COP15 MONTREAL BIODIVERSITY

NATURE AND DEVELOPMENT BRIEF

Integrating Climate and Nature Action

WORLD BANK GROUP

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Humanity is entirely dependent on nature for survival, wellbeing, and economic prosperity. Investing in nature is critical not only for maintaining biodiversity and a stable climate, but also for reducing poverty and inequality, and maintaining the critical ecosystems that support livelihoods. The World Bank Group (WBG) has invested in natural capital for decades and is supporting people and communities to promote sustainable and resilient growth.

This Brief is one of a series exploring strategic areas for achieving impact at scale as countries implement the new global targets, once adopted, by investing in nature for green, resilient, and inclusive development; integrating action on nature loss and climate change; and scaling up finance for nature. The brief explores the interface between nature and climate, the synergies that can be exploited and potential tradeoffs to be managed, outlining why the two agendas need to come together in support of nature- and climate-smart development.

KEY MESSAGES

- Climate change and the unprecedented global loss of biodiversity are among the biggest challenges humanity faces - the two crises reinforce each other and are pushing the planet towards dangerous and irreversible tipping points.

- Tackling nature loss and climate change together offers the best hope for preventing the systemic threats they pose to development, economic growth, and the wellbeing of people and the planet.

- An effective response to these crises requires social and economic transformation, and integrated policy action and investment at all levels:

  - Globally, countries need to work together to better connect climate and biodiversity ambitions, as reflected in the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD) respectively, and to ensure their implementation is aligned.

  - At the country level, policymakers need to ensure nature, climate and development considerations are included in sector strategies and plans, including as part of national plans to meet climate mitigation and adaption goals These include Nationally Determined Contributions, (NDCs) and biodiversity goals like National Biodiversity Strategies and Action Plans (NBSAPs).

  - Locally, public and private actors need to invest in nature-based solutions that support climate mitigation and adaptation, such as increasing green spaces in cities to improve the microclimate and air quality. These solutions also provide long-term benefits to nature and help create livelihood opportunities.

- The WBG has extensive global experience, analytical expertise, and financial resources to support countries as they combine their efforts to tackle climate change and nature loss to improve the future for people and communities.

1. THE CHALLENGE

Climate change and nature loss are critical threats to development, economic growth, and the wellbeing of people and planet. The growing frequency and intensity of cyclones is damaging homes, infrastructure, and livelihoods. Rising temperatures and unpredictable rainfall reduce crop yields, contribute to water insecurity, and pose a health risk to people and livestock. But the loss of soil productivity and land degradation, declining fish stocks, and the destruction of habitats that shield communities from extreme weather and zoonotic diseases represent threats of a similar scale. Unchecked, climate change will push up to 130 million people into poverty over the next eight years[1] and could cause 200 million people to migrate within-countries by 2050.[2] Nature loss poses a similar risk to development goals – a sudden loss of ecosystem services such as pollination, provision of timber from tropical forests, and food from marine fisheries, could mean that low-income countries experience one-third lower real GDP growth and lower-middle-income countries forego 20 percent of growth over the next decade[3] (see brief on *Investing in nature for green, resilient, and inclusive development (GRID)*). These also represent threats to global food security. The poorest and most vulnerable communities stand to lose the most from the compounding effects of these twin crises.

Nature and climate are intertwined. The two environmental crises are deeply interconnected; biodiversity and ecosystem services – referred to simply as 'nature' in this brief – underpin the regulation of the global climate. Oceans, soils, forests, peatlands, and other ecosystems are the world's largest carbon sinks, absorbing 60 percent of gross annual anthropogenic carbon emissions.[4] A significant loss of these systems hinders our ability to mitigate and adapt to climate change. Conversely, climate change is one of the five direct drivers of nature loss, alongside land and sea use change, overexploitation, pollution, and invasive species.[5] The impacts of climate change shift and shrink the critical habitats that species rely on, alter ecosystem functioning, and interact with other drivers of nature loss to weaken the resilience of ecosystems to natural shocks and man-made pressures.

The acceleration of climate change and nature loss are pushing the planet towards dangerous and irreversible tipping points. These include the disappearance of coral reefs and the collapse of ice sheets, which can unleash self-reinforcing global warming. Continued loss of the Amazon, which is the world's largest rainforest and one of the Earth's most important ecosystems for climate regulation, could push it to an irreversible tipping point that sees it transition to savanna, leading to widespread loss of species, a vast release of carbon, and change in regional rainfall patterns. Most importantly, environmental degradation follows a nonlinear pattern; it can compound and engender catastrophic and unpredictable ecological losses that pervade the global economy. Precautionary action is thus critical to avert these risks.

Neither crisis can be addressed independently of the other. For example, emissions from agriculture, forestry, and other land use (AFOLU) account for 22 percent of global greenhouse gas emissions.[6] Net zero goals under the Paris Agreement are not feasible without natural sequestration, which is why all Intergovernmental Panel on Climate Change (IPCC) pathway models that limit global warming to 1.5C° include actions to conserve and restore nature.[7] Such strategies make economic sense too – natural climate solutions can contribute 37 percent of cost-effective climate mitigation through 2030.[8] Similarly, nature plays a critical role in adaptation, through such services as shoreline protection, retention of flood waters, securing water resources to cope with drought, and the prevention of landslides and other natural disasters. In turn, falling short on the global climate ambition will adversely impact ecosystems, even under a 1.5°C to 2°C warming scenario, compromising efforts to address climate change.

Tackling these environmental challenges jointly would have significant economic and fiscal benefits. While countries have to date largely addressed them as separate problems, there is growing momentum for coordinated and transformative action across the two**.** Implementation of the Paris Agreement and the CBD Strategic Plan 2011–2020 has been siloed, although there is a growing confluence of the two agendas. Much work remains for countries to reflect in their policy decisions and strategic investments the interlinkages between climate, nature, and development outcomes. While more than 80 percent of the revised NDCs contain nature-related actions,[9] few countries have

reported on alignment of their NDCs and Long-term Strategies with the CBD Aichi Biodiversity Targets, missing an opportunity to assess the synergies between national goals for climate and nature. Few countries systematically assess the potential impacts on nature of their emission reduction strategies, including any potential trade-offs. Even more importantly, countries' development strategies often fail to incorporate integrated plans towards climate resilience, mitigation, and nature loss prevention.

2. WHAT IS NEEDED?

A holistic approach must be taken. Addressing climate change and nature loss together will require transformative action, with coordinated responses spanning the global, national, and local levels (see Figure 1). An integrated response means exploiting synergies – capturing advantageous win-win investments for nature, climate, and development – as well as identifying and minimizing trade-offs. The alternatives, a climate- or nature-only approach, would miss opportunities for impact and fiscal efficiency, while compromising long-term development.

Integrated implementation of actions toward global climate and nature goals is essential. There are numerous synergies across the three Rio Conventions – the CBD, the UNFCCC, and the United Nations Convention to Combat Desertification (UNCCD). The momentum built on nature and climate through COP27 of the UNFCCC and COP15 of the CBD offers a unique opportunity to take stock of complementary actions under the Paris Agreement and the proposed post-2020 global biodiversity framework, align global resource mobilization strategies, and harmonize monitoring and reporting mechanisms under the two Conventions.[10] It is also critical to further the science/policy collaboration to close knowledge gaps at the climate-nature nexus.

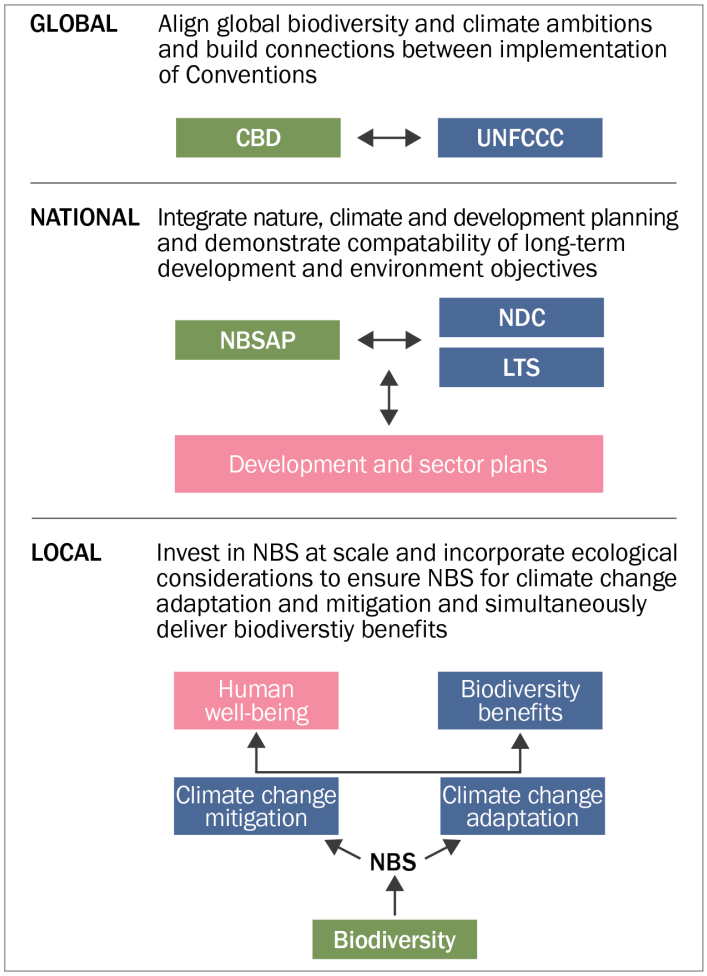

Figure 1: What does a climate- and nature-smart approach look like?

Finance must be harnessed to the cause. Financing strategies need to be better coordinated, leveraging climate finance to support nature, particularly to scale up investment in nature-based solutions. A critical first step is to understand overlaps between investments needed to implement UNFCCC and CBD targets and to reflect this in countries' national resource mobilization strategies under each Convention. Equally important is the growing momentum in the financial sector, where central banks, financial regulators, financial institutions, and corporations are recognizing the opportunities and potential returns on nature-based investments, as well as taking steps to better understand nature-related risks alongside climate-related ones. There is much scope for green financial instruments to scale up investment in nature – including as part of climate change-related investments – as well as for growing engagement of the private sector, developing nature finance markets, and tapping into carbon markets and net-zero pledges to finance nature-based solutions (see brief on *Scaling up Finance for Nature*).

Nature and climate need to be mainstreamed across sectors. At the country level, there are opportunities to mainstream nature alongside climate into development and sector strategies and plans. The sustainable transformation of key socio-economic sectors is critical. Coordinated sector-level transition can in turn focus on the sectors that are responsible for a vast majority of global GHG emissions and driving nature loss[11] (see Figure 2), particularly in agriculture, forestry and other land use sectors which cuts across both climate change and nature goals.

Figure 2: Priority socio-economic systems for action to address climate change and nature loss

(LEFT) Source: World Bank Group Climate Change Action Plan (RIGHT) Source: WEF The Future of Nature and Business

The way these key sectors plan, invest, and produce is important for climate, nature and for broader development goals. Mainstreaming nature into sectoral plans along with coordinated revision of the key national plans under the UNFCCC and CBD –NDCs and the NBSAPs[12] – can pave the way for policies and investments with the greatest climate and nature synergies or co-benefits and lowest opportunity costs. For this to succeed, it will be essential to develop decision-making tools, and monitoring and reporting frameworks that help governments assess the respective nature and climate co-benefits of policies and investments, as well as their contribution to development outcomes (see brief *Investing in nature for GRID*).

At the local level, there is a need to scale up nature-based solutions. This represents a win-win for people and the planet. Investments in nature-based solutions – such as green infrastructure – support climate change mitigation and adaptation because they sequester carbon and strengthen climate resilience of communities in urban, rural, and coastal areas (see Box 1). Unlike conventional grey infrastructure, that serves a narrow purpose, hybrid grey-green or green infrastructure solutions offer a wide range of co-benefits. These include improved air and water quality at the local level, opportunities for recreation and aesthetic enjoyment, and community wellbeing benefits, in addition to carbon sequestration and nature conservation.

Getting the design of nature-based solutions right means considering environmental, social and economic benefits from the outset. Achieving outcomes for climate resilience and nature requires an integrated approach covering the protection of local habitats that are still in good ecological condition, the restoration of degraded ecosystems, or the creation of new interventions if needed.[13] Such nature-based solutions need to be purposefully planned, designed, implemented, monitored, and maintained. In practice, this means tracking targeted results for nature and incorporating ecological-scale considerations into investment decisions.

This is achieved by scaling up site-based approaches to cover landscapes, seascapes and watersheds; connecting green, blue and grey interventions; and planning for the long-term maintenance of nature-based solutions to ensure their continued effectiveness. It is also key to set up governance mechanisms that engage local communities, allow them to reap the benefits of nature-based solutions, and promote sustainable financing mechanisms for conservation and restoration.

The time to act is now. The synergies between nature and climate work notwithstanding, dedicated action is needed to effectively address climate change and nature loss. Even with full consideration of the nature-climate interface, targeted attention to address the other drivers of loss is needed to 'bend the curve' on nature loss (see brief *Investing in nature for GRID*). In turn, while nature offers cost-efficient ways to mitigate climate change and support adaptation, these can only be effective if they build on ambitious emissions reductions across sectors.

BOX 1. THE POWER OF NATURE-BASED SOLUTIONS

Nature-based solutions are actions to protect, conserve, restore, sustainably use, and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.14 Investing in nature-based solutions offers many benefits (see Table 1). For example, green infrastructure involving mangroves, wetlands, and watersheds can enhance the performance of (or even replace) traditional gray infrastructure in areas such as flood protection, water resource management, and the protection of built assets from geohazards.15 Green infrastructure offers long-term benefits for biodiversity and ecosystem services when designed and planned in a way that considers the needs of nature.

TABLE 1: CLIMATE MITIGATION AND ADAPTATION BENEFITS FROM NATURE

CLIMATE IMPACT	ADAPTATION BENEFITS OF NBS	MITIGATION BENEFITS OF NBS
Increased droughts	Restorative agricultural and forestry practices to increase water retention capacity and mitigate droughts.	Sustainable agricultural practices build soil carbon and improve crop yields.
Heat extremes	Increase green spaces in cities to improve the microclimate and air quality.	Green spaces in cities are also carbon sinks and can reduce energy spent on air conditioning.
Sea level rise	Mangrove conservation and reforestation protect coastal areas against damage from storm surges and ongoing erosion.	Mangroves sequester four times as much carbon as terrestrial forests, mostly through sediments.
River flooding	Maintain and restore wetlands and forestation of water catchments that act as natural buffers against floods and prevent landslides.	Wetland areas sequester carbon through plant photosynthesis and by acting as sediment traps for runoff.
Increased fire risk	Maintain and restore diverse forests, with active management of invasive species, that are more robust against pest attacks and present a lower fire risk.	Forests are natural carbon sinks; however carbon stored in biomass through forests could be released back into the atmosphere by wildfires.

3. HOW IS THE WBG CONTRIBUTING TO SOLUTIONS?

Climate and nature matter for development. The WBG sees climate change and nature loss as critical development issues and its investments help tackle these intertwined crises in tandem. The WBG is the world's largest financier of climate action in developing countries, accounting for over half of multilateral climate finance to developing countries and over two-thirds of adaptation finance and investing over US$31.7 billion in 2022 alone. The WBG also has a long track record of supporting biodiversity conservation and sustainable natural resources management, paving the way for green, resilient, and inclusive development in client countries.

The WBG is strongly committed to climate and nature action. The WBG is uniquely placed to support countries to integrate climate, nature and development objectives, due to its financial capacity, policy and analytical work, and investment that mobilizes partners and additional finance. This includes working with financing and planning ministries to integrate nature into development planning, and with ministries of agriculture and energy to mainstream biodiversity into sectoral plans and landscape strategies. In addition, the global reach of the WBG means it can work across sectors and regions, tackling the nature and climate aspects of pressing development challenges – such as fragility and conflict, poverty, food insecurity, and global health.

This commitment is reflected in WBG priorities. The WBG's commitment is reiterated in the WBG Climate Change Action Plan (CCAP) 2021-2025 and the twentieth replenishment process of the International Development Association (IDA20), which integrate climate change and nature action into development financing. The CCAP recognizes the vital importance of nature for climate change mitigation and adaptation. WBG investments are addressing the shared drivers of climate change and nature loss, building an enabling policy and institutional environment, and spearheading financial innovation to scale up investment in sustainable (low-carbon and nature-smart) sector transitions and maintaining critical natural capital (see brief on *Scaling up Finance for Nature*). IDA20 will also invest in critical biodiversity and ecosystem services in the poorest countries, which are least equipped to protect nature and stand to lose the most in relative terms from its loss.

The synergies between climate, nature, and development also inform the WBG's country work. Through Country Climate and Development Reports (CCDRs), the WBG is helping its clients identify priority areas for climate action, including opportunities stemming from natural capital, for green, resilient, and inclusive development (see Box 2). This in turn is reflected in Systematic Country Diagnostics and Country Partnership Frameworks and, ultimately informs WBG's technical assistance and investment portfolio. For example, WBG support for the revision of NBSAPs, NDCs, and the development of Long-Term Strategies in client countries is helping identify strategic opportunities to deploy nature-based solutions for low-carbon and resilient development in a cost-effective way.

BOX 2. INTEGRATING NATURE AND CLIMATE ACTION FOR DEVELOPMENT IN CCDRS

The first set of CCDRs cover 24 countries, and the aim is to roll them out to all WBG countries in the next few years. CCDRs combine the best available data, models and tools to place what is often a discussion of impacts in the distant future into more immediate and actionable recommendations for a country's decisionmakers today. Through this process, CCDRs demonstrate the value and importance of nature for economic development and for climate mitigation and adaptation, helping clients prioritize conservation and the restoration of valuable green and blue ecosystems, and raising this issue to the attention of national development planning and finance authorities. The analysis will also help countries deploy nature-based solutions for climate resilience in cities, agricultural landscapes, and coastal areas. The WBG will also use CCDRs to identify new private sector opportunities for climate and nature business.

There are several excellent examples of nature-climate-development interlinkages in CCDRs:[16]

- In **Indonesia**, there is immense potential for low-cost nature-based climate solutions by leveraging forests, peatlands, and mangroves as a source of emissions reduction. Indonesia plans to make forestry and other land use (FOLU) a net carbon sink by 2030 under its "FOLU Net Sink 2030" plan. Actions to achieve these goals include restoring 2.7 million hectares of peatlands, rehabilitating 5.7 million hectares of degraded forestlands, and continuing recent progress in reducing deforestation and forest degradation rates. Emissions reductions in the FOLU sector will provide a hoped-for 60 percent on the NDC reduction.

- **China's** CCDR noted considerable success with land restoration at scale over three decades, contributing to climate mitigation and adaptation, but importantly also the conservation of biodiversity and other ecosystem services. The CCDR found that China could further increase land-based carbon sequestration by 34 percent, through restoration of natural ecosystems, with no net reduction in food production.

- In **Peru**, where agriculture occupies 90 percent of the total deforested area, reversing deforestation and moving to a zero-carbon forest sector could generate 2.2 million jobs, bring $3.5 billion in benefits from recovered ecosystem services, and increase the sector's value-added sevenfold. Improving land use planning and agriculture innovation systems, promoting intensification, and integrating smallholders and communal organizations into agriculture value chains can help address deforestation, increase the productivity of crops and livestock, and boost incomes for local communities.

- In **Ghana**, coastal fishing and farming livelihoods are threatened by projected sea level rise of 16.5 cm and 34.5 cm by 2050 and 2080 and increased flooding in low and coastal areas. Blue carbon ecosystems, such as mangroves, wetlands, lagoons, and seagrass meadows increase the resilience of coastal communities by naturally mitigating the impacts of flooding, shoreline erosion, and storm surges. The CCDR recognizes the development benefits of protecting and restoring these ecosystems through a blue economy approach that includes ecosystem-based integrated coastal zone management, the enhanced enforcement of protected areas, and the use of blue bonds and carbon markets to generate financing for nature-based solutions.

- **Rwanda's** CCDR demonstrates the socioeconomic importance of protected areas. Rwanda is heavily dependent on nature-based tourism, an increase in average temperatures could lead to a reduction in international tourism demand in the country of 11-20 percent between 2040 and 2059. Effectively managing the national protected area network is critical to conserving the ecosystems and wildlife on which this tourism depends and supporting a climate-resilient tourism industry and local livelihoods. Actions such as collaborative management partnerships for protected areas, wetland restoration, the establishment of agroforestry in protected area buffer zones, and the development of revenue-sharing mechanisms with communities can help achieve this.

The WBG's investment portfolio supports both low-carbon and nature-smart development. Through the application of rigorous environmental and social safeguard policies and standards, the WBG integrates biodiversity and nature-based solutions early on in projects that its clients undertake**.** This includes managing nature-related risks in WBG investments that support the transition to low-carbon energy systems. The World Bank portfolio actively invests in 'whole of economy' transformations needed to address the drivers of climate change and nature loss, and put countries on sustainable development paths by mainstreaming nature and climate considerations in development and sectoral planning, and in strategic sector investments. In turn, the International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) engage with the private sector, helping develop sector-wide approaches to integrate nature risks, supporting the transition to low-carbon and resilient energy systems in project development, and supporting sustainable market and value chain development (see Box 3).

BOX 3. DELIVERING LOW-CARBON ENERGY THAT MITIGATES NATURE RISKS

The IFC is helping establish how wind generation may be scaled up sustainably. In **Africa**, wind power potential is enough to satisfy the entire continent's electricity demands 250 times over, but the siting of wind turbines also brings potential adverse impacts on biodiversity, including globally-significant migratory bird species. IFC is working in emerging markets to help identify areas that could be particularly vulnerable to negative impacts, such as protected areas, important bird migratory corridors and nesting sites, and community conservation areas, and to exclude these areas from further consideration. Through its Scaling Wind initiative, IFC is mainstreaming nature into government tendering processes – one example being the integration of environmental and social considerations into Ethiopia's first competitively-bid wind energy project. This work is being replicated in **Mongolia** and **Timor Leste**.

In the **Solomon Islands**, MIGA is helping navigate trade-offs between hydropower development – an important part of the country's green energy future – and nature. Hydropower projects can alter downstream hydrology, obstructing fish migration and degrading natural habitats. In accordance with the requirements of MIGA Performance Standards, the project is adopting a mitigation hierarchy to avoid and reduce potential impacts on nature, including environmental flow release, and a trap-and-haul system at the dam to facilitate fish migration and the monitoring of fish presence and movements. The operator will also develop a biodiversity action plan to achieve a net gain in biodiversity in designated critical habitats.

The WBG brings a comprehensive set of analytical tools to the table. The WBG provides metrics, data and analytical tools based on the best scientific data available and economic analysis to better understand how to maximize synergies and manage trade-offs between low-carbon and nature investments. For example, WBG integrated ecosystem-economy modeling[17] shows how the benefits of nature-smart policy increase substantially when the carbon sequestration services of nature are factored in. New economic analysis supports the deployment of nature-based solutions for climate resilience through guidance on assessing costs and benefits, which include flood risk reduction, carbon storage and sequestration, and nature conservation.

The WBG is helping its clients scale up nature-based solutions to address multiple development challenges, including climate change. Nature-based solutions for climate resilience demonstrate the benefits of integrating climate and nature investments (see Box 4). Support ranges from institutional capacity building for the identification and planning of nature-based solutions, to filling knowledge and technical gaps, developing best practice approaches, and providing guidance to adequately quantify the benefits and costs of alternative options. From 2012-2021, the WBG invested $5 billion into nature-based solutions.[18] This portfolio is expanding as clients look for next-generation solutions and hybrid 'green-grey' interventions across different sectors exposed to the physical risks of climate change, such as extreme weather or supply chain disruptions. IFC and MIGA are also exploring opportunities to integrate more nature-based solutions into large infrastructure projects.

BOX 4. WBG INVESTMENTS IN NATURE-BASED SOLUTIONS FOR CLIMATE RESILIENCE

In **Burundi**, the World Bank is scaling up sustainable land management and ecosystem restoration practices that will enable people to better adapt to climate change and accelerate the transition of the vital coffee sector (which generates 80 percent of the country's exports, but is a major cause of deforestation) towards a more sustainable production model. As part of the Global Environment Facility (GEF)-funded, World Bank-led program on Food Systems, Land Use and Restoration (FOLUR), the project has already brought 39,000 hectares of degraded productive lands under sustainable management practices, towards the target of 100,000 hectare.

This and the adoption of improved agricultural practices and technology by 28,000 smallholder farmers in coffee-growing hills will contribute to a carbon sink of 4.5 million tonnes of CO2e, with significant adaptation co-benefits through soil erosion control and drought resistant varieties of seeds, reduced risk of landslides and erosion, and nature conservation. Strengthened private sector participation and value chains, as well as partnerships with international commodity roundtables through the FOLUR program, will amplify collaboration and knowledge exchange on sustainable coffee production. In parallel, activities to strengthen protected area management and establish community-based ecotourism will help prevent further deforestation and preserve biodiversity and ecosystem services for the well-being of forest-dependent communities.

In **Sri Lanka**'s capital Colombo – the first capital to be accredited as an International Wetland City – wetland ecosystems have become an important solution for the flood-prone city's future. Following World Bank technical assessments that showed that protection from flooding depended on the city's natural wetlands, the Metro Colombo Urban Development Project protected and restored 20 square kilometres of freshwater lakes, wet woodlands, wet grasslands, and swamps. These restored areas offer a natural defense to flooding, purifying and cooling air, absorb up to 90 percent of Colombo's greenhouse gas emissions, and protect important plants for Ayurvedic medicine and over 280 wildlife species, including the endangered fishing cat. Thanks to the success of nature-based solutions in Colombo, the government intends to replicate wetland preservation across the country.

In **Belize**, ecosystem-based marine conservation has strengthened the climate resilience of the Belize Barrier Reef System. With funding from the Adaptation Fund, the World Bank supported several nature-based adaptation measures, including the expansion of marine protected areas from 13 percent to 20 percent of territorial waters with the creation of 406,000 hectares of marine protected areas and 59,000 hectares of no-take replenishment zones, along with coral restoration at 12 sites, and the promotion of economically viable and sustainable livelihoods for communities adversely impacted by climate change. These measures will generate significant returns over the long term, through enhanced coastal protection from storm surge, sea level rise, and extreme weather events; environmental benefits from carbon sequestration and healthy ecosystems that provide a sanctuary for marine flora and fauna; and economic benefits to local communities from sustainable fisheries management and tourism.

In **Mozambique**, Africa's country third most vulnerable to climate change, the World Bank's cross-sectoral portfolio is harnessing nature to support climate resilience, disaster risk management, and rural development. Under the Cities and Climate Change Project, flood risk in the coastal city of Beira has been reduced through the creation of an urban green park along a rehabilitated tidal river and mangrove restoration zone, in parallel with grey interventions such as rehabilitation and extension of the city's aging stormwater drainage system. The investments showcase how cities can use green-grey infrastructure to deliver climate, socioeconomic and environmental benefits. In the Northern provinces of Mozambique with particularly low welfare levels and deep-rooted fragility, the Northern Mozambique Rural Resilience Project is reversing environmental degradation that threatens livelihoods and compounds climate risks. Mangrove restoration in Nampula and Cabo Delgado is stabilizing vulnerable sections of coastline, reducing soil erosion, and enhancing fish nurseries in depleted areas. The long-term sustainability of fish stocks is being supported by making grants and training available to more than 2,000 fishers for value chain development, and bringing over 6,000 artisanal operators into the vessel registration and licensing system.

4. WHAT DOES SUCCESS LOOK LIKE?

A broader vision. The climate and nature crises are among the biggest challenges we face, and our only chance of success is tackling them together. Success means a transition to nature- and climate-smart development that recognizes their interconnectedness and addresses synergies and tradeoffs in a transparent, equitable, and inclusive manner. This will be supported by increased awareness of the climate-nature nexus, improved capacity for recognizing climate-nature risks and opportunities in client countries, and public and private sector decision-making that explicitly considers biodiversity and ecosystem services.

Prioritizing nature-based solutions. In particular, there are opportunities to be exploited in how we use and manage land and oceans, and in the potential role that nature-based solutions can play. Success will involve scaling up nature-based solutions across regions, with increased consideration of biodiversity needs and outcomes as a foundation, and greater sharing of lessons learned on achieving parallel benefits for resilience and nature. Growing awareness of the potential of nature-based solutions will support increased integration into larger infrastructure projects in place of or alongside grey components. Enhanced investments and finance for nature-based solutions, with increased private sector investments, will deliver win-win outcomes for carbon sequestration, increased climate resilience, nature, and economic growth.

Embedding nature and climate into development. The integration of nature and climate into development planning and country engagement will help stakeholders navigate the climate-nature interface in national development goals and drive integrated investment. This will translate into increased mainstreaming of nature within climate investments; recognizing and engaging the sectors where potential tradeoffs exist; the comprehensive application of environmental and social frameworks; and increased investment in efforts to conserve and restore nature for the range of mitigation and adaptation services it provides**.**

Integrating on-ground action. As awareness of the interconnections, opportunities, and risks grows, implementation of national commitments under climate and biodiversity conventions can be integrated with greater alignment of ambitions. Ultimately, managing the climate-nature interface will mean allocating space and resources to different sectors in a way that protects high-value natural assets and is transparent about impact assessment, mitigation, and offsetting, supported by land use and marine spatial planning that explicitly considers nature and climate. Analyzing data in an integrated way will facilitate better decision-making and help establish climate and nature goals as critical development issues.

Promoting collective action. Looking forward, the continued alignment of global climate and nature dialogues will ensure that momentum is maintained. A key step will be the adoption of a climate change target within the post-2020 biodiversity framework that recognizes the complexity of the climate-nature interface[19]. On the climate agenda, the recent COP-27 had a focus on adaptation and scaling finance, including the contribution and role of nature-based solutions, offering further potential to advance collaborative nature and climate action at the highest political levels. As agendas merge, successfully tackling both crises will mean transformative change in all parts of society and our economy, in support of nature and climate-smart development.

FOOTNOTES

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10 Examples of alignment to nature on the climate agenda include the clear recognition of nature within the agreement from the 2021 UNFCCC COP-26 in Glasgow and the Glasgow Leaders' Declaration on Forests and Land Use endorsed by 141 countries at the same meeting.

11 Climate: World Bank Group. 2021. World Bank Group Climate Change Action Plan 2021–2025: Supporting Green, Resilient, and Inclusive Development. World Bank, Washington, DC. World Bank. https://openknowledge.worldbank.org/handle/10986/35799; Nature: World Economic Forum in collaboration with AlphaBeta, The Future of Nature and Business, 2020.

12 A National Biodiversity Strategy and Action Plan (NBSAP) is a key national requirement for Parties to the CBD, outlining a countries national targets and context for conservation and sustainable use of biodiversity, how the country intends to fulfil the objectives of the CBD, and how biodiversity can be integrated into relevant sectoral or cross-sectoral plans and policies. It is expected that following endorsement of a post-2020 framework, countries will update their NBSAPs in line with the post-2020 targets providing an important opportunity to align national commitments on nature and climate change plans.

13 https://blogs.worldbank.org/sustainablecities/nature-based-solutions-resilient-cities-and-restoring-local-biodiversity.

14 Resolution adopted by the United Nations Environment Assembly of the United Nations Environment Programme on 2 March 2022: Nature-based solutions for supporting sustainable development. UNEP/EA.5/Res.5

15 Browder, G.; S. Ozment; I. Rehberger Bescos; T. Gartner; and G. Lange. Integrating Green and Gray: Creating Next Generation Infrastructure. Washington DC: World Bank and World Resources Institute, 2019. https://openknowledge.worldbank.org/handle/10986/31430

16 World Bank Group. Climate and Development : An Agenda for Action - Emerging Insights from World Bank Group 2021-22 Country Climate and Development Reports. Washington, DC: World Bank, 2022. https://openknowledge.worldbank.org/handle/10986/38220

17 Johnson, J.A.; G. Ruta; U. Baldos; R. Cervigni; S. Chonabayashi; E. Corong; O. Gavryliuk,; J. Gerber; T. Hertel; C. Nootenboom; S. Polasky. The Economic Case for Nature: A Global Earth-Economy Model to Assess Development Policy Pathways. Washington, DC: World Bank, 2021.

18 Browder, G.; S. Ozment; I. Rehberger Bescos; T. Gartner; and G. Lange. Integrating Green and Gray: Creating Next Generation Infrastructure. Washington DC: World Bank and World Resources Institute, 2019. https://openknowledge.worldbank.org/handle/10986/31430

19 The first draft of the post-2020 framework included proposed Target 8: Minimize the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem-based approaches, contributing at least 10 GtCO2e per year to global mitigation efforts, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity.

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