.8 million in 2023/24. The government’s own support for MoFE varied but held relatively steady for the first four years, but declined in the most recent fiscal year. Commitments to biodiversity in particular from the government’s internal sources totalled US$266 million over the past five years, always exceeding US$50 million per year. This demonstrates the government’s ongoing dedication on biodiversity conservation, despite challenges in the overall funding.

Other ministries and departments also contributes to biodiversity conservation and management in Nepal. The Environment Protection Fund is established in accordance with the Environment Protection Act, 2019 (Section 31) for the protection of environment, prevention and control of pollution, climate change management and protection of the national heritages serving as a funding mechanism in the country (MoFSC, 2014). However, the lack of sector-based categorisation and monitoring complicates the tracking of biodiversity finance, and funds may inadvertently be counted multiple times under different categories.

**Private spending on biodiversity**

Private sector involvement in protecting and promoting biodiversity in Nepal remains limited, despite the government’s engagement efforts. However, private investment in hospitality-related businesses near conservation areas greatly affects where tourists go. Some areas receive a majority of visitors – 85% go to Chitwan National Park and Annapurna Conservation Area in particular.

This uneven distribution results in missed opportunities for ecotourism and revenue generation in less explored areas, highlighting the need for targeted conservation efforts and for promoting sustainable development (MoFE, 2018a). There is little engagement of the private/corporate sector in payment for ecosystem services (PES) initiatives in Nepal, for instance (MoFE, 2018b). The self-financing model exemplified by the Annapurna Conservation Area demonstrates how protected areas can sustain themselves financially while promoting conservation goals (NTNC, 2023). The collaborative efforts among various actors demonstrate a shared commitment to protecting the country’s biodiversity. By working together, they can leverage their respective strengths to promote sustainable development and protected area management.

**International biodiversity finance**

International biodiversity finance commitments to Nepal totalled just under US$119 million in 2012–2021, as shown in Figure 4. Except for one US$543,000 grant from the Swedish Postcode Lottery in 2018, all the funds came as grants from bilateral or multilateral sources. Nearly two-thirds, US$75.5 million, came from the United States, which has supported a range of conservation
and ecosystems-based climate change adaptation activities. The US has allocated another US$33 million for biodiversity-related projects in 2022–2027.\textsuperscript{13} The Global Environment Facility was Nepal’s second-largest biodiversity funder in the past decade, at US$16.3 million.

**Figure 2** Annual international biodiversity finance to Nepal, by type of finance (commitments, in million USD)

As the US-funded work shows, climate and biodiversity finance often overlap in Nepal – though climate objectives are often emphasised. The Green Climate Fund has committed US$27.4 million towards a US$33.7 million project in the Gandaki River Basin that aims to enhance the resilience of communities and ecosystems, for instance.\textsuperscript{14} The project is led by the International Union for Conservation of Nature (IUCN), with NTCN and the government.

The latter highlights one more challenge for Nepal: Most international biodiversity finance flows through entities outside the government. This means that core programmes and institutions must be funded with domestic resources. There are significant coordination challenges as well, placing large burdens on the Nepali government’s already stretched staff and budgets. For instance, in the past five fiscal years, around 60% of the country’s domestic biodiversity budget was allocated to the national park protection team (MoF, 2019; 2020; 2021; 2022; 2023). The NTNC’s total revenue for fiscal 2022, meanwhile, was only NPR 658.7 million (just under US$5 million).\textsuperscript{15} This shows Nepal has significant unmet needs for external finance for biodiversity and nature protection.

\textsuperscript{13} See www.usaid.gov/nepal/fact-sheets/erobiodiversity.
\textsuperscript{14} See www.greenclimate.fund/project/fp131 and NTCN (2023).
\textsuperscript{15} NTNC, 2023, “Annual Report 2022.”
References


