Catalysing Investments for Nature-based Solutions in the Global South

Recommendations for the G20

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Image: Alamy

An image from South Korea's 'Cheonggyecheon Stream Restoration Project' that preserves and maintains urban natural resources. Green corridors like these are effective urban nature-based solutions, that provide benefits such as habitat for biodiversity, mitigation of urban heat island effect, and reduction of GHG emissions.

Executive summary

The Global South is facing multiple crises, including climate change, biodiversity loss, and economic disparities, which disproportionately affect low- and middle-income countries (LMICs) (Bhargawa and Bhargava 2023; Bhonsle 2023). Nature-based solutions (NbS) offer a promising means to address these complex issues by leveraging ecosystems to mitigate climate change, enhance biodiversity, and support sustainable development (Seddon et al. 2022). NbS provide holistic approaches to tackling interconnected challenges such as environmental degradation, disaster risks, and economic instability (UNEP 2022a). They offer cost-effective, resilient solutions that also promote community well-being, especially in vulnerable regions in the Global South.

Despite the recognised potential of NbS to address these multifaceted challenges, they remain underutilised due to insufficient financing, inadequate policies, and a lack of technical capacity (Wadhawan and Bajpai 2024). Only 9 per cent of the total climate finance mobilised by developed nations has been channelled towards NbS-related activities, making it difficult to achieve global biodiversity, mitigation, and land-degradation targets, particularly in the Global South (OECD 2023).

Our study finds that several barriers hinder the scaling and mainstreaming of NbS, especially in LMICs. First, the lack of standardised frameworks to measure NbS benefits limits evidence-based policymaking and private-sector investment (Wadhawan and Bajpai 2024). Second, private financing is constrained by investors' focus on short-term gains, neglecting the long-term benefits of NbS (Gómez, Purata, and Rodríguez 2023). Additionally, national policies often fail to recognise the critical role of Indigenous and local communities (IPLCs) in NbS, limiting inclusive participation (Dawson et al. 2021; Sangha 2020; WWF 2021).

Scaling NbS in LMICs requires a multifaceted approach that involves building a supportive policy environment, unlocking both public and private investments, and ensuring inclusive governance. The G20 can play a critical role in shaping a conducive ecosystem for investments in NbS by fostering international cooperation and integrating nature finance into both national and global frameworks. Brazil's G20 presidency offers a unique opportunity to advance these efforts, particularly by channelling financial flows towards NbS initiatives in the Global South.

To provide actionable insights for Nature-based Solutions (NbS) in the Global South, this brief incorporates a novel analysis focused on adapting existing frameworks to low- and middle-income country (LMIC) contexts. Building on the foundational work of IUCN, Conservation International, and CEEW, our study identifies region-specific NbS opportunities and quantifiable benefits tailored to LMIC ecosystems and socio-economic settings. We assessed financing needs and mapped potential policy gaps, enabling the development of targeted recommendations that support scalability and investment attractiveness for NbS initiatives. This approach bridges global NbS standards with localised needs, offering a refined pathway to drive policy and financial support for NbS in LMICs.

Key recommendations

Adopt a unified framework for mapping NbS benefits: Develop a comprehensive framework for mapping and quantifying NbS benefits, adaptable to various ecosystems and contexts in LMICs. This would enable stakeholders to identify best practices, improve decision-making, and increase investments.

Ensure inclusivity in national policies: National policies must actively engage Indigenous groups and vulnerable communities in decision-making processes, ensuring diversity and empowerment. This would foster livelihood generation, enhance social inclusion, make the sector more attractive to private investors.

Enable public and private investments through innovative financing mechanisms: De-risk the NbS sector by promoting blended finance, green bonds, and risk-sharing facilities. Additionally, governments should incentivise nature-positive investments through carbon pricing mechanisms and credit schemes.

Leverage G20's role in mainstreaming finance for NbS: The G20 should prioritise high-quality, accessible finance for NbS in LMICs. It should also promote multilevel governance to facilitate direct financial flows to local communities, particularly in biodiversity-rich areas such as the Amazon.

By aligning human activities with nature, NbS can contribute to long-term resilience and sustainable growth.

> NbS can reduce the intensity of climate change and weather hazards by at least 26% (IFRC and WWF 2022).

1. Introduction

Amidst the triple crisis of climate change, economic slowdown, and social upheaval, the synergistic approach of aligning with nature holds the potential to address these challenges collectively. Recognised globally, the significance of nature-based solutions (NbS) has grown over time, with various definitions proposed. Figure 1 illustrates the evolution of the term 'nature-based solutions' over the years.

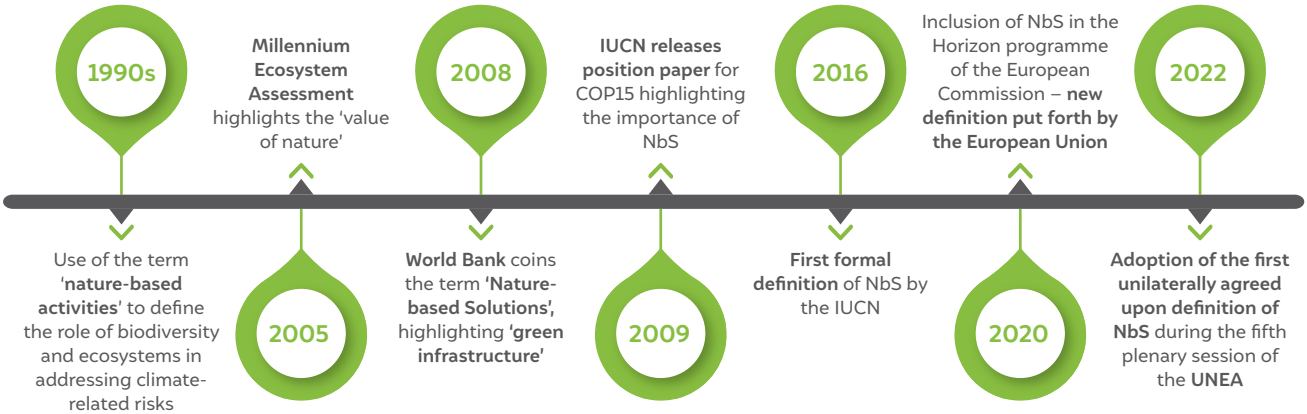
NbS offer a diverse approach to the problems exacerbated by climate change and extreme weather events as they are based on the idea of establishing a symbiotic relationship with nature rather than trying to control it. NbS provide a plethora of benefits that address different human and ecological needs. Figure 2 highlights some of the key examples.

Despite the well-recognised benefits of NbS, financial support remains insufficient to meet global targets for mitigation, biodiversity, and land degradation. NbS-related sectors, such as agriculture, forestry, and fisheries, received only 9 per cent of the total climate finance mobilised by developed countries under the USD 100 billion goal in 2022 (OECD 2023). In 2022, annual financial flows into nature totalled USD 200 billion, well below the USD 436 billion needed by 2030 (UNEP 2023). Of this amount, the public sector contributed 82 per cent, amounting to USD 165 billion, while the private sector contributed USD 35 billion (UNEP 2023). However, much of this finance came in the form of non-concessional loans, exacerbating debt pressures in developing countries. Currently, 60 per cent of low-income countries spend more on debt servicing than on climate adaptation, highlighting the severity of debt distress in these nations (Achampong 2023).

LMICs located in the Global South require significant financial resources to meet the targets set by the Rio Convention. According to the UNEP, based on land use and cost modelling, countries in Asia, Africa, and Latin America require an investment of USD 283 billion in comparison to the USD 34 billion required by countries in North America and Europe (UNEP 2023). However, over 82 per cent of the current funding for protected areas and other NbS has been allocated to countries located in North America and Europe, with countries in Asia, Africa, and Latin America receiving less than 18 per cent collectively (UNEP 2022a). This stark imbalance underscores the global mismatch in nature financing.

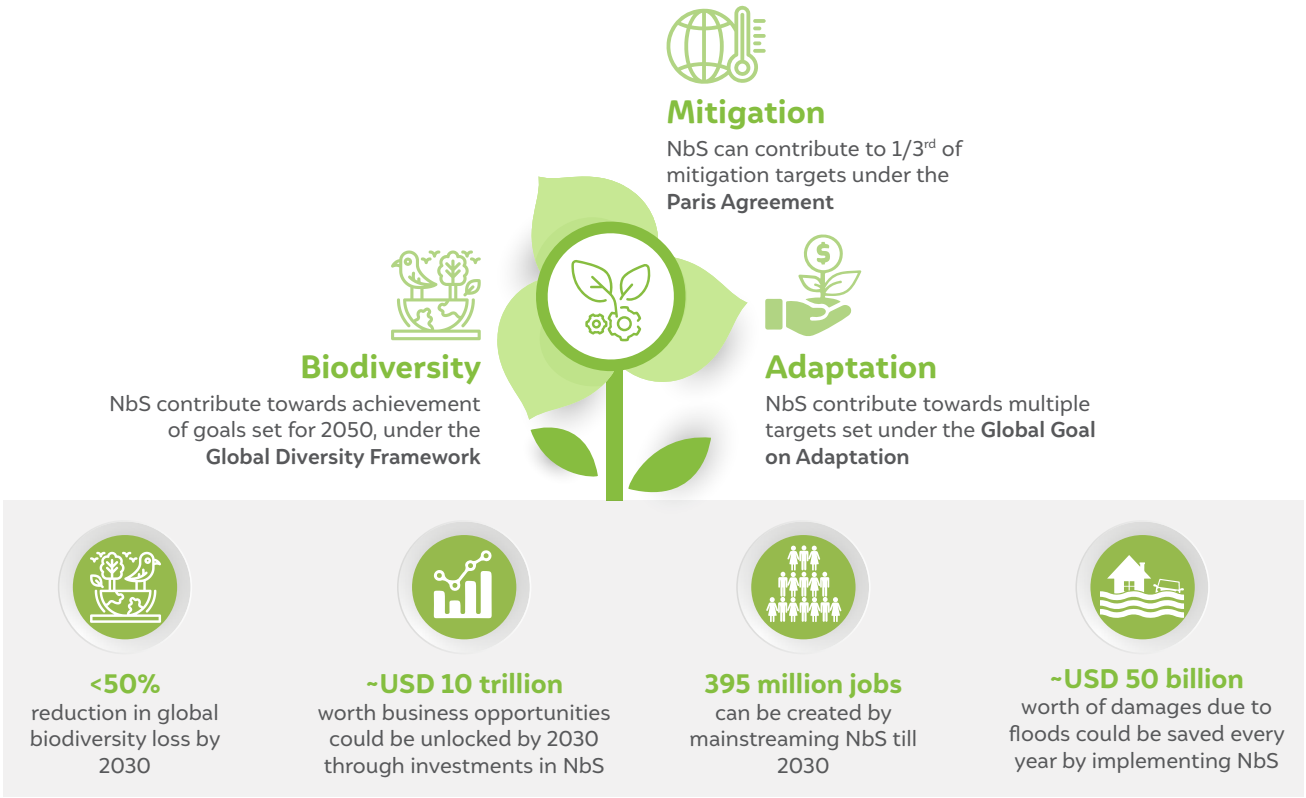
LMICs face several challenges in scaling and mainstreaming NbS. Private finance inflows into NbS are limited because investors struggle to recognise the economic potential of these projects, which in turn restricts funding opportunities (Seddon et al. 2020).

Figure 1 Timeline highlighting the evolution of NbS



Source: Wadhawan, Shreya, and Aryan Bajpai. 2024. Accelerating Investments towards Nature-based Solutions in the Global South – A Unified Framework for Mapping and Estimating Benefits. New Delhi: Council on Energy, Environment and Water.

Figure 2 The plethora of benefits provided by NbS



Source: Authors' compilation based on WEF. 2022. New Nature Economy Report II: The Future of Nature and Business. Cologny, Switzerland: World Economic Forum; UNEP. 2022b. Nature-based Solutions: Opportunities and Challenges for Scaling Up. Nairobi: UN Environment Programme; and Reguero, Borja G., Michael W. Beck, David N. Bresch, Juliano Calil, and Imen Meliane. 2018. "Comparing the Cost Effectiveness of Nature-based and Coastal Adaptation: A Case Study from the Gulf Coast of the United States." Plos One 13 (4): e0192132.

Moreover, private-sector investments often prioritise opportunities that provide short-term gains, while NbS projects typically require a longer timeframe to yield benefits, diminishing private-sector interest (Gómez, Purata, and Rodríguez 2023). Additionally, inadequate financial tools, the absence of enabling policy conditions, and the lack of indicators to measure NbS benefits further deter private-sector investment. Existing frameworks for NbS implementation are predominantly designed for developed countries, posing challenges for LMICs that lack adequate financial and technical resources (Seddon et al. 2020). There is a clear and pressing need for standardised guidelines and adaptable tools that are tailored to the diverse socioeconomic and environmental contexts of countries in the Global South.

According to the State of Finance for Nature in G20 report, the G20 countries invested USD 120 billion in NbS in 2020. However, future global investment needs to increase fourfold by 2050, equalling a yearly total of more than USD 536 billion, to meet net-zero targets. As G20 countries' investments account for about 40% of this total, they must provide an extra USD 165 billion by 2050 (UNEP 2022b). As the G20 Presidency holds a pivotal role, it's essential to heed the following recommendations to foster an environment conducive to scaling NbS, particularly in the LMICs.

This brief leverages the expertise of leading organisations to inform its recommendations on Nature-based Solutions (NbS). The International Union for Conservation of Nature (IUCN) has set a foundation with its Global Standard for NbS, providing benchmarks that facilitate measurable, effective NbS implementation across regions. Conservation International offers practical insights, pioneering financing mechanisms such as 'Debt for Nature Swaps' and investment principles for Natural Climate Solutions, aligning NbS interventions with climate and biodiversity goals. Complementing these, the Council on Energy, Environment, and Water (CEEW) has developed a framework to quantify NbS benefits, enabling evidence-based policymaking and attracting targeted investments. Together, these contributions emphasise NbS's potential to address the interconnected crises in the Global South effectively. As the G20 Presidency holds a key position of influence, it is essential to implement the following recommendations to foster an environment conducive to scaling NbS, particularly in the Global South.

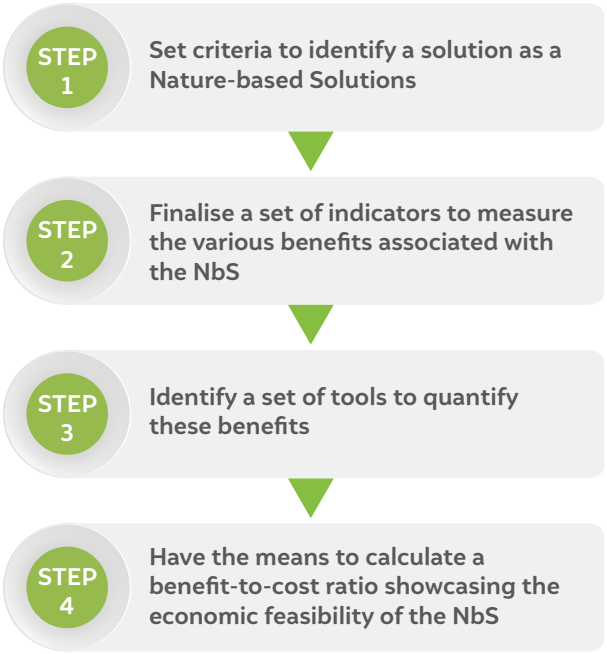
2. Recommendations

2.1 Adopt a unified framework to map and estimate the benefits associated with NbS

To ensure the scalability and feasibility of NbS, stakeholders require a comprehensive understanding of three crucial dimensions: the specific local challenges, the most appropriate solutions for implementation, and the potential benefits that these solutions can deliver. This calls for the urgent development of a unified framework that builds on existing tools and guidelines, such as the 'Global Standards for NbS' by IUCN, to help stakeholders map and quantify the benefits of NbS. Such a framework must support both public- and private-sector stakeholders and address the challenges they face in scaling and mainstreaming NbS.

This is particularly important for nations in the Global South, which not only lack the financial resources to map and track the co-benefits generated by these solutions but also often the requisite technological capabilities to implement NbS successfully. Further, the uniform framework must be adaptable to a wide range of ecosystems while preserving indicator consistency to allow for comparisons across various NbS. This would help maximise investments by assisting stakeholders in identifying best practices. To achieve this, the unified framework should provide four sets of guidelines as highlighted in Figure 3 below:

Figure 3 Guidelines for building a unified framework



Source: Authors' analysis

> G20 countries need to scale their annual NbS spending from USD 120 billion to USD 285 billion by 2050 (UNEP 2022c).

Additionally, the framework must align with existing global targets on climate change, such as the Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), Sustainable Development Goals (SDGs), and Global Biodiversity Framework. It should also support private-sector stakeholders in identifying the co-benefits of implementing NbS. It should help stakeholders estimate the economic feasibility by calculating the return on investments (ROIs) and Net Present Values (NPVs) of NbS. Further, the framework must include risk assessment protocols that help inform investment decisions. In a rapidly changing world, a unified NbS assessment framework is essential for informed decision-making and fostering a harmonious coexistence between nature and human societies.

One such example is the Effective Nature-based Solutions Utilisation and Resource Evaluation (ENSURE) framework, developed by the Council on Energy, Environment and Water (CEEW) (Wadhawan and Bajpai 2024). ENSURE aids users in identifying interventions as NbS, mapping local factors that influence the project, and measuring its benefits to highlight its economic potential. If adapted to the specific context of a country, this framework could significantly accelerate the flow of finance towards NbS, particularly in the Global South.

The development of this framework should not delay action for nature, which is needed to meet international biodiversity and climate goals. Attention should be paid to convergence in existing guidance, criteria, and case studies, including those under the UNEA 5/5 resolution (UNEP 2022c), to avoid delaying the financing and implementation of NbS activities.

Thus, the G20 task force must highlight in its declaration document the core components required for forming this framework and the tools necessary for its adoption by different countries, especially in the Global South. These guidelines should align with the current Global priorities for achieving various Biodiversity Targets and SDGs.

2.2 Ensuring diversity and inclusivity in national policies to scale and mainstream NbS in the Global South

Indigenous groups and local communities heavily rely on nature for their sustenance and livelihoods; however, their crucial role in conservation and protection is often overlooked in national policies (Thompson, Lantz, and Ban 2020). Uncertainty around land ownership can deter investors and lead to conflicts. The IUCN emphasises that NbS should be based on inclusive, transparent, and empowering governance processes that protect the rights of nature-dependent communities (IUCN 2020). National policies must acknowledge these relationships and guide finance providers and implementation agencies to actively involve and empower Indigenous communities in scaling NbS efforts.

Policies should also ensure the inclusion of diverse groups such as Indigenous communities and other vulnerable groups such as women, youth, and persons with disabilities by including them in decision-making processes. These groups can help identify benefits and monitor the progress of NbS implementation, contributing to the reporting requirements of these projects (FAO n.d.). Implementation agencies should also provide payment for ecosystem services[1] to these groups, promoting livelihood generation and social upliftment (Lliso et al. 2020). Additionally, national policies should mandate gender-transformative strategies, compelling implementation agencies to address structural inequalities during project execution (Pross 2019).

> Policies should ensure the inclusion of diverse groups such as Indigenous communities and other vulnerable groups.

Projects like GEF-7 Inclusive Conservation Initiative (ICI) project support IPs and LCs in stewarding 7,615,066 hectares of high biodiversity areas (CI and IUCN 2023). The Indigenous Peoples Finance Facility (IPAF) enhances IPs' capacity to access funding for forest conservation and management (IFAD n.d.).

Image: Alamy

The 3,000-foot Bamboo Bridge on the Mekong River, Kampong Cham, Cambodia, is one of the world's longest bamboo bridges. The bridge, a green infrastructure-based solution, ensures connectivity for locals and tourists by adapting to seasonal water level changes.

1. Payment of ecosystem services programmes allow for the translation of the ecosystem services that ecosystems provide for free into financial incentives for their conservation, targeted at the local actors who own or manage the natural resources.

Image: iStock

Floating bamboo houses protect communities in Viet Nam, Philippines, and Myanmar from floods, rising water levels, and typhoons, while offering an affordable and safe housing option.

> **More than half of the world's GDP, totalling USD 44 trillion, relies heavily on nature and its services, making it vulnerable to nature loss (WEF 2020).**

Opportunities for IP- and LC-led conservation exist across diverse regions and ecosystems. The G20 Brazil ECSWG should focus on IPLCs while exploring PES mechanisms and mandate gender-transformative strategies to address structural inequalities (Pross 2019).

Recognising and respecting the rights of Indigenous peoples and local communities (IPLCs) is crucial for sustainable development and attracting private investment. Governments must uphold IPLCs' right to free, prior, and informed consent in decisions affecting their lands, territories, and resources. Uncertainty around land ownership can deter investors and lead to conflicts. Therefore, governments should establish transparent and enforceable land tenure systems, recognise customary land rights, and ensure fair compensation and resettlement processes for land acquisition. Meaningful stakeholder engagement and collaboration among governments, businesses, civil society organisations (CSOs), and local communities can build trust, address concerns, and ensure the social and environmental sustainability of private investments.

The G20 plays a crucial role in advancing climate action, setting the stage for COP30 in Belem, Brazil. COP29 determined a New Collective Quantified Goal (NCQG) for climate finance, focusing on quality, predictability, and accessibility. Under India's G20 Presidency, strides have been made in reinforcing commitments on land degradation, ecosystem restoration, and biodiversity enrichment. Brazil must advance this roadmap, ensuring high-quality finance for developing countries and direct access for IPLCs. Urgent action from G20 leaders is needed to scale high-integrity NbS, phase out fossil fuel emissions, and reduce nature-negative financial flows. A unified framework for estimating NbS benefits could help countries, especially LMICs, leverage sustainable finance mechanisms, benefiting both the public and private sectors while ensuring inclusivity and diversity.

Image: iStock

Green walls are not only visually stunning but also help reduce both indoor and outdoor temperatures while improving indoor air quality (Yeh 2012).

2.3 Enabling public and private investments in NbS in the Global South

Multiple strategies can be used to boost private-sector investments, including de-risking the sector by scaling innovative financial mechanisms such as blended finance and sustainable green bonds and by leveraging tools such as risk-sharing facilities that increase investor confidence to scale investments in nature (UNEP 2022b). The Climate Finance Lab, through its Amazon Food & Forest Financing Initiative and the Investment Blueprints for Conservation (The Global Innovation Lab for Climate Finance n.d.), invites investors, asset managers, philanthropies, and other local stakeholders to utilise blended finance strategies and invest in socio-bio-economy initiatives in the Amazon by supporting local businesses and value chains. This initiative guarantees returns to investors and has also stimulated an increase in regenerative practices across the rainforests. Furthermore, the private sector must also be incentivised to 'green' their portfolios by dedicating a percentage of their investments to NbS. This could also be achieved by emphasising the potential of carbon markets to companies (Martinez, Srinivas, and Gregorie n.d.). High-integrity carbon markets are critical tools for unlocking finance, increasing ambition, and achieving the goals outlined in the NDCs under the Paris Agreement. They can support doubling climate ambition over 2020–2035 at the same total costs as a scenario without markets (Piris-Cabezas et al. 2023).

Similarly, the Biodiversity Credit Alliance encourages private investments in nature and biodiversity by encouraging companies to buy biodiversity credits while upholding social and ecological safeguards (UNDP n.d.). Lastly, private-sector investments must be guided by science- and evidence-based decisions that take into consideration nature- and climate-related risks, reduce uncertainties, and set long-term visions for companies to invest in nature (The Nature Conservancy 2023). Governments must also create an environment that enables the private sector to boost investments in NbS.

It is essential to incentivise nature-positive actions through credit schemes and carbon-pricing mechanisms such as carbon taxes and emissions trading systems (ETS), as they attach a monetary value to' the cost of greenhouse gas emissions, incentivising businesses to reduce their carbon footprints, and driving investments in low-carbon technologies and solutions (DGB Group 2023; World Bank n.d.). To mainstream these mechanisms, governments can provide financial incentives, subsidies, tax breaks, or other forms of support to encourage private-sector investments in sustainable development projects (Polzin 2017). Examples include feed-in tariffs for renewable energy projects, tax credits for energy-efficient technologies, and grants for biodiversity conservation initiatives (Atalla, Mills, and McQueen 2022). These incentive mechanisms can help offset investment risks and promote the adoption of environmentally friendly practices. The *Green Credit Rules* launched in 2023 in India encourage nature-positive actions by companies and individuals by introducing tradable credits (MoEFCC 2023)[2].

The G20 Brazil Sustainable Finance Working Group (SFWG) could adopt similar inclusive and transparent mechanisms to strengthen blended finance. Governments should create a supportive ecosystem, especially in LMICs, by developing sound policies and institutional capacities to build stable project pipelines that link to sectoral strategies, investment plans and sustainability standards (Systemiq 2019). Another example is the SubNational Climate Fund, a joint initiative by GCF, IUCN, PEGASUS and R20 aiming to bring climate finance to the subnational government by using blended finance instruments. Such initiatives, if scaled up, can significantly reduce the financing gap and enable scaling up effective and high-integrity NbS.

> **More than half of the world's GDP, totaling USD 44 trillion, relies heavily on nature and its services, making it vulnerable to nature loss (WEF 2020).**

Alternative financial mechanisms are essential for LMICs to implement nature- and biodiversity-related interventions. Debt-for-nature swaps, popular since the 1980s, have seen recent use, such as Gabon restructuring USD 500 million of debt under a Blue Bond with support from Bank of America, USDFC, and The Nature Conservancy (TNC). These swaps have the potential to unlock significant financial resources and drive meaningful conservation efforts in developing countries. For example, Peru's USD20 million debt-for-nature swap with the U.S. redirected debt payments to conservation efforts, such as improving protected areas and natural resource management. This deal included contributions from four NGOs, Conservation International, TNC, Wildlife Conservation Society, and World Wildlife Fund, who collectively donated USD 3 million in addition to the U.S.'s USD 15 million.

Multilateral Development Banks (MDBs) and Development Finance Institutions (DFIs) hold strong potential in scaling blended finance and debt-for-nature swaps. The working group must prioritise building an enabling environment for MDBs to increase their share of private sector activities, currently at 30 per cent, and support countries accessing debt-for-nature swaps. Alternative mechanisms, such as India's Green Credit Rules (GCR), encourage nature-positive actions via tradable credits (MoEFCC 2023). Similarly, the Biodiversity Credit Alliance supports private investments in nature and biodiversity by guiding companies to buy biodiversity credits while upholding social and ecological safeguards (UNDP n.d.). The G20 Task Force on Global Mobilisation against Climate Change (TFGMCC) could use these examples as a model for green credit policies.

2. The Indian Council of Forestry Research and Education (ICFRE), serving as the administrator for the Green Credit Programme will award 'tradable credits' after measuring the environmental impact generated by the implemented green action based on a defined benchmark.

2.4 G20's role in mainstreaming finance for nature-based solutions

The G20 plays a crucial role in advancing climate action, paving the way for COP30 in Belem, Brazil. Under India's G20 Presidency, significant progress has been made in reinforcing commitments, with a focus on land degradation, ecosystem restoration, and biodiversity enrichment.

Brazil's role is particularly important in advancing this roadmap, especially in terms of ensuring increased high-quality finance for developing countries and facilitating direct access to finance for IPLCs, which is integral to supporting the bioeconomy. Given the Amazon's central role as a hub for bioeconomy and NbS, protecting the Amazon and preventing it from reaching a tipping point[3] is essential to safeguarding the global climate system (Flores et al. 2024).

The G20 can help promote multilevel governance to improve the flow of climate finance to grassroot organisations. The enhancing nature-based solutions for an accelerated climate transformation (ENACT) partnership provides a potential model for leveraging global and local partnerships to advance NbS at the G20 Brazil. To keep the target to limit the average global surface temperature to 1.5°C above pre-industrial levels within reach, we need to transform our relationship with nature, scale up NbS, halve fossil fuel emissions, and rapidly scale negative emissions technologies.

Image: iStock

The tambopata natural reserve in the Peruvian Amazon.

3. A 'tipping point' is the critical threshold value of an environmental stressing condition at which a small disturbance may cause an abrupt shift in the ecosystem state

3. Conclusion

NbS can support both environmental conservation and sustainable development. Their effective implementation depends on three foundational pillars: generating evidence at the local level, establishing viable financial mechanisms, and creating enabling policy frameworks. These pillars are interdependent, forming the backbone of NbS scalability.

Our primary recommendation is to develop a standardised framework for mapping and estimating the benefits of NbS, informed by empirical evidence, to drive financial flows towards these interventions. To achieve this, it is vital to enhance the capacity of local communities to understand and implement NbS by providing them access to relevant technologies. However, building technical capacity at the regional level demands significant resources and time and often necessitates government funding. LMICs face additional socioeconomic challenges, such as poverty and unemployment, potentially hindering their willingness to allocate funds for NbS capacity building. This often creates a trade-off between investing in NbS and addressing pressing socioeconomic issues. To overcome this dilemma, alternative and concurrent strategies are required, such as establishing public–private partnership (PPP) models with risk-sharing facilities. In these models, the private sector and/or international sources finance local community capacity building, while governments provide insurance against project failure. Additional innovative financial mechanisms such as debt-for-nature swaps, green bonds, and impact funds combined with technical assistance facilities, can also play a role.

Simultaneously, innovative financial models such as blended finance, risk-sharing facilities, carbon markets, and green bonds can be utilised to mobilise funding for NbS. However, due to socioeconomic differences, some regions and solutions may not generate immediate economic benefits. Thus, the financial models developed and adopted need to be selected carefully and tailored according to the local context.

It is essential to create an enabling ecosystem through changes in policies and the regulatory environment. However, securing political will and commitment both on an international and national level poses challenges, especially considering the diverse interests and priorities among G20 nations. G20 countries, particularly Brazil, must encourage governments to support the development of enabling policy conditions that benefit communities and can unlock private-sector investments to bridge the financial gap for NbS initiatives.

Ultimately, the successful scaling of NbS finances relies on the collaboration and synergy of all three pillars – evidence generation, innovative financial models, and supportive policy and governance frameworks.

Image: Alamy

Traditional stilt houses made of local material are local NbS that can protect against floods. This is a stilt bamboo house in the Dispur district of Assam, one of India's most flood-prone states.

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Green roofs help reduce energy costs, improve air quality, and enhance biodiversity while providing natural insulation from extreme heat (EPA, 2022).

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