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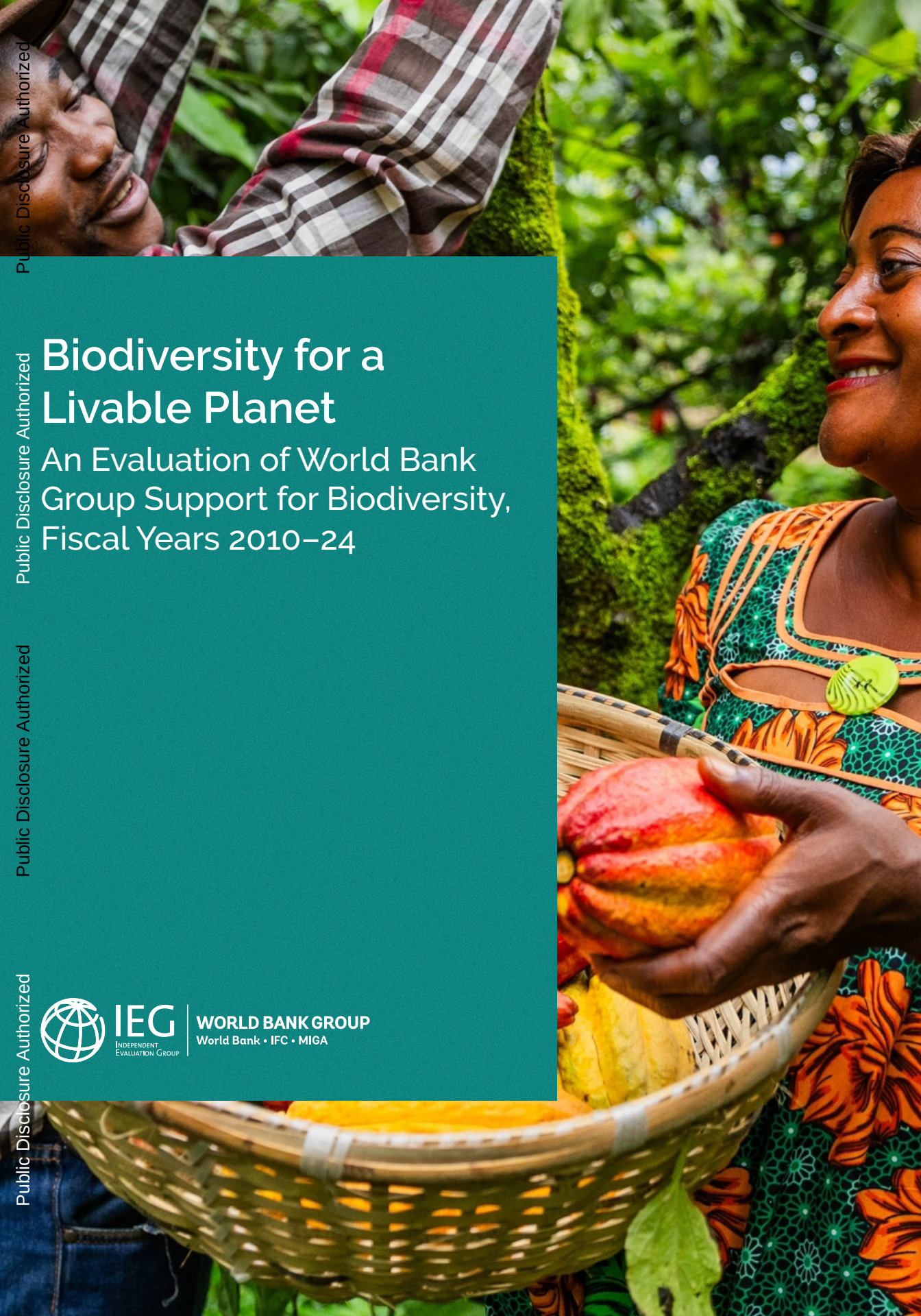
Biodiversity for a Livable Planet

An Evaluation of World Bank Group Support for Biodiversity, Fiscal Years 2010–24



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The cover photo of cocoa farmers in Africa demonstrates the positive relationship between policy incentives and reduced deforestation in biodiversity-rich areas.

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October 9, 2025

Contents

Abbreviations v

Acknowledgments vi

Overview viii

1. Background and Context 1
   - Role of the World Bank Group 4
   - The Evaluation 5

2. Biodiversity Conservation 9
   - Geographic Representativeness 13
   - Identifying, Empowering, and Protecting Indigenous Peoples and Local Communities to Achieve Conservation Aims 16
   - Ecological Outcomes, Monitoring, and Reporting 20
   - Ecological Connectivity 24
   - Sustainable Financing 30

3. Connecting Climate and Biodiversity in Development Planning 36
   - Country Partnership Frameworks 37
   - Country Climate and Development Reports 40

4. Integrating Biodiversity into Production Sectors 43
   - World Bank Agriculture Investments 45
   - International Finance Corporation's Agriculture Investment and Advisory 49
   - Sustainable Forest Management 53
   - Sustainable Fisheries and Aquaculture 58
   - Factors of Effectiveness Across Production Sectors 65

5. Biodiversity Offsets 73
   - Capacity Constraints 76
   - Information Disclosure Post-Board Approval 77
   - Implementation 77

6. Conclusions, Implications, and Recommendations 81
Conclusions 81
Implications 83
Recommendations 84

Bibliography 86
Systematic Review of Tree Cover Change as a Biodiversity Proxy Indicator in Protected Areas 102

Boxes

Box 2.1. Lessons from the Resilient Natural Resource Management for Tourism and Growth Project 20
Box 2.2. Protecting Biodiversity While Addressing Resource-Related Conflict Drivers 23
Box 2.3. Madagascar's Third Environment Program Support Project Shows the Importance of Using a Landscape-Level Approach 26
Box 2.4. Native Species–Focused Restoration in Paraguay's Atlantic Forest Achieved Landscape-Level Management and Inclusive Socioeconomic Gains 27
Box 2.5. Strengthening Community Land and Resource Rights Through New Conservation Laws in Mozambique 28
Box 2.6. Best Practices in Land–Sea Connectivity 29
Box 4.1. Scaling Biodiversity-Friendly Rice Cultivation in the Mekong Delta 48
Box 4.2. International Finance Corporation: Preferential Finance and Traceability Schemes in Tackling Commodity-Induced Deforestation, Brazil 51
Box 4.3. Approach to Sustainable Land Management and Production Forestry in Côte d'Ivoire 57
Box 4.4. Case Study: World Bank Assistance to Peru's Fisheries Sector 62
Box 4.5. International Finance Corporation Environmental and Social Services in Ecuador: Supporting Environmental Management in the Shrimp Sector 64
Box 5.1. Evolution of World Bank Environmental and Social Framework and International Finance Corporation Sustainability Framework Requirements for Biodiversity Offsets 75

Figures

Figure 2.1. World Bank–Financed Protected Areas over Time 12
Figure 2.2. World Bank Project Sites with Biodiversity Conservation Activities Across Biomes 14
Figure 2.3. World Bank Project Sites Across Sub-Biomes 15
Figure 2.4. Share of Conservation-Focused Projects Applying Operational Policy 4.10 Versus Environmental and Social Standard 7 18
Figure 2.5. Management Effectiveness Scores in Sub-Saharan African Protected Areas, by Subregion 22
Figure 3.1. Country Partnership Frameworks with Climate and Nature-Related High-Level Objectives 39

Tables

Table 2.1. World Bank Conservation Project Sites Within Indigenous Territories 17
Table 4.1. Effective Fisheries Management Techniques by Global Practice 60

Appendixes

Appendix A. Evaluation Methods 110
Appendix B. Evaluation Portfolio 162
Appendix C. Country Diagnostics 221
Appendix D. Geospatial Analysis Protected Areas 230

Abbreviations

CBD	Convention on Biological Diversity
CCDR	Country Climate and Development Report
COP	Conference of the Parties
CPF	Country Partnership Framework
EQ	evaluation question
ESF	Environmental and Social Framework
ESS	Environmental and Social Standard
EU	European Union
FCPF	Forest Carbon Partnership Facility
GBF	Global Biodiversity Framework
GHG	greenhouse gas
IFC	International Finance Corporation
IPLCs	Indigenous Peoples and local communities
METT	Management Effectiveness Tracking Tool
MIGA	Multilateral Investment Guarantee Agency
OP	Operational Policy
PES	Payments for Ecosystem Services
PS6	Performance Standard on Environmental and Social Sustainability

All dollar amounts are US dollars unless otherwise indicated.

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Overview

Biodiversity—the diversity of life at genetic, species, and ecosystem levels—is essential to sustaining human well-being, economic stability, and climate resilience, yet it is declining at a rate unprecedented in human history. Biodiversity underpins food security by supporting soil fertility, crop yields, and marine productivity, while increasing resistance to pests, disease, and climate risk. It also plays a vital role in climate mitigation and adaptation. Yet mammals, birds, amphibians, insects, plants, and marine life are vanishing tens to hundreds of times faster than in the past 10 million years (IPBES 2019), and wildlife populations have dropped by 73 percent on average in just five decades (WWF 2024). More than 85 percent of wetlands have been lost, half of coral cover has disappeared, and one-third of global tree species are now at risk of extinction. These losses threaten the functioning of ecosystems that provide food, water, shelter, energy, medicine, and income—especially for the 79 percent of people living below the global poverty line who depend on nature (IIED 2014). High levels of biodiversity loss increase the likelihood of crossing ecological tipping points, with irreversible consequences for livelihoods, economic development, disaster exposure, and climate stability.

The international community has committed to halting and reversing biodiversity loss, but progress remains below target. The Convention on Biological Diversity (1992) and the Aichi Biodiversity Targets (2011–20) laid the foundation for global action to address the drivers of biodiversity loss, but most goals were not met. The Kunming-Montreal Global Biodiversity Framework, adopted in 2022, renewed ambition, aiming to conserve and manage at least 30 percent of all land and oceans by 2030. Yet a significant financing gap persists, particularly in directing resources to developing countries to implement commitments and to support Indigenous Peoples and local communities (IPLCs).

The World Bank Group has articulated a strong corporate commitment to supporting a livable planet that is dependent on biodiversity outcomes. The Corporate Scorecard tracks biodiversity-dependent indicators such as

changes in natural capital wealth, the share of fish stocks within biologically sustainable limits, and the percentage of terrestrial and aquatic areas under protection. The Global Challenge Program on Forests for Development, Climate, and Biodiversity seeks to scale sustainable forest landscapes and ecosystem solutions for development, climate, and biodiversity outcomes. The Bank Group is a signatory to the Joint Statement by the Multilateral Development Banks on Nature, People and Planet, which emphasizes tackling nature and biodiversity loss, making nature-positive investments, and reporting on progress. In *Unlocking Nature-Smart Development: An Approach Paper on Biodiversity and Ecosystem Services*, the Bank Group renewed its focus on biodiversity and nature, pledging to pursue a whole-of-economy approach to address drivers of biodiversity loss (World Bank Group 2021). *Blue Biodiversity: Investing in Our, and Our Ocean's, Future* highlights the importance of conserving aquatic biodiversity for social and economic benefits (World Bank 2024a). These initiatives build on more than 30 years of biodiversity commitments.

This evaluation asked: How well is the Bank Group supporting clients to address biodiversity loss? We answer this question through two subquestions: (i) How is the World Bank addressing biodiversity challenges through conservation-focused activities? and (ii) How well are the World Bank and the International Finance Corporation (IFC) supporting activities with potential biodiversity benefits in key production sectors, and are those activities likely to achieve such benefits? A third question on managing risks to biodiversity was integrated into questions (i) and (ii) and addressed in the portfolio review of biodiversity offsets.

As per the Approach Paper, institutional coverage was based on portfolio presence. The evaluation covers World Bank conservation activities (FY 2010–24, chapter 2); World Bank and IFC production activities (FY15–24, chapter 4); and Bank Group experience with biodiversity offsets (FY15–24, chapter 5). It also examines strategic aspects across the Bank Group, notably on country engagement and links to climate change (chapter 3). The evaluation covers national, not global, convening efforts and excludes IFC's *Biodiversity Finance Reference Guide* because of its nascency.

We used a mixed methods approach that included literature reviews, AI-powered project identification, portfolio, geospatial and case analyses,

and interviews. We developed an AI-powered classification tool based on keywords from the literature, enhanced with machine learning and manual verification, to identify portfolios. We assessed conservation activities against international best practice, using literature underpinning the Global Biodiversity Framework. In the absence of ecological monitoring data, we used results monitoring, and geospatial analyses to examine tree cover, as a proxy. While not sufficient, analyses of tree cover enabled us to test assumptions about the efficacy of protected forested areas; this was the first time such analyses had been done at the World Bank. Two expert literature-based reviews focusing on resource governance and Indigenous Peoples were commissioned to enhance the analyses. We conducted exploratory case studies to contextualize the mainstreaming analyses in Brazil, Côte d'Ivoire, Ecuador, Mozambique, Peru, and Viet Nam. We also conducted a review of Bank Group experience with biodiversity offsets (see appendix A).

Biodiversity Conservation

Although insufficient to achieve all biodiversity goals, conservation remains a key component of global biodiversity efforts, as also reflected in the World Bank's portfolio. Protected areas are 33 percent more effective at reducing habitat loss than unprotected areas, although there is wide variability (Li et al. 2024). As such, a key biodiversity conservation approach used by the World Bank is support for protected areas. The evaluation identified and mapped 526 World Bank–supported protected area sites (out of 880 identified sites) in 130 projects approved between FY10 and FY24.

We examined geographic representativeness and found that the World Bank prioritizes biodiversity conservation in areas with high species richness, with 85 percent of 880 protected sites located in dry (45 percent) and humid (40 percent) tropics. Conservation funding for deserts, drylands, mangroves, temperate forests, and flooded grasslands remains low, despite their ecological importance and role in carbon sequestration—a pattern reflected in global conservation finance.

There is weak monitoring and therefore limited evidence of biodiversity outcomes. There is a lack of robust monitoring and reporting on biodiversity outcomes in World Bank and IFC interventions. As a result, the

ability to credibly demonstrate and learn from biodiversity gains or losses is constrained. This shortfall is rooted in both project design and strategic gaps, including a lack of biodiversity experts able to support clients in incorporating appropriate ecological change metrics into projects at the preparation stage and accounting for these changes over time. Measuring biodiversity, forest recovery, and ecosystem resilience is inherently a long-term challenge, so monitoring frameworks need to be designed accordingly. In practice, the Bank Group has relied on process indicators that verify important biodiversity-related activities (such as management effectiveness and certification processes put in place) but that are insufficient to measure biodiversity outcomes.

Tree cover data show that, in the context of rapid deforestation globally, World Bank–funded protected areas in tropical forests have on average succeeded in maintaining tree cover. A systematic review of 52 peer-reviewed studies confirms that tree cover change is a valid proxy for biodiversity in tropical forest ecosystems, reporting significant positive correlations between tree cover and biodiversity indexes. Forests—especially tropical ones—harbor a large share of terrestrial biodiversity, and changes in tree cover correlate with changes in species richness and ecosystem health. Tree cover reflects ecosystem structure and connectivity, both of which are critical for sustaining diverse biological communities. While it is a coarse proxy, it is often used when consistent, large-scale biodiversity data are lacking. Of the 526 protected area sites that we were able to map, 448 are in tropical forest areas. Using geospatial analyses, we estimate that the 448 sites, on average, maintained tree cover at a rate of +2.0 percent after project closure and +3.1 percent during and just after implementation.

The World Bank has applied landscape and seascape approaches to address biodiversity loss and increase resource productivity, though most projects lack reporting on species composition, ecological change, or tenure security. These approaches use territorial planning to integrate land, water, and biodiversity considerations, emphasizing coordination, stakeholder engagement, and decentralized management—an approach seen in about half of the World Bank's conservation-focused projects. Effective land- and seascape strategies require clear ecological objectives, spatial integration, cross-sector coordination, outcome monitoring, long-term funding, and active management

of trade-offs. However, few projects report on species composition (such as the use of diverse, native species) or document vegetation change or the securing of land and resource rights. While two-thirds of projects aim to strengthen community land and resource rights, only five track improvements in rights or tenure security (IPBES 2019; UNCCD 2019).

The World Bank infrequently identifies and engages Indigenous Peoples in its conservation efforts, and when it has, activities have been concentrated in just a few countries. Indigenous Peoples manage over a quarter of the world's land, including 40 percent of protected areas and one-third of intact forests. These lands experience less deforestation, slower biodiversity loss, and improved restoration and carbon storage compared with lands managed by external parties (Busch and Ferretti-Gallon 2023; Fa et al. 2020; Garnett et al. 2018). However, they are also severely threatened. The World Bank's biodiversity Approach Paper deems the identification, engagement, and protection of IPLCs central to positive biodiversity outcomes. Using LandMark data, our geospatial analysis found that only 6 percent of World Bank conservation areas overlap with lands held or used by IPLCs, covering 12 sites in Indigenous territories and 23 within community lands in eight countries. Using a second data set that more thoroughly includes Indigenous lands in Africa (Garnett et al. 2018), we identified 83 project sites—14.2 percent of World Bank conservation areas—within Indigenous Peoples lands. These are in Brazil, Colombia, the Democratic Republic of Congo, Mexico, Mozambique, Panama, Peru, and Zambia.

The share of conservation-focused projects that identify, engage, and protect IPLCs in conservation, as measured by Environmental and Social Framework policies specific to Indigenous Peoples, indicates a relative decline when compared with the share under the safeguard policies. The proportion of conservation projects that apply Operational Policy 4.10 (Indigenous Peoples) and the subsequent Environmental and Social Standard 7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) has declined from 52 percent (Operational Policy 4.10) to 25 percent (Environmental and Social Standard 7). This trend is most evident in Sub-Saharan Africa, where most conservation projects are based. Projects in Sub-Saharan Africa under the Dedicated Grant Mechanism for IPLCs—which aims to provide direct support for their participation in

sustainable forest management—also lack environmental and social risk management policies specific to Indigenous Peoples.

Biodiversity and Climate

The increased focus on climate change in Bank Group country engagements has not been coupled with a similar increase in focus on biodiversity, despite strong interlinkages. Most Country Partnership Frameworks (CPFs) are strongly aligned with global climate agreements, but no CPFs refer to global biodiversity agreements or national biodiversity frameworks. The Bank Group does not optimize biodiversity benefits in the 72 percent of CPFs that have climate and nature objectives and rarely captures biodiversity-related results in CPFs. Optimizing and capturing biodiversity benefits is essential for CPFs with portfolios comprising a significant proportion of land under enhanced management on the Corporate Scorecard—in Chad, Ethiopia, Niger, and Senegal. Only 25 percent of Country Climate and Development Reports seek to restore habitats, while 80 percent recommend using natural habitats for carbon capture.

Mainstreaming Biodiversity in Production Sectors

Although they are few, cases where biodiversity has been integrated into agriculture and agribusiness activities demonstrate that economic–ecological win–wins are possible. Sustainable production practices are powerful means to address the drivers of biodiversity loss while achieving more sustainable yields and income gains. A small share of the World Bank's agriculture lending (17 of 247 projects) explicitly applied and measured biodiversity-friendly practices such as plant and crop diversity, organic soil matter, reduced agrochemical use, and certified practices. Evaluated projects showed both positive biodiversity and economic results, with notable examples in China, Panama, and Viet Nam. Twenty-seven of 107 IFC investments promoted sustainable practices, using traceability and certification schemes and indicators. Notable efforts include support for deforestation-free soy production in Brazil and certifications for a fiberboard plant in Aisa and a fruit producer in South Africa. These examples occurred in vertically integrated businesses where companies had strong sustainability commitments. IFC had setbacks in more complex landscape-level efforts, such as supporting

deforestation-free cocoa in West Africa. One-quarter of IFC's agriculture and agribusiness-related advisory projects (17 of 67) supported more sustainable practices (such as crop rotation, soil management, avoided deforestation, and certification or traceability schemes), but a lack of appropriate indicators limits our ability to validate biodiversity-related results.

The World Bank is advancing elements of fisheries management with potential biodiversity gains, but there is uneven application across Global Practices, and most projects are struggling to reconcile the long-term need for enhanced fisheries management with short-term food security and income needs. Projects emphasizing good fisheries management tend to originate in the environmental practice, but even in these cases, marine ecosystem health is rarely measured. The small-scale fisheries sector faces the challenge of balancing the control of fishing activities with food security and employment aims. A notable World Bank fisheries project that demonstrated income and employment benefits while reducing fishing pressure is the South-West Indian Ocean Fisheries Governance and Shared Growth project in East Africa. IFC has helped Ecuador become a leading producer of sustainable and profitable commercial aquaculture.

Payments for forest carbon have been an important vehicle for conserving natural forests and ecosystem services landscapes. With the support of the Forest Partnership Facility, clients have achieved 188 percent of the target for avoided deforestation within landscapes, totaling 14.5 million hectares across four countries; these activities in one case contributed to an increase in average farm yields of 25 percent. Restoration targets, however, have been far from met. While clients have requested "quality carbon" and support for measuring its multiple benefits (biodiversity, climate change, and land), carbon finance programs have not supported the systematic capturing of biodiversity outcomes.

Well-implemented sustainable forest management plans should yield biodiversity benefits, but too few projects report on implementation or track and certify sustainable practices. Four of the 35 World Bank projects with sustainable forest management plans reported on actual implementation, while half reported on species composition when planting. Six of the 83 World Bank forest production projects cited certification or traceability schemes.

Good practices include the Ghana Tree Crop Diversification Project, which tracked traceable tree crop area, certification in cocoa, and premiums for certified cocoa, and the Côte d'Ivoire Forest Investment Program, which planted native mahogany, tiama, and medicinal trees within cocoa agroforestry and restored native species in sensitive areas. The Rwanda Volcanoes Community Resilience Project (FY24–) mandates that at least 20 percent of species be native and empowers local communities to supply these seedlings.

Incentives for Biodiversity-Positive Production Approaches

We identified four key factors that enable integration of biodiversity into production:

- Interministerial collaboration, especially between environmental and production ministries, and channeling of new information about applied research and technologies to extension services, firms, cooperatives, and resource users.
- Alignment of public and private finance with emerging sustainability regulations and markets (such as the European Union Regulation on Deforestation-free Products) helps create economic incentives for biodiversity-positive production.
- Availability of financial instruments to reduce up-front costs, buffer risk, and secure land and resource rights and tenure.
- Identification of entry points where production systems are reaching ecological limits—such as degraded soils due to overexploitation—can promote biodiversity-positive approaches that regenerate natural capital, productivity, and jobs.

World Bank Group Biodiversity Offsets

Biodiversity offsets are increasingly used across the Bank Group to manage residual environmental impacts, yet their effectiveness remains limited because of inherent complexity, weak institutional capacity, lack of transparency, and inconsistent implementation. Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate

for significant residual adverse biodiversity impacts arising from project development that persist after appropriate avoidance, minimization, and restoration measures have been taken. There has been uneven and inconsistent updating of offset information after project Board approval, and the methodologies used to estimate biodiversity loss and gains are often unclear, falling short of international best practice. Although implementation status and quality vary across institutions and sectors, most implementation activities are delayed or incomplete, undermining projects' ability to estimate that offsets will likely deliver their intended conservation outcomes.

Conclusions

The Bank Group has laid a credible foundation for biodiversity action and now faces a critical implementation test: translating its high-level commitments into measurable biodiversity outcomes that deliver human well-being, food security, sustainable production, and jobs. The Bank Group's attention to climate change has not been coupled with a focus on biodiversity in country strategies. On conservation, ecological monitoring, inclusion of IPLCs, and investment in sustainable financing are needed to enhance the World Bank's support for the 30×30 target agreed upon by clients under the Global Biodiversity Framework.

The integration of biodiversity in production sectors remains ad hoc and underleveraged, despite identified opportunities for scale. World Bank and IFC cases show that it is possible to reconcile biodiversity goals with economic growth, jobs, food security, and climate aims across agriculture, forestry, and fisheries. However, the current approach remains fragmented, with biodiversity integration concentrated in a few country contexts and progressive firms rather than embedded across the portfolio.

The challenges identified in implementing biodiversity offsets, of which there are ongoing examples in the World Bank, IFC, and the Multilateral Investment Guarantee Agency, indicate that institutional, technical, and financial strengthening is required to ensure that offsets function as credible, outcome-based conservation tools.

Based on these conclusions, we propose the following four recommendations to help the Bank Group support clients in achieving their livable planet goals.

Recommendations

The Bank Group should assist clients to identify, finance, and measure biodiversity outcomes. To support this goal, the Bank Group should strengthen its internal capabilities. This will involve (i) using existing country diagnostics (for example, Country Climate and Development Reports and CPFs) to identify biodiversity-relevant entry points; (ii) integrating biodiversity finance initiatives into broader economic development strategies and making explicit the linkages between commitments and finance across biodiversity, climate, and land degradation; (iii) conducting ecological monitoring, including by using a combination of technology (for example, Earth observation tools) and validation methods (for example, habitat and species monitoring, soil health analysis) to improve measurement and reporting; and (iv) addressing internal biodiversity capacity constraints.

The World Bank should engage, empower, and protect IPLCs to achieve sustainable and inclusive biodiversity outcomes at scale. This entails (i) internalizing and raising awareness about the role of Indigenous Peoples as effective stewards of biodiversity-rich landscapes; (ii) enhancing the identification of IPLCs and placing these groups at the center of biodiversity solutions; (iii) strengthening resource rights to ensure sustainable biodiversity outcomes; and (iv) in conservation efforts, enhancing collaboration between social development, Indigenous Peoples specialists, and environmental teams.

The World Bank and IFC should proactively replicate and scale proven biodiversity-positive production models that deliver positive ecological, economic, and social outcomes. This involves (i) finding opportunities to introduce new production and agribusiness methods, supported by policies, regulations, and incentives that encourage biodiversity investment; (ii) tailoring successful interventions to local ecological and cultural contexts; (iii) augmenting the capacity of extension networks and/or revisiting advice provided by firms; and (iv) helping raise consumer awareness and demand for sustainable products. When piloting new approaches, underpin projects with robust monitoring, reporting, and adaptive learning systems to help teams track and adapt.

The World Bank, IFC, and the Multilateral Investment Guarantee Agency should actively address the gaps in offset projects regarding staff capacity, information disclosure, and project life cycle monitoring and supervision. The Bank Group should establish functional, recognized, and appropriately resourced biodiversity focal points across the Bank Group to provide access to experts and opportunities for sharing, peer review, and learning from offset practice. Third-party verification for high-risk or high-impact projects, as good practice, is encouraged.

1 | Background and Context

Biodiversity—encompassing the variety of life on Earth at genetic, species, and ecosystem levels—provides essential services that support human survival and well-being. Biodiversity is crucial for healthy ecosystems, supporting food, clean air and water, medicine, income, and climate stability. While high concentrations exist in the tropics—in tropical rainforests and coral reefs—biodiversity benefits all environments by supporting life-sustaining services. Biodiverse wetlands are natural filters that improve water quality, and biodiversity holds cultural significance, especially for Indigenous Peoples. The decline of biodiversity severely threatens ecosystem services, food and water security, economies, the environment, and human health.

Biodiversity underpins global food security and livelihoods. A variety of wild species are vital to agriculture, especially pollinators that fertilize crops; more than 75 percent, or between $235 billion and $577 billion, of annual global food production depends on them (IPBES 2016). Biodiversity supports soil health, nutrient cycling, photosynthesis, and habitat provision. A lack of diverse soil organisms can result in decreased soil fertility, which may cause lower agricultural yields and increased risk of desertification. Diverse marine ecosystems bolster fish populations, boost disease resistance, and increase environmental adaptability (IIED 2014). Biodiversity also provides essential resources—such as food, water, energy, and medicine—for 79 percent of those living below the poverty line.

Biodiversity and climate change are intrinsically linked: biodiversity is essential for mitigating the effects of climate change, while climate change presents considerable risks to ecosystems and species. Diverse forests, wetlands, oceans, and coastal ecosystems are carbon sinks, helping to regulate climates (Seymour et al. 2022). Mangroves store more carbon per unit area than terrestrial forests while also reducing disaster exposure and economic loss (Hochard et al. 2019; Sanderman et al. 2018). Restoring ecosystems enhances disaster resilience. Climate change drives biodiversity loss by raising

temperatures, altering rainfall patterns, and causing extreme weather, leading to habitat loss, species displacement, and extinction risks.

However, biodiversity loss is occurring at an unprecedented pace, prompting scientists to caution that we may be nearing critical thresholds that risk causing irreversible ecosystem degradation. Species across all groups are disappearing at rates tens to hundreds of times above the 10-million-year average (IPBES 2019). There has been a catastrophic 73 percent decline on average in the monitored wildlife population in just 50 years (1970–2020; WWF 2024). Approximately 50 percent of live coral reef cover and over 85 percent of wetlands have been lost. More than one-third of global tree species face extinction, highlighting deforestation's threat to biodiversity. Between 1990 and 2020, 420 million hectares of forest were lost worldwide—an area equivalent in size to the European Union (EU). Notably, more than 90 percent of this deforestation took place in tropical regions. Such significant declines in healthy ecosystems are bringing the Earth closer to critical tipping points.

There are five main drivers of biodiversity loss, mostly associated with human behaviors. The drivers are changes in land and sea use, direct exploitation of organisms, invasive species, pollution, and climate change (IPBES 2019). Deforestation, urbanization, agricultural expansion, and infrastructure development contribute to habitat destruction and fragmentation, resulting in species decline and ecosystem loss. The expansion of beef, soy, and oil palm production has been a significant contributor to widespread deforestation and biodiversity decline. In 2023, 6.4 million and 62.6 million hectares of native forests were clear-cut and degraded, respectively, at rates exceeding pre-2021 pledge levels. Poaching, overfishing, and unsustainable harvesting have led to population declines and extinctions. For example, 38 percent of global fish stocks are fished at unsustainable levels. Invasive species are associated with about 40 percent of endangered species listings. Air, water, and soil pollution harms wildlife and disrupts ecosystems, leading to biodiversity loss. Climate change is causing mass plant and animal mortality. Economic actors may not take responsibility for biodiversity loss since they do not receive all of its benefits. Limited awareness of ecosystem service value also restricts conservation efforts.

The international community has entered into agreements to halt and reverse biodiversity loss, but implementation is insufficient. At the 1992 Earth Summit, 150 leaders signed the United Nations Convention on Biological Diversity (CBD) to support conservation, sustainable biodiversity use, and equitable benefit sharing. Governments reconvened in Aichi in 2010 (at the 2010 Conference of the Parties, or COP10) and set 20 biodiversity targets. A decade later, most of the CBD objectives, but none of the targets, were achieved (CBD 2020). Parties to the CBD adopted the Kunming-Montreal Global Biodiversity Framework (GBF) in 2022 to halt and reverse biodiversity loss by 2050, while setting interim targets of effectively conserving and managing at least 30 percent of the Earth's land and ocean by 2030. Sufficient funding has not been forthcoming: the GBF estimates that $700 billion is needed annually to achieve the targets. In Rome in 2025, parties agreed to mobilize $200 billion annually and to increase flows to developing countries but acknowledged the persistence of the financing gap.

Global biodiversity agreements have increasingly recognized the importance of Indigenous Peoples and local communities (IPLCs) in protecting biodiversity. IPLCs manage 80 percent of global terrestrial biodiversity by exercising customary rights over half of the world's lands (IPBES 2019; RRI 2020). Forests overseen by Indigenous Peoples, whether formally recognized or governed by traditional practices, are significantly less prone to deforestation than those managed by external entities (Blackman and Veit 2018; Ding et al. 2016; Fa et al. 2020; Nepstad and Schwartzman 2006; Walker et al. 2020). This underscores the vital role of Indigenous guardianship, yet Indigenous Peoples receive only 0.13 percent of climate change funding, with their rights protected on just 10 percent of the land they inhabit (FAO 2021b; Garnett et al. 2018). Therefore, the GBF named IPLCs as key partners in biodiversity protection, restoration, and sustainable use. The 2024 United Nations Biodiversity Conference in Cali established a permanent subsidiary body for Indigenous Peoples, with a formal role in conservation decision-making, and created the Cali Fund to ensure equitable sharing of benefits from genetic resources. However, national-level efforts do not always align with these global commitments because of unrecognized rights, forced evictions, marginalization, threats from extractive industries, and inadequate financial support.

Role of the World Bank Group

The World Bank Group has articulated a strong corporate commitment to support a livable planet that is dependent on measurable biodiversity outcomes. In October 2023, the Bank Group reframed its vision to create a world free of poverty on a livable planet. Its Corporate Scorecard stresses that no country is immune to the declines in biodiversity that undermine development and exacerbate poverty. National challenges tracked on the Scorecard (client context indicators) focus on preserving and restoring biodiversity. These challenges include establishing economies with increased renewable natural capital, increasing and maintaining fish stocks within sustainable levels, and establishing and maintaining protected terrestrial and aquatic areas. The Bank Group results indicator, "hectares of terrestrial and aquatic areas under enhanced conservation/management," requires projects to show evidence of improving the extent or condition of these areas, enhancing biodiversity or other ecosystem services and addressing the drivers of nature loss.[1] The Global Challenge Program on Forests for Development, Climate, and Biodiversity also seeks to scale up sustainable forest landscapes and ecosystem solutions to enhance development, climate, and biodiversity outcomes. The Bank Group was 1 of 10 multilateral development banks to sign the Joint Statement by the Multilateral Development Banks on Nature, People and Planet, which emphasizes tackling the drivers of nature and biodiversity loss, promoting nature-positive investments, and advancing progress reporting. The statement reads: "nature (including ecosystems and their biodiversity), plays a critical role in providing resources and services that underpin and support the planet and people in terms of human health and wellbeing; economic growth, jobs, and livelihoods, food security; and air, water, and soil quality."

In *Unlocking Nature-Smart Development: An Approach Paper on Biodiversity and Ecosystem Services*, the Bank Group placed a renewed emphasis on biodiversity and nature, including the need to take a whole-of-economy approach. In this paper, the Bank Group highlights the importance of adopting such an approach to address the drivers of biodiversity and ecosystem services loss by scaling up biodiversity financing, establishing a solid scientific and economic base for action, and implementing equitable and inclusive

measures to address the biodiversity crisis (World Bank Group 2021). Other sector studies, such as the *Blue Biodiversity* report (World Bank 2024a), highlight the importance of conserving aquatic biodiversity for social and economic benefits. These initiatives build on more than 30 years of biodiversity commitments, including the 1990 publication *The World Bank and the Environment: First Annual Report* and the World Bank's Environment Strategy (2012–22), *Toward a Green, Clean, and Resilient World for All*, which encompassed commitments to conserve and restore biodiversity while adopting more integrated, economywide approaches and innovative financing solutions. The World Bank also mitigates biodiversity risks through its Environmental and Social Framework (ESF) Environmental and Social Standard 6 (ESS6).

The International Finance Corporation (IFC) also tracks its nature-based investments using a common set of principles. "Nature-positive" refers to increasing the resilience of our planet and societies to stop and reverse nature loss. This approach aims to enrich biodiversity, store carbon, purify water, and reduce pandemic risk. IFC also mitigates the risk of biodiversity loss through its Performance Standard on Environmental and Social Sustainability (PS6).

The Evaluation

This evaluation asked the following question: How well is the Bank Group supporting clients to address biodiversity loss? To answer this question, we posed two main subquestions:

- Evaluation question (EQ) 1: How well is the World Bank addressing biodiversity challenges through conservation-focused activities?
- EQ2: How well are the World Bank and IFC supporting activities with potential biodiversity benefits in key production sectors, and are those activities likely to achieve such benefits?

A third question on addressing risks was subsumed into the first two questions (using safeguards, ESF, and Performance Standards) and was addressed by covering the Bank Group's experience with biodiversity offsets.

The evaluation scope involves three dimensions. It covers the periods FY 2010–24 for conservation activities and FY15–24 for production activities. The longer time frame was needed to measure land-use change in the conservation portfolio, and the shorter time frame was assigned to production activities, recognizing the recency of commitments to reintroduce biodiversity commitments in production sectors, especially agriculture. The evaluation covers the World Bank for conservation-focused activities, the World Bank and IFC for production activities, and the Bank Group (the World Bank, IFC, and the Multilateral Investment Guarantee Agency [MIGA]) for biodiversity offsets. The evaluation scope also covers the Bank Group's engagement at a national level but not at a global convening level.

We used triangulated methods to answer the EQs, which also contributed new knowledge for the Bank Group and the global community. Further information can be found in appendix A.

» Literature and portfolio review. We conducted focused literature reviews to identify good practice and to identify the Bank Group's commitments and its advantages. We deployed text analytics and search algorithms to process, analyze, and organize portfolio data. Our team developed specialized AI models that automatically classified and organized critical information into distinct portfolios (for conservation, integration, and offsets). We developed structured templates, integrating data visualization to analyze Bank Group performance against the literature and Bank Group commitments.

» Geospatial analysis. We conducted geospatial analyses to identify World Bank conservation activities for FY10–24. We identified protected areas (or other physical conservation areas) supported by the World Bank across 130 projects. Within these, we geolocated 880 unique sites with conservation activities. Of these, we matched 605 sites with the World Database on Protected Areas, which includes 305,198 registered areas (275 sites could not be matched). This marks the first time that the full range of World Bank–financed protected areas has been identified and mapped. Of the 605 sites, we have geospatial data points for 585 of them. For geolocated areas, we performed geospatial analysis to assess relevance (siting) and effectiveness (tree cover change over time, which we assessed using consistent spatial and temporal resolution, for the period FY16–24). We organized analysis of tree

cover into two cohorts: projects approved in FY10–14 and those approved in FY15–19. The first cohort assesses the impact of World Bank support after project close; the second cohort assesses project effects during and immediately after implementation.

- Expert-led deep dives. Experts led in-depth analysis on land and resource rights, IPLCs, and biodiversity offsets to deepen portfolio results.
- Review of core country diagnostics. We assessed the extent to which the Bank Group is integrating biodiversity into the most recent Country Partnership Framework (CPF) for each country or country grouping (n = 113) and in 57 disclosed Country Climate and Development Reports (CCDRs).
- Exploratory case studies. We analyzed technical or policy mechanisms that had achieved positive ecological and economic effects from integrating biodiversity into key production sectors; these case studies were conducted in Brazil, Côte d'Ivoire, Ecuador, Peru, and Viet Nam, and virtually for Mozambique.

[1] As per the World Bank Group Scorecard FY24–30 methodology note, the indicator measures the terrestrial and inland/marine aquatic areas (in millions of hectares) that are under enhanced protection, conservation, restoration, or sustainable management through operations supported by the International Bank for Reconstruction and Development, the International Development Association, IFC, and MIGA. This will include the results of work on diverse landscapes (for example, forests, grass and shrub lands, woodlands, wetlands, water bodies, watersheds, oases, and urban green and blue spaces) and seascapes (for example, ocean and coastal zones, including wetlands, deltas, mangroves, and reefs) that have been improved from a nature perspective. These are expected to improve the extent or condition of these areas relating to biodiversity or other ecosystem services and address drivers of nature loss. Relevant activities may reduce and reverse natural resource degradation, protect and enhance natural habitats and their ecosystem services, and thus provide nature benefits to dependent communities. This indicator does not include terrestrial or aquatic areas managed as offsets for project-related biodiversity impacts (public or private sector). Production landscapes or seascapes (for example, plantations, agriculture, and aquaculture areas) may be included where practices are applied that result in demonstratable benefits to nature, while not involving conversion of natural habitats (World Bank Group 2025).

2 | Biodiversity Conservation

Highlights

Although not sufficient to achieve all biodiversity goals, conservation remains a key component in global biodiversity efforts, as reflected in the World Bank's portfolio. For the first time, we mapped 526 World Bank–supported protected area sites (out of 880 identified sites) in 130 projects approved between FY 2010 and FY24.

We examined geographic representativeness and found that the World Bank prioritizes biodiversity conservation in areas with high species richness, with 85 percent of 880 protected sites located in dry (45 percent) and humid (40 percent) tropics. Conservation funding for deserts, drylands, mangroves, temperate forests, and flooded grasslands remains low, despite their ecological importance. This pattern is reflective of wider trends in global conservation finance.

The World Bank's monitoring and, therefore, evidence of biodiversity outcomes are limited. There is a lack of robust monitoring and reporting on biodiversity outcomes. As a result, the ability to credibly demonstrate and learn from biodiversity gains or losses is constrained. This shortfall is rooted in both project design and strategic gaps, including a lack of biodiversity experts able to support clients in incorporating appropriate ecological change metrics into projects at the preparation stage and accounting for these changes over time.

Tree cover data show that, in the context of rapid global deforestation, World Bank–funded protected areas in tropical forests have on average succeeded in maintaining tree cover. Of the 526 protected area sites that we could map, 448 are in tropical forest areas. Using geospatial analyses, we estimate that the 448 sites, on average, maintained tree cover at a rate of +2.0 percent after project close.

The World Bank has applied landscape and seascape approaches to address biodiversity loss and increase resource productivity, though most projects lack reporting on species composition, ecological change, or tenure security.

Although Indigenous Peoples and local communities demonstrate effectiveness in protecting biodiversity, the World Bank infrequently identifies, engages with, and protects them in its conservation efforts; when it has, it has concentrated activities in just a few countries. The share of conservation-focused projects that identify, engage with, and protect Indigenous Peoples and local communities in conservation, as measured by Environmental and Social Framework policies specific to Indigenous Peoples, indicates a relative decline when compared with the share under the safeguard policies.

Most World Bank efforts to support sustainable financing for conservation including endowment funds, payments for environmental services, and ecotourism were successful, but these efforts have decelerated since 2015. More recently, the World Bank has led the way by developing and demonstrating the potential of innovative biodiversity-related financial instruments, including for blue bonds and wildlife bonds. Continued learning is essential to determine their replicability, scalability, and effectiveness in achieving biodiversity outcomes.

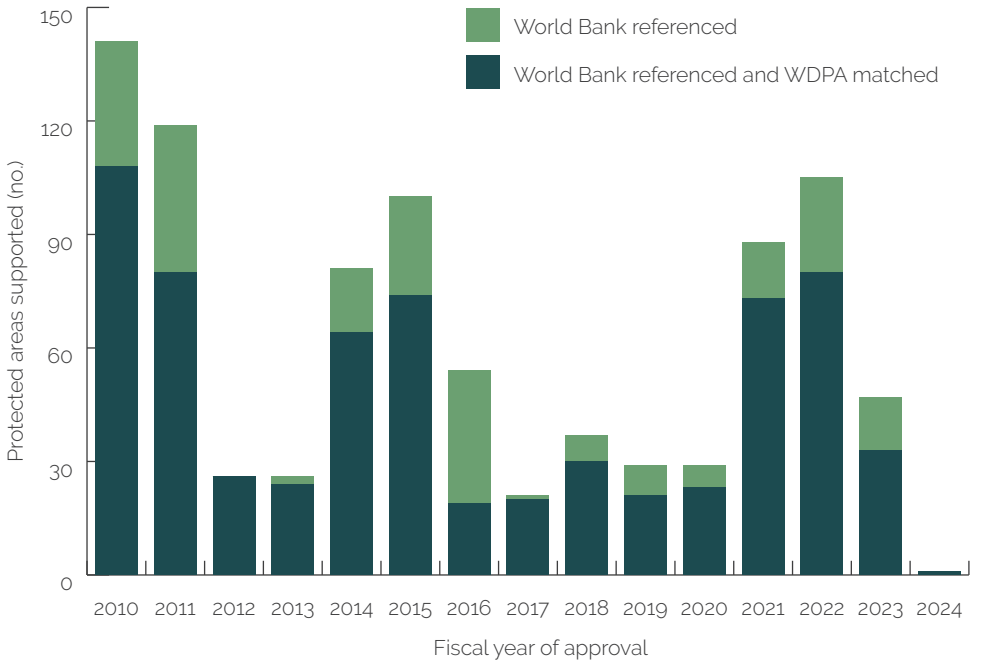
Although insufficient to reach biodiversity goals on its own, conservation remains a critical component of global biodiversity efforts. Conservation is crucial for biodiversity, preventing species extinction, maintaining ecosystem services, and boosting ecological resilience. Conservation supports human well-being by preserving ecosystem functions such as pollination, water purification, and carbon sequestration (Díaz et al. 2019). Protected areas, habitat restoration, and species management effectively slow biodiversity decline; without them, bird and mammal extinction rates would be much higher (Bolam et al. 2021). Well-managed marine protected areas increase fish biomass and biodiversity (Edgar et al. 2014). A global study found that protected areas are 33 percent more effective at reducing habitat loss, including deforestation, than unprotected areas, while also noting the limited ability of protected areas to mitigate human pressure, as well as variability in relation to management practices, enforcement, and size (Li et al. 2024). This chapter covers World Bank support for conservation activities. It does not cover IFC or MIGA because they do not finance conservation.

World Bank support for protected areas (and other effective area-based conservation measures) was higher in FY10–15 but has remained broadly consistent over the past decade (FY15–24), aligning with funding replenishment cycles. The World Bank frequently established protected areas to prevent biodiversity loss. We identified 139 lending projects approved between FY10 and FY24 that included conservation activities. Within these projects, we identified 880 conservation areas. While figure 2.1 shows a decrease in World Bank–financed protected areas since FY10–15, it also indicates that support has remained consistent since then. The Environment, Natural Resources, and Blue Economy Global Practice manages 80 percent of the portfolio, which is mostly located in Latin America and the Caribbean and Sub-Saharan Africa. The project activities include the following:

1. The development and management of protected areas, tourism, employment, and livelihoods
2. Wildlife protection and management; the prevention of poaching, trafficking, and human–wildlife conflict; habitat preservation; and the conservation of endangered species

3. Policies and institutions, legal and regulatory frameworks, capacity building, and financing

Figure 2.1. World Bank–Financed Protected Areas over Time



Source: Independent Evaluation Group, with WDPA data from April 2025.

Note: Protected areas referenced by the World Bank that could not be matched with the WDPA are shown in light green; those that could be matched with the WDPA are shown in dark green. This chart includes duplicate protected areas if they have received support from multiple projects over time. WDPA = World Database on Protected Areas.

The identification of good conservation practices from the literature and World Bank commitments yielded five areas of inquiry, around which this chapter is organized. The five assessment areas are (i) geographic representativeness, or the equitable and proportional representation of different biomes, ecosystems, and taxonomic groups; (ii) engagement and protection of IPLCs; (iii) ecological outcomes, monitoring, and reporting; (iv) ecological connectivity, or the unimpeded movement of species and the flow of natural processes that sustain life across ecosystems, including shifts from fragmented protected areas to landscape approaches; and (v) sustainable finance.

Geographic Representativeness

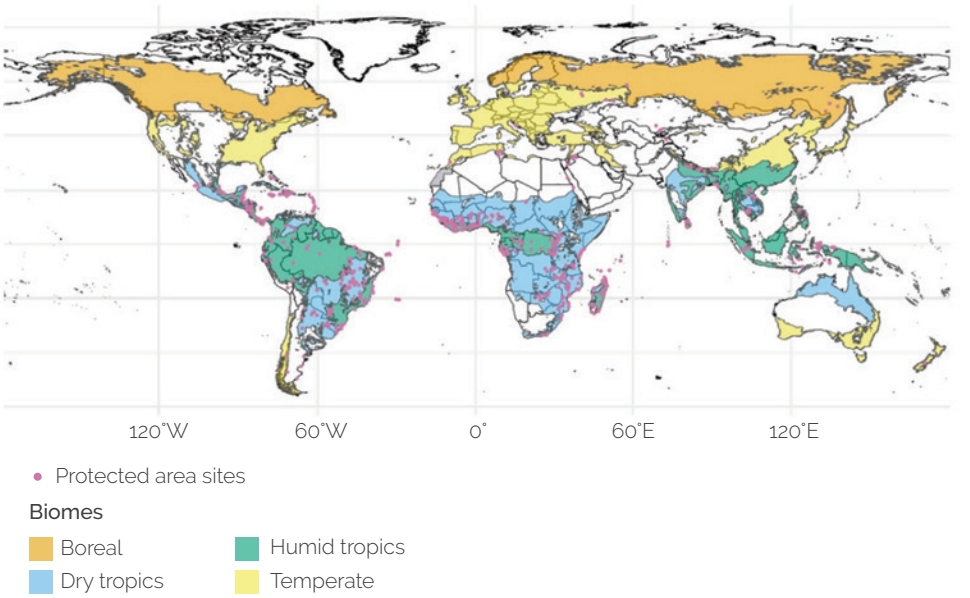
Geographic representativeness, a principle enshrined in the GBF, ensures that conservation areas cover all major ecosystems and species distributions. A diverse network of protected eco-regions boosts ecological resilience, maintains ecosystem functions, and helps species adapt to climate change threats. Focusing conservation efforts on popular parks, for example, leaves many species and habitats vulnerable to decline or extinction. Reflecting this importance, global targets call for ecological representativeness in conservation efforts (CBD 1992, 2010; GBF target 3). By 2020, 15 percent of land and 7 percent of marine areas were classified as protected globally, but there were notable regional disparities (UNEP-WCMC and IUCN 2021). Arid areas and tropical dry broadleaf forests face especially low protection (Biber et al. 2022; Gaisberger et al. 2022). Other systems such as temperate grasslands, Mediterranean woodlands, peatlands, and the deep ocean also have low conservation coverage (Hoekstra et al. 2005). Expanding protections to these underrepresented biomes is crucial for achieving the global 30×30 target.

The World Bank has focused its biodiversity conservation efforts on areas with high biodiversity richness, or endemism, within specific biomes in the tropics. Using geospatial analysis, we determined that 448 conservation sites in the portfolio of 139 projects are located within two main forest biomes: dry tropics (53 percent) and humid tropics (47 percent). Using a classification of 14 distinct biomes, we then determined that most conservation sites were positioned within tropical and subtropical moist broadleaf forests and tropical and subtropical grasslands, savannas, and shrublands. The concentration of project sites in the former category is mainly due to activities in the Amazon Basin, the Congo Basin, the southern part of West Africa, and Southeast Asia.

The World Bank's portfolio has limited coverage of subtropical regions, deserts, and mangroves, which are also underrepresented in global conservation efforts. Overall, clients managing significant desert, dryland, and mangrove areas are receiving less support (see figures 2.2 and 2.3). Only 4.8 percent of World Bank conservation sites are in tropical and subtropical dry broadleaf forests. Deserts and xeric shrublands make up 18 percent of the global biome data set and support high biodiversity, including many endangered species

(IUCN 2011). However, desert biomes account for just 2.2 percent of World Bank conservation sites. Deserts host 6 percent of the world's population (Mortimore et al. 2009), who often rely on these ecosystems for livelihoods, food security, and climate resilience.[1] Less than 2 percent of World Bank conservation sites overlap with mangroves.[2]

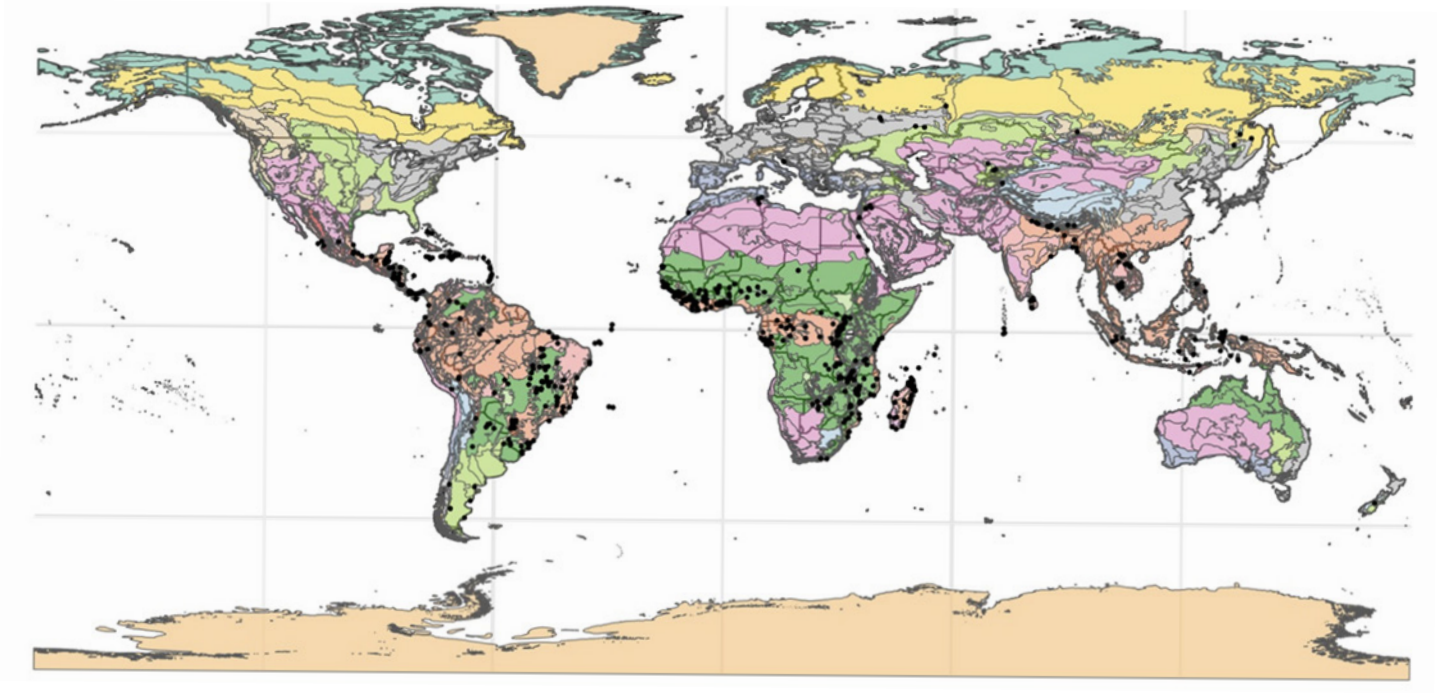
Figure 2.2. World Bank Project Sites with Biodiversity Conservation Activities Across Biomes



Source: Independent Evaluation Group.

Note: This map has been cleared by the World Bank Group cartography unit.

Figure 2.3. World Bank Project Sites Across Sub-Biomes



- Protected area sites

Biomes

- Boreal forests, or taiga
- Deserts and xeric shrublands
- Flooded grasslands and savannas
- Mangroves
- Mediterranean forests, woodlands, and scrub
- Montane grasslands and shrublands
- n.a.
- Temperate broadleaf and mixed forests
- Temperate conifer forests
- Temperate grasslands, savannas, and shrublands
- Tropical and subtropical coniferous forests
- Tropical and subtropical dry broadleaf forests
- Tropical and subtropical grasslands, savannas, and shrublands
- Tropical and subtropical moist broadleaf forests
- Tundra

Source: Independent Evaluation Group.

Note: n.a.= not applicable;This map has been cleared by the World Bank Group cartography unit.

Identifying, Empowering, and Protecting Indigenous Peoples and Local Communities to Achieve Conservation Aims

There is compelling evidence that Indigenous Peoples are more effective stewards of biodiversity-rich landscapes than other groups. Indigenous Peoples, representing 6 percent of the population, manage more than a quarter of the world's land surface, including 40 percent of terrestrial protected areas and intact landscapes, and one-third of global intact forests (Fa et al. 2020; Garnett et al. 2018; ILO 2019). Forests under Indigenous management are less prone to deforestation and degradation than those managed by external entities (Busch and Ferretti-Gallon 2023; Fa et al. 2020; FAO and FILAC 2021), with their stewardship reducing agriculture-driven deforestation (Pratzer et al. 2023). Biodiversity declines more slowly in Indigenous-managed lands, and these areas offer better restoration and carbon storage (Busch and Ferretti-Gallon 2023; Porter-Bolland et al. 2011; Stevens et al. 2014). Approximately 42 percent of global lands in good ecological condition are within IPLC lands (WWF et al. 2021).

Unlocking Nature-Smart Development: An Approach Paper on Biodiversity and Ecosystem Services highlights the essential role of IPLCs in achieving biodiversity goals (World Bank Group 2021). The paper states that effective conservation of natural habitats requires placing IPLCs, who rely on and help conserve nature, at the center. These communities have deep, place-based ecological knowledge developed over millennia, enhancing biodiversity preservation (Dawson et al. 2024). Good governance (including land tenure security), equitable benefit sharing, and the preservation of local knowledge are crucial for their contribution to conservation (IPBES 2019).

Yet the World Bank infrequently supports conservation activities within IPLC areas, and when it does, it tends to concentrate its activities in just a few countries. Evaluating the relationship between World Bank projects and IPLC lands is crucial for assessing the inclusivity and effectiveness of conservation efforts. Geospatial analyses show that 6 percent of project sites (35 out of 585) are located within IPLC lands, with 12 project sites overlapping Indigenous Peoples territories and 23 located within local community lands (table 2.1; LandMark platform data)—a minor overlap considering

the extensive biodiversity encompassed within IPLC lands. These sites span eight countries: Brazil, Colombia, the Democratic Republic of Congo, Mexico, Mozambique, Panama, Peru, and Zambia. Because the LandMark data set underidentifies Indigenous Peoples lands in Africa, we used Garnett et al. (2018), which identifies 83 project sites within Indigenous Peoples lands, representing 14.2 percent of World Bank conservation sites.[3]

Table 2.1. World Bank Conservation Project Sites Within Indigenous Territories

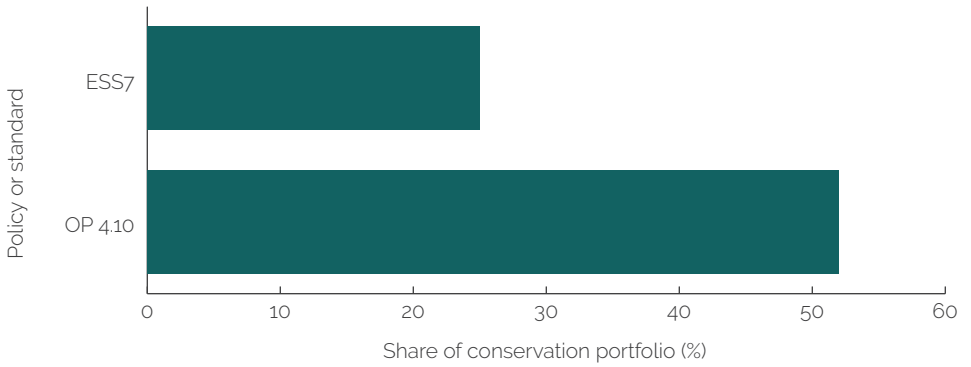
Data Source	Distance from Indigenous Lands	Project Sites (no.)	Share of Total (%)
LandMark	Sites within Indigenous lands	35	6.0
LandMark	Sites less than 10 kilometers from Indigenous lands	48	8.2
LandMark	Sites 10–30 kilometers from Indigenous lands	54	9.2
LandMark	Sites more than 30 kilometers from Indigenous lands	448	76.6
Total number of World Bank protected area sites		585	
Garnett et al. (2018)	Sites within Indigenous lands	83	14.2
Garnett et al. (2018)	Sites less than 10 kilometers from Indigenous lands	50	8.5
Garnett et al. (2018)	Sites 10–30 kilometers from Indigenous lands	56	9.6
Garnett et al. (2018)	Sites more than 30 kilometers from Indigenous lands	396	67.7
Total number of World Bank protected area sites		585	

Source: Independent Evaluation Group.

The share of conservation-focused projects that identify, engage, and protect IPLCs in conservation, as measured by ESF policies specific to Indigenous Peoples, indicates a relative decline compared with the share under safeguard policies. Analyzing the incidence of conservation projects that apply the World Bank's Operational Policy (OP) 4.10 (Indigenous Peoples) and the subsequent ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) implemented from October 2018 onward, we note a decline in the proportion of projects using these policies to identify, engage, and protect Indigenous Peoples. Whereas

52 percent of conservation projects (49 out of 94) under safeguards applied OP 4.10 (Indigenous Peoples), 25 percent of conservation projects (8 out of 32) under the ESF applied ESS7 (see figure 2.4). This trend is most evident in Sub-Saharan Africa, where most conservation projects are based. The number involved is limited, especially under the ESF, so this trend merits further analysis since new ESS7 provisions and clarifications could reasonably have been expected to increase ESS7's application in comparison with OP 4.10.

Figure 2.4. Share of Conservation-Focused Projects Applying Operational Policy 4.10 Versus Environmental and Social Standard 7



Source: Independent Evaluation Group.

Note: The conservation portfolio includes 126 investment project financing projects (of a portfolio of 139) and excludes development policy financing and category C/low-risk projects. ESS = Environmental and Social Standard; OP = Operational Policy.

Projects in Sub-Saharan Africa under the Dedicated Grant Mechanism for IPLCs—which aims to provide direct support, enabling their participation in sustainable forest management—lack environmental and social risk management policies specific to Indigenous Peoples. The Dedicated Grant Mechanism is a Climate Investment Fund financing window that provides direct grant support to IPLCs so that they can contribute time-tested approaches to protecting and managing the natural environment. Among the 15 Dedicated Grant Mechanism projects within the scope of this evaluation, OP 4.10 or ESS7 was applied across all 9 projects located in East Asia and Pacific, South Asia, Latin America and the Caribbean, or globally. However, only 2 of the 6 Dedicated Grant Mechanism projects for IPLCs in Sub-Saharan Africa applied a risk management policy specific to Indigenous

Peoples (1 in the Democratic Republic of Congo applied OP 4.10), and the only Sub-Saharan African Dedicated Grant Mechanism project under the ESF, in the Republic of Congo, applied ESS7.

Document reviews and interviews highlight several factors that may be contributing to the limited engagement of IPLCs in World Bank conservation activities:

- In the conservation portfolio, the World Bank tends to support Indigenous Peoples who have existing legal recognition and clear collective land and resource rights under national law. According to our review of World Bank project documents, projects hosted by countries that have applied both OP 4.10 and ESS7 in the conservation context always protect or engage Indigenous communities that are recognized by the government and that possess collective land tenure rights recognized under national law. Further, the same Indigenous groups tend to be protected under both OP 4.10 and ESS7, and most of these groups have legally recognized land rights.
- Engaging Indigenous communities may present new challenges because of new ESF requirements for free, prior, and informed consent under specified circumstances that may be especially common in the conservation context. Under the safeguard policies, only free, prior, and informed consultation was required. Furthermore, circumstances that are unique to or especially common in Indigenous territories may make project implementation more complex. A deeper understanding of these dynamics requires an examination of project siting decisions, including the criteria used, the stakeholders involved, the obstacles encountered by environmental and social professionals, and the policy considerations shaping conservation efforts.

Most conservation projects involve land or resource restriction risks that, if left unattended, can cause significant economic and social harm to IPLCs. Eighty-four percent of the World Bank conservation projects applied environmental and social risk management policies concerning land and resources, specifically OP 4.12 (Involuntary Resettlement) under the safeguard policies or ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) under the ESF. Unresolved concerns about potential or realized restrictions on resource access can escalate, as illustrated by the Tanzania Inspection Panel (box 2.1).

Box 2.1. Lessons from the Resilient Natural Resource Management for Tourism and Growth Project

A World Bank Inspection Panel case concerning Tanzania's Resilient Natural Resource Management for Tourism and Growth (REGROW) project has yielded vital lessons for effectively and safely engaging communities in protected area management. Approved in 2017, REGROW aimed to improve the management of natural resources, enhance tourism assets, and promote alternative livelihoods in and around Ruaha National Park. Between 2023 and 2024, two Requests for Inspection were submitted to the World Bank's Inspection Panel. The Requests collectively alleged excessive use of force by park authorities aimed at restricting park access, imminent risk of forced eviction, and inadequate consultation. The Inspection Panel investigation found that the World Bank had not adequately identified and addressed the risks associated with potential community resettlement, conflicts arising from park access restrictions, and the impact of supporting an agency with a mandate to enforce park regulations on local communities dependent on the park's natural resources. A World Bank Management Action Plan was put in place with corrective actions, while lessons derived from the project are being actively incorporated into a World Bank–wide review of projects with protected areas. These lessons include the need for the World Bank to thoroughly assess national laws that prohibit access or residence within protected areas before supporting such projects, the importance of robust process frameworks, and the necessity of proactive, open discussions with borrowers about security challenges in protected areas to clarify any sensitive or unresolved legacy issues, such as disputes over land rights or unresolved claims from affected communities.

Sources: World Bank Inspection Panel 2024; World Bank 2025a, 2025c.

Ecological Outcomes, Monitoring, and Reporting

Most World Bank projects with conservation activities do not monitor ecological outcomes. Quantitative ecological monitoring is crucial for understanding biodiversity outcomes. By tracking species abundance, dispersal, genetic diversity, and ecosystem function, the effectiveness of conservation efforts can be evaluated. Advances in remote sensing, spatial data, and AI-based image monitoring enhance ecological monitoring possibilities. Yet

only 14 of the 139 projects in the World Bank portfolio with dedicated conservation activities include indicators measuring ecological outcomes.[4] More significantly, we found that only 39 of 3,049 indicators could yield ecological information related to the projects' conservation aims. These indicators included data on species richness, ecological integrity, and ecosystem health, as well as sightings of key species, wildlife abundance indexes, bioindicators, habitat representation rates, and vegetation metrics. The most frequently occurring indicator, the Management Effectiveness Tracking Tool (METT), co-designed by the World Bank, allows comparisons of important process factors globally but lacks information on ecological outcomes.

Tree cover data show that, in the context of rapid global deforestation, World Bank–funded protected areas in tropical forests have on average succeeded in maintaining tree cover. A systematic review of 52 peer-reviewed studies confirms that tree cover change is a valid proxy for biodiversity in tropical forest ecosystems, reporting significant positive correlations between tree cover and biodiversity indexes. Forests—especially tropical ones—harbor a large share of terrestrial biodiversity, and changes in tree cover correlate with changes in species richness and ecosystem health. Tree cover reflects ecosystem structure and connectivity, both of which are critical for sustaining diverse biological communities. While it is a coarse proxy, it is often used when consistent, large-scale biodiversity data are lacking. Of the 526 protected area sites that we could map, 448 are located in tropical forest areas. Using geospatial analyses, we estimate that the 448 sites, on average, maintained tree cover at a rate of +2.0 percent after project close and +3.1 percent during and just after implementation. This shows that these protected areas have helped maintain tree cover and have likely stemmed biodiversity loss in tropical forest areas.

The World Bank helped strengthen management capacity for many Sub-Saharan African protected areas that have maintained or increased their tree cover. The baseline METT scores for closed projects with support for protected areas in Sub-Saharan Africa (25 projects) reveal that the World Bank targeted protected areas with low institutional capacity (or a low METT baseline), as shown in figure 2.5. Protected areas with such low baseline scores are considered "paper parks," or protected areas that exist in name only. We also find that in closed projects, World Bank–supported

Sub-Saharan African protected areas have improved management effectiveness by about 20 percentage points, on average, as depicted in figure 2.5. The average tree cover in Sub-Saharan African protected areas for closed projects with a METT score (25 projects encompassing 98 protected areas) is 1.9 percent, which is on par with the average for all projects with protected areas approved between FY10 and FY14. There is, of course, variation in tree cover in the Sub-Saharan Africa portfolio; these trends are discussed next.

Figure 2.5. Management Effectiveness Scores in Sub-Saharan African Protected Areas, by Subregion

Source: Independent Evaluation Group.

Note: This figure is based on a subset of 33 indicators from 17 projects in Sub-Saharan Africa (of 25) that tracked METT score indicators in a comparable way that could be aggregated. METT = Management Effectiveness Tracking Tool.

Enhanced protected area management can be linked to maintained tree cover in most World Bank–supported protected areas in Sub-Saharan Africa. Tree cover gain is associated with repeat investments, while loss occurs in situations of protracted conflict. In the FY10–19 cohort, 63.6 percent of Sub-Saharan African protected areas had near-stable tree cover (±3 percent, exclusive), 30.2 percent increased by at least 3 percent, and 6.2 percent declined by at least 3 percent. Protected areas that gained tree cover tended to

receive more than one round of project support.[5] Protected areas in proximity to high-intensity conflict, however, lost more tree cover on average than protected areas in more stable locations. For example, in both Burundi and Mozambique, protected areas located in regions that experienced conflict events saw declines in tree cover, whereas protected areas in more stable parts of the country saw tree cover gains.[6] World Bank analytical work highlights the benefits of staying engaged in conflict-affected situations to maintain biodiversity gains, including by partnering with local communities (box 2.2). Other factors that explain performance have to do with the intended use of the protected area and its associated level of protection. In Malawi, forest cover increased in national parks and wildlife reserves managed by the Department of National Parks and Wildlife, but it decreased in forest reserves managed by the Forestry Department, which suffered from low budget, staffing, and enforcement capacity. Teasing out further performance factors across the protected area portfolio could yield useful insights but would require expanded analyses outside of the scope of this evaluation.

Box 2.2. Protecting Biodiversity While Addressing Resource-Related Conflict Drivers

World Bank practice underscores the benefits of staying engaged during conflict to protect biodiversity, safeguard institutions, aid affected communities, and address natural resource–related instability. For example, the Sudan Sustainable Natural Resources Management Project (FY 2013–23) met biodiversity and conservation goals despite a military takeover. It improved biodiversity at 28 sites and achieved 94 percent of its reforestation target, covering 39,150 hectares. The Burkina Faso Communal Climate Action and Landscape Management Project (FY22–) used advanced conflict assessments to identify low- to medium-risk areas where the World Bank could partner with local community leaders to continue to protect biodiversity and associated ecosystem services. The World Bank disengaged in conflict areas around Quirimbas National Park in the Mozambique Forest Investment Project (FY17–22); these areas, according to our geospatial analysis, experienced an estimated 4.07 percent decline in tree cover between FY16 and FY24.

Sources: Ahmadnia et al. 2022; Independent Evaluation Group.

Ecological Connectivity

Ecological connectivity—the unimpeded movement of species across landscapes and seascapes—is vital for biodiversity conservation. It supports genetic exchange, species dispersal, and ecosystem resilience, which are all crucial for sustaining biodiversity amid environmental changes (Hilty et al. 2020). Fragmentation from human activities and climate change isolates populations, causing genetic bottlenecks and local extinctions (Hilty et al. 2020). Connectivity structures such as ecological corridors, stepping-stone habitats, wildlife crossings, and marine protected area networks are effective in supporting biodiversity.[7] Current efforts focus on landscape and seascape strategies, policies, and restoration to address biodiversity loss.

Ecological Corridors

Although the World Bank has infrequently supported connectivity structures when financing terrestrial protected areas, when it has done so it has been effective. A notable case is in the Brazilian Amazon. Only one-fifth (n = 18) of the projects supporting terrestrial protected areas helped develop, rehabilitate, demarcate, or expand ecological corridors. The World Bank's support for Brazil's Amazon Region Protected Areas is a notable exception and has seen exceptional results. In Amazon Region Protected Areas, the World Bank helped protect 60 million hectares of land by establishing large contiguous protected areas rather than isolated patches; setting up buffer zones and sustainable-use areas to create stepping stones for species movement and reduce habitat fragmentation; and linking Indigenous and conservation areas, allowing species movement and sustainable use of resources while respecting Indigenous land rights. Studies that include geospatial analyses show that deforestation rates were significantly lower in Amazon Region Protected Areas than in unprotected areas (Pellin et al. 2022; Soares-Filho et al. 2010).[8] Elsewhere, our geospatial analyses—conducted for 35 areas in six closed projects that supported physical connectivity policies and actions—show that 66 percent of these areas increased tree cover between 2016 and 2024 (and had outcomes rated moderately satisfactory or better and positive protected area management effectiveness scores).

Landscape and Seascape-Level Approaches

The World Bank has worked to integrate biodiversity and ecosystem services into landscape and seascape management, beyond protected areas and corridors. *Unlocking Nature-Smart Development*: *An Approach Paper on Biodiversity and Ecosystem Services* recognizes that corridors are important for supporting ecological connectivity but alone are insufficient to prevent habitat loss and fragmentation. Rather, in line with the literature, the World Bank promotes landscape-level approaches that seek to balance ecological, economic, and social goals, including by addressing the drivers of biodiversity loss. Between FY10 and FY24, the World Bank approved 59 projects using a landscape-level approach that includes conservation activities; most of these projects were in Latin America and the Caribbean and Sub-Saharan Africa, with some emerging in East Asia and Pacific and in Europe and Central Asia. The projects seek to use territorial planning—integrating land, water, and biodiversity considerations—to optimize ecosystem services and manage competing land use. They emphasize coordination, policy alignment, participation, and decentralized management. Tools such as small grants promote economic diversification and reduce pressure on fragile ecosystems. The Independent Evaluation Group's 2021 assessment of Madagascar's Third Environment Program Support Project highlights the need for an integrated approach to address the drivers of biodiversity loss (box 2.3).

Landscape-level projects often do not report on ecological considerations, such as species composition, or on outcomes. Landscape-level projects with conservation aims support afforestation, reforestation, or native forest restoration. The composition of trees and other species is crucial for optimizing biodiversity in landscapes. Native mixed species planting or natural regeneration can restore ecological and sustainable balance, as demonstrated by the World Bank's restoration activities in the Atlantic Forest (box 2.4). Using nonnative or monoculture species can harm biodiversity and resilience by reducing soil fertility, altering hydrology, or supporting fewer native species. Yet only 44 percent of landscape-level projects with conservation activities (26 of the 59 projects) include species choice, and just 1 measures actual plantings (the Rwanda Volcanoes Community Resilience Project tracks the proportion of native tree seedlings). Also, only 2 of the 59 projects captured

vegetation change using the Normalized Difference Vegetation Index, while correcting for natural variability to strengthen the analysis robustness (in the Nigeria Agro-Climatic Resilience in Semi-Arid Landscapes Project and the Ghana Sustainable Land and Water Management Project). The rest use area-based indicators (93 percent) or relegate measurement to the boundaries of protected areas (mostly using the METT). Without systematic monitoring and reporting on ecological outcomes, gaps remain in assessing species survival, ecosystem services, and ecological trade-offs.

Box 2.3. Madagascar's Third Environment Program Support Project Shows the Importance of Using a Landscape-Level Approach

Achieving biodiversity outcomes in Madagascar in areas characterized by high levels of food pressure requires a balanced approach. The World Bank has supported biodiversity conservation efforts in Madagascar since 1991 by creating national parks and forest corridors and building environmental and forest management capacity. The Independent Evaluation Group used satellite imagery to measure and compare deforestation rates between World Bank–supported and non–World Bank–supported areas. The analysis showed increased deforestation in both, with higher rates in the humid zones of World Bank–supported areas. Declining rice yields around protected areas likely worsened deforestation as communities expanded agricultural lands into forests. Despite livelihood support activities, there was no significant difference in incomes or reduction in forest fires between villages. Geospatial analysis revealed that the World Bank's approach of expanding protected areas without addressing issues such as agricultural productivity and land tenure was insufficient to curb deforestation and biodiversity loss.

Source: World Bank 2021.

Landscape-level approaches also fall short of achieving intended land and resource rights activities to ensure sustainable biodiversity gains. Secure land and resource rights foster sustainable land management, encourage investments in conservation practices, and reduce conflict (IPBES 2019; Larson 2011; UNCCD 2019). Ninety-three percent of the 59 landscape-level projects cite the need to secure communities' land, tenure, or resource rights, of

which 39 financed a relevant activity. These activities included commitments to strengthen community-led resource governance (n = 33); tenure regularization or formalization (n = 16); and legislative or regulatory reforms (n = 5). However, projects with commitments to strengthen community rights mainly reported on participation in resource management deliberative bodies (for example, community forest or watershed management committees; 20 out of 33 projects); 5 out of 16 projects tracked progress on tenure regularization and formalization;[9] and 2 out of 5 projects tracked regulatory reforms. The conservation activities supported in Mozambique exemplify how strengthening community land and resource rights can support biodiversity (box 2.5).

Box 2.4. Native Species–Focused Restoration in Paraguay's Atlantic Forest Achieved Landscape-Level Management and Inclusive Socioeconomic Gains

The Paraguay Conservation of Biodiversity and Sustainable Land Management Project restored 36,254 hectares of land using native species. Indigenous Peoples and local communities earned income by supporting reforestation and agroforestry activities, including by planting native yerba mate and fruit trees. Small farmers also gained income (and food security) by providing environmental services such as planting fruit trees and shade-grown crops and restoring riparian zones. The project relied on medium and large landowners to work at scale, supporting wider swaths of forest restoration and regeneration through agroforestry and sustainable forest management efforts. Across the project area, native species were used to restore riparian zones and degraded areas to improve habitat connectivity and reduce soil erosion. Large-scale plantations of exotic species were avoided, while eucalyptus was planted in specific areas for fuelwood production and to conserve native forests. This approach improved habitat suitability for native fauna and provided economic benefits to participants. With a 75 percent survival rate, the project showed that community-driven restoration with site-adapted native species offers significant ecological and socioeconomic advantages.

Source: World Bank 2017.

Box 2.5. Strengthening Community Land and Resource Rights Through New Conservation Laws in Mozambique

The Mozambique Conservation Areas for Biodiversity and Development Project (FY 2015–20) strengthened community land and resource rights, established participatory Conservation Area Management Councils, and introduced local revenue distribution mechanisms. It supported legal reforms and the regazetting of land rights, reenforcing rural governance under a new Conservation Law allowing communities to remain in some protected areas if their land use supported biodiversity. By project close, five co-management agreements were formalized, community perceptions of benefits from conservation areas improved by 23 percent, and 2,052,100 hectares were under improved biodiversity protection (108 percent of the target). Sustainable forest management activities in and around two conservation areas also cut carbon dioxide emissions from deforestation from 1 million tons to 131,113 tons per year, far exceeding the 500,000-ton target.

Source: Independent Evaluation Group.

Biodiversity in Seascapes

The World Bank's marine biodiversity conservation efforts often highlight land–sea connectivity for sustainability, but many opportunities are missed. Twenty-eight of 46 marine conservation projects support land–sea connectivity, adhering to global best practices in environmental planning and integrated management strategies. These projects consider how upstream activities, such as agriculture or urban development, affect downstream marine environments. Best practice examples are illustrated in box 2.6. Eighteen (of 46) marine conservation-focused projects neglect land–sea connections. For example, the Senegal Natural Resources Management Project focuses on land conservation but fails to address runoff affecting coastal biodiversity. The Grenada Second Fiscal Resilience and Blue Growth development policy credit recognizes land–sea connectivity but lacks actionable strategies to integrate watershed management into marine conservation. Synergies between marine biodiversity conservation and other sector activities, particularly fisheries management, can be enhanced through the

selective application of other effective area-based conservation measures, or sites outside protected areas that provide effective, long-term biodiversity conservation.[10] But only the Fiji Tourism Development Program showed the potential of other effective area-based conservation measures to boost conservation efforts beyond designated protected areas through actors such as Indigenous communities, the private sector, and government agencies.

Box 2.6. Best Practices in Land–Sea Connectivity

The best practices in land–sea connectivity highlight innovative approaches to integrating terrestrial and marine conservation strategies. The Red Sea and Gulf of Aden Strategic Ecosystem Management Project integrates forest and fisheries management to ensure that upstream land-use activities do not negatively affect downstream marine ecosystems. The Kenya Coastal Development Project and the Mozambique Conservation Areas for Biodiversity and Development Project emphasize the connection between terrestrial watershed management and marine ecosystem health, ensuring that upstream activities do not harm marine biodiversity. The Strengthening Biodiversity Conservation Through the National Protected Areas Project in Peru integrates both terrestrial and marine conservation. By implementing ecological corridors, the project maintains biological connectivity across landscapes, addressing land-based impacts on marine biodiversity.

Source: Independent Evaluation Group.

The marine portfolio shows inconsistencies in handling displacement and access restrictions, with some projects having clear safeguards and others having vague or no commitments. Twenty-seven projects use Resettlement Policy Frameworks and Process Frameworks to address displacement risks, ensuring community participation, alternative livelihoods, and compensation. Projects such as the Guinea-Bissau Biodiversity Conservation Project and the Caribbean Marine Biodiversity Program integrate displacement mitigation into conservation planning by using participatory frameworks and benefit-sharing mechanisms. Eight projects acknowledge displacement risks but rely on broad commitments, such as "ensuring alternative livelihoods," without structured compensation plans or legal frameworks. Although these

projects recognize the risks, they lack clear, actionable safeguards to prevent disproportionate impacts on communities. For example, the Unleashing the Blue Economy of the Caribbean project mentions displacement risks but does not outline concrete mitigation measures. Some projects also reference economic displacement risks, such as the Ocean Partnerships for Sustainable Fisheries and Biodiversity Conservation project, although it does not provide structured transition support for small-scale fishers affected by regulatory changes. Similarly, the Northern Mozambique Rural Resilience Project identifies risks but lacks a dedicated mitigation framework, instead relying on general economic resilience strategies that do not explicitly compensate affected groups. Twelve project documents make no mention of displacement measures.

Sustainable Financing

Sustainable financing for conservation activities is crucial for sustaining hard-won biodiversity gains. Most conserved areas suffer from financial challenges due to their public goods nature, resulting in habitat loss and diminished ecosystem services. Sustainable finance mechanisms, especially those that use adequate financial incentives or market-driven approaches to attract the private sector, help sustain biodiversity gains. Mechanisms that have proven effective in the World Bank's portfolio for sustaining biodiversity protection include Payments for Ecosystem Services (PES),[11] especially in IPLC areas; conservation or endowment funds; and—to a certain extent—ecotourism, which also provides job opportunities. The following analysis covers the 139 World Bank lending projects with conservation activities.

PES has shown good environmental and livelihood results, especially in community-held lands, but the World Bank's support for PES has waned. PES is a market-based approach to conservation financing, initially championed by the World Bank, that is based on the principle that beneficiaries of ecosystem services (such as downstream users of clean water) should pay for them, while those who contribute to generating these services (upstream) should be compensated (Engel et al. 2008; Pagiola and Platais 2007; Wunder 2005, 2008). PES programs prioritizing IPLC territories have been particularly successful. Programs in Costa Rica, Ecuador, Guatemala, Mexico, and Peru have collectively supported Indigenous and tribal communities to preserve more

than 4 million hectares of forest, representing 10 percent of these communities' titled lands. Research shows that these programs have not negatively affected voluntary community initiatives to manage and conserve biodiversity sustainably. In Costa Rica and Mexico, these programs have enhanced the efforts of IPLC to manage their territories without compensation (FAO and FILAC 2021).[12] The World Bank used PES to support conservation aims in 11 of the 139 projects identified. The 7 closed and validated projects—all rated moderately satisfactory or higher—supported PES in community landscapes and showed effective environmental and livelihood results. For example, PES contributed to a 20 percent reduction in deforestation in biodiversity corridors and excellent economic returns in Mexico, and it helped the Democratic Republic of Congo achieve an estimated 29.5 million tons of avoided carbon dioxide emissions—more than double the original target—by incentivizing agroforestry and land-use planning techniques.[13] Yet despite these successes, the World Bank approved few projects with PES mechanisms in the second half of the evaluation period.

The use of conservation trust funds was infrequent but largely effective. Conservation trust funds were implemented in 15 conservation projects, 12 of which were in Latin America and the Caribbean. All but one of these funds were established before FY15. Ten of these funds have demonstrated strong results, achieving significant capitalizations, positive rates of return, and broad protected area coverage. Notably, the Amazon Region Protected Areas Project Transition Fund reached 173 percent of its target capitalization, providing sustainable financing through 2039. The Caribbean Biodiversity Fund attained a market value of $98 million, supporting more than 100 conservation projects in 12 Caribbean countries.

Ecotourism activities have been effective in achieving local economic benefits, but links to biodiversity protection have not been measured. When conducted responsibly, ecotourism provides local communities with incentives to protect forests, wildlife, and landscapes, thereby encouraging sustainable viewing and experiences instead of poaching or overharvesting, while also generating employment and distributive benefits. Thirty-two projects in the conservation portfolio included ecotourism activities. Of the 15 closed and validated projects, 87 percent were rated as moderately satisfactory or higher, and 12 demonstrated positive results in terms of

infrastructure improvement, training, increased visitation, revenue, and benefits to local livelihoods. For instance, in Sri Lanka, 5,000 households experienced an increase in income through handicraft sales and guided tours. In Mozambique's marine protected areas, 1,500 jobs were created, contributing to enhanced park management scores. Meanwhile, Tunisia integrated ecotourism activities into a broader tourism framework to promote tourism diversification, resulting in additional income for more than 12,000 households through tourism-related activities and a 30 percent increase in local employment within the project areas. However, no project has assessed the links between ecotourism and biodiversity (for example, avoided deforestation or habitat preservation).

Although traditional conservation finance tools are less common now, the World Bank has recently taken the lead in developing and showcasing specialized biodiversity-related financial instruments such as blue bonds and wildlife bonds. As demonstration projects, these instruments have been enabled through concessional finance, including the Global Environment Facility and PROGREEN, which has helped de-risk these pioneering efforts. As shown in *Making Waves: World Bank Support for the Blue Economy, 2012–23* (World Bank 2024c), the World Bank helped launch the world's first sovereign blue bond with the government of the Seychelles, designed to fund sustainable fisheries and the expansion of marine protected areas. Launched in 2018, the experience has helped raise global awareness about biodiversity finance and the potential of mobilizing private capital while also demonstrating the need to focus on lowering transaction costs, managing investor risk tolerance, achieving scale, and ensuring sustained ecological and socioeconomic benefits (March et al. 2024; World Bank 2024c). Since 2022, the World Bank has succeeded in developing the Rhino Bond in South Africa, which links investor returns to biodiversity outcomes—specifically, increases in black rhino populations—and initial monitoring has shown encouraging results, including population growth exceeding original targets (World Bank 2025e). Building on this approach, a similar outcome-based "Chimpanzee Bond" is currently being developed in Rwanda, intended to finance chimpanzee habitat preservation through performance-linked investor payments. Given their nascency, continued learning is essential to determine their replicability, scalability, and ultimate effectiveness in achieving biodiversity objectives.

[1] In addition to their social importance, deserts and other drylands hold nearly one-third of terrestrial global carbon stocks, offering significant potential for enhanced sequestration through improved land management (Trumper et al. 2008).

[2] Mangroves account for just 0.2 percent of the total biome area in the global biome data set, making them the smallest of the 15 biome categories analyzed. By contrast, they make up 1.5 percent of project coverage in the World Bank conservation portfolio. Although this may initially suggest proportional attention, there are compelling reasons to expect greater prioritization of mangrove ecosystems. Mangroves sequester up to five times more carbon than terrestrial forests and can store it for centuries under the right conditions. They also provide critical protection from storm surges and extreme weather events, with investment returns estimated at four times their cost (UNEP 2021). Furthermore, for 1.5 billion people, fish is the most important source of protein, and in low-income, food-deficit countries, nearly 20 percent of animal protein comes from fish, making mangroves essential for sustaining coastal fisheries and livelihoods. Restoring mangroves could add up to 60 trillion commercially valuable fish and invertebrates to coastal waters annually, offering a powerful boost to global food security (UNEP 2021). Lastly, mangroves are vital biodiversity hotspots, but nearly half the mammal species that depend on these ecosystems are at risk of extinction. Although their geographic footprint is limited, the ecological and socioeconomic value of mangroves arguably warrants higher coverage than area-based metrics alone might suggest.

[3] An important caveat with data from Garnett et al. (2018) is that we are unable to distinguish whether Indigenous Peoples areas are formally recognized by governments.

[4] P083813—DRC GEF Financing to PREPAN Project; P088520—Biodiversity Conservation and Rural Livelihoods Improvement; P098538—Sustainable Land and Water Management; P108879—AFCC2/RI-Nyika Transfrontier Conservation Area Project; P110661—Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin; P120561—Tunisia: Ecotourism and Conservation of Desert Biodiversity; P122383—Landscape Approach to Wildlife Conservation in Northeast China; P122419—Support to Protected Areas Management; P126361—Kihansi Catchment Conservation and Management Project; P129647—Peru Strengthening Sustainable Management of the Guano Islands, Isles and Capes National Reserve System Project; P130474—Management and Protection of Key Biodiversity Areas in Belize; P155642—Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3); P166802—Mozambique Conservation Areas for Biodiversity and Development—Phase 2; P170466—Uganda Investing in Forests and Protected Areas for Climate-Smart Development Project.

[5] Protected areas in Africa that received repeat World Bank support experienced greater positive tree cover change on average. Of 138 protected areas in Sub-Saharan Africa that received support from a single World Bank project approved between FY10 and FY19, 67.4 percent had an average tree cover change of within ± 3 percent; 6.5 percent had an average tree cover decline of 3 percent or greater; and 26.1 percent had an average tree cover increase of 3 percent or greater. Of 39 Sub-Saharan African protected areas that received repeat World Bank support from projects approved between FY10 and FY19, 41 percent had an average tree cover change of within ± 3 percent; 2.6 percent had an average tree cover decline of 3 percent or greater; and 56.4 percent had an average tree cover increase of 3 percent or greater.

[6] Conflict can affect forest cover negatively or positively based on conflict dynamics, but across the evaluation portfolio a decrease in tree cover at the protected area level has been shown to be associated with proximity to high-intensity conflict. In Mozambique, tree cover increased by an average of 6.1 percent in World Bank–supported protected areas, but Quirimbas National Park—located in Cabo Delgado province, which accounted for nearly 70 percent of all conflict events in the country during the project period—lost 4.9 percent, and the World Bank was forced to cancel project activities (see box 2.2). In Burundi, Bururi Forest Nature Reserve and Ruvubu National Park, located in relatively low-conflict provinces, gained about 5.5 percent, whereas tree cover in Kibira National Park, in a high-conflict province, fell by 2.1 percent. For a region or province to be considered "high conflict," it must be in the top five provinces by total number of conflict events and be the location of more than 5 percent of the total conflict events in the country. This analysis used conflict event data from Armed Conflict Location and Event Data, specifically the number of battles, explosions or remote violence, or violence against civilians.

[7] Damschen et al. (2019) found that linked habitat patches retained more native plant species over decades, while Olds et al. (2016) observed higher fish species richness and resilience in well-connected reef networks.

[8] Soares-Filho et al. (2010) found that the expansion of protected areas in the Brazilian Amazon, including Amazon Region Protected Areas, was responsible for 37 percent of the region's total reduction in deforestation between 2004 and 2006. The research highlighted that these protected areas effectively inhibited deforestation without causing leakage (that is, deforestation shifting to other areas). Pellin et al. (2022) analyzed 133 protected areas and found that total deforestation amounted to 276.63 square kilometers in 2020, with 226.37 square kilometers occurring within 90 sustainable-use protected areas (0.06 percent of this group's total area) and 50.26 square kilometers occurring within 43 strictly protected areas

(0.01 percent of this group's total area). These findings suggest that most deforestation took place within a few protected areas, indicating the effectiveness of well-managed protected areas in reducing deforestation.

[9] These projects measured the registration of secured land plots, the issuance of land certificates—including those bearing women's names—and community or social forest management agreements or enterprises with formal tenure arrangements.

[10] Area-based fisheries management can qualify as an "other effective area-based conservation measure" if it benefits biodiversity in the long run. For instance, community-managed fisheries refuges protecting critical marine habitats may be considered other effective area-based conservation measures.

[11] Sometimes also referred to as Payments for Environmental Services.

[12] These positive results were generated despite relatively modest government investment and considerable variation in the annual average payment per hectare (Mexico's program was the better funded but only featured an annual average investment of $56 million per year, of which Indigenous Peoples received approximately 40 percent). Government funding for these programs in Costa Rica, Ecuador, and Mexico has declined or stagnated due to budget restraints, putting future progress in jeopardy (FAO and FILAC 2021).

[13] In the Democratic Republic of Congo, the Improved Forested Landscape Management Project implemented PES contracts across 89 percent of targeted chiefdoms to incentivize sustainable agroforestry and land-use planning.

3 | Connecting Climate and Biodiversity in Development Planning

Highlights

Countries recognize the need to better connect climate and biodiversity ambitions—as reflected in the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity—and to align implementation.

Most Country Partnership Frameworks are strongly aligned with global climate agreements but not with global biodiversity agreements or national biodiversity frameworks.

The World Bank Group is not optimizing biodiversity benefits in Country Partnership Frameworks with climate and nature objectives and often not capturing biodiversity-related results. Biodiversity considerations are most notably absent in Country Partnership Frameworks whose portfolios represent an outsized share of land being put under improved management in the Corporate Scorecard.

In Country Climate and Development Reports, the link between biodiversity and climate change is often acknowledged for mitigation purposes. However, recommendations to restore natural habitats to enhance carbon capture and enlarge biodiversity benefits are infrequent. Country Climate and Development Reports also rarely identify the biodiversity risks posed by climate change.

Countries recognize the need to better connect climate and biodiversity ambitions—as reflected in the United Nations Framework Convention on Climate Change and the CBD—and to align implementation. The need to identify and pursue synergistic solutions between climate and biodiversity goals has been strongly articulated at the COPs and at the Fifteenth United Nations Biodiversity Conference. The World Bank Board has asked management to identify complementary actions, align resource mobilization strategies, and harmonize monitoring and reporting mechanisms for both conventions. In its three *Nature and Development Briefs* for the Fifteenth United Nations Biodiversity Conference, the World Bank stated that policy makers should incorporate considerations of nature, climate, and development into sector strategies and plans, including national plans for achieving climate mitigation and adaptation goals (World Bank 2022a, 2022b, 2022c). In *Unlocking Nature-Smart Development: An Approach Paper on Biodiversity and Ecosystem Services*, the Bank Group stated that the country engagement process provides mechanisms to integrate biodiversity and ecosystem services into national development strategies. In the 2021 Joint Statement by the Multilateral Development Banks on Nature, People and Planet, the Bank Group committed to helping clients update their national biodiversity strategies.

As such, we assess the extent to which the Bank Group integrates biodiversity into its CPFs and CCDRs. We assess the most recent CPFs (n = 113) and all 57 disclosed CCDRs. CPFs are the primary strategic document that outlines the Bank Group's engagement with a member country. CCDRs are designed to help countries prioritize actions to reduce greenhouse gases (GHGs), enhance adaptation, and achieve broader development goals.

Country Partnership Frameworks

Most CPFs are strongly aligned with global climate agreements but not with global biodiversity agreements or national biodiversity frameworks. Ninety percent of the 113 most recent CPFs (n = 102) articulate climate priorities, citing nationally determined contributions, the Paris Agreement, or Paris Alignment. However, no CPF refers explicitly to the global biodiversity agreements (the GBF, the CBD, or the Kunming-Montreal and Aichi targets), and only three CPFs (Ghana, Mexico, and Zambia) link Bank Group support to their respective national biodiversity strategies and action plans.[1]

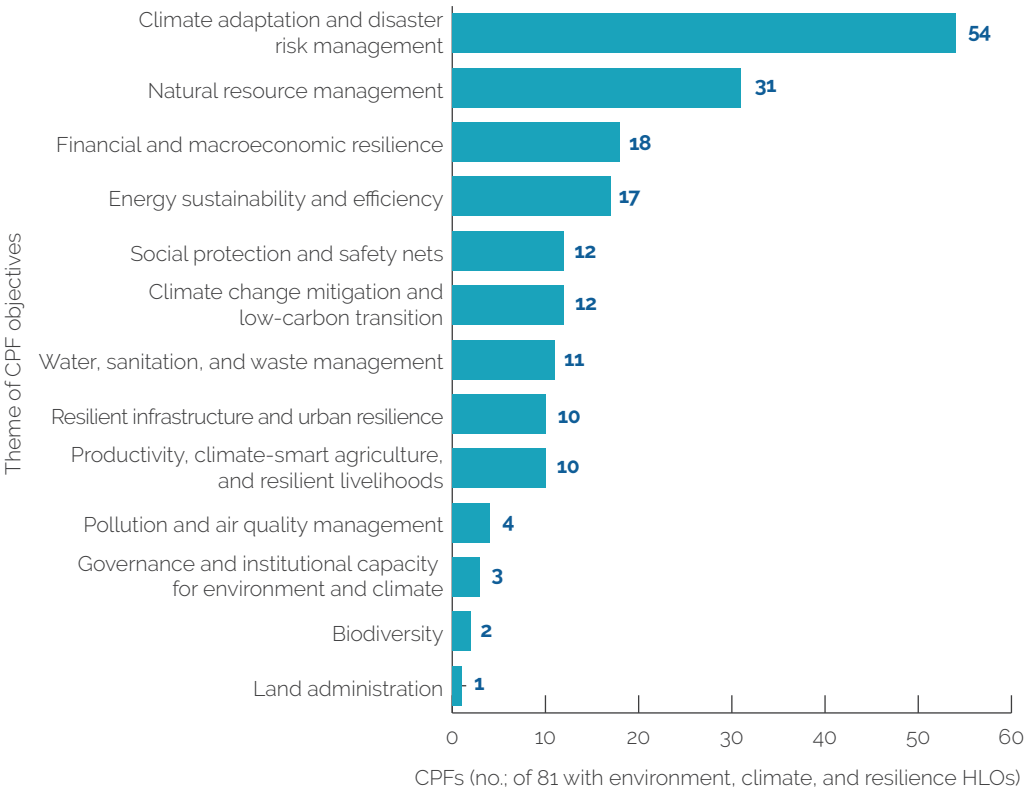
The Bank Group is not optimizing biodiversity benefits in client engagements with climate and nature objectives and is often not capturing biodiversity-related results. Most CPFs aim to achieve climate change, sustainability, or resilience goals. Eighty-one of the 113 CPFs (72 percent) include high-level outcomes related to climate adaptation, disaster risk management (including the use of nature-based solutions such as mangrove restoration), natural resource management, climate mitigation, and low-carbon growth (figure 3.1). These themes provide opportunities to support biodiversity-positive choices and to help clients capture and report on biodiversity results where they exist. Only 20 CPFs report on biodiversity, most of which were approved after 2022. Eight track forest cover (Benin, Bosnia and Herzegovina, Brazil, Indonesia, Kenya, the Lao People's Democratic Republic, Montenegro, and Panama), and eight track emission reduction from avoided degradation or deforestation (Burkina Faso, the Republic of Congo, the Democratic Republic of Congo, Lao PDR, Madagascar, Mexico, Mozambique, and Nepal). Notable CPFs that have strong metrics include Lesotho's, which tracks natural resource depletion as a percentage of gross national income; Uzbekistan's, which measures degraded land as a percentage of total land area; and Cambodia's, Jamaica's, and Sri Lanka's, which use the Yale Environmental Performance Index.

Biodiversity considerations are most notably absent in CPFs whose portfolios represent an outsized share of land being put under improved management in the Corporate Scorecard. The Corporate Scorecard tracks about 19.6 million hectares of land under enhanced management or conservation in 18 countries whose most recent CPFs do not articulate, capture, or report on biodiversity.[2] This includes 11.7 million hectares of land in the Sahel (Chad, Niger, and Senegal), 7.2 million hectares in Ethiopia, 308,000 hectares in Somalia, 279,884 hectares in Europe and Central Asia (Albania, Kazakhstan, the Kyrgyz Republic, Moldova, and Tajikistan), and 152,000 hectares in the Plurinational State of Bolivia.

The World Bank is infrequently supporting and leveraging analytical work on valuing ecosystem services to inform integrated climate–biodiversity solutions at a national level. Valuing ecosystem services assigns economic, social, and ecological significance to the benefits provided by natural systems. Quantifying ecosystem services helps governments and businesses

incorporate environmental costs and benefits into decision-making. Even though the World Bank has supported natural wealth accounting in a few countries through its WAVES (Wealth Accounting and the Valuation of Ecosystem Services) program (2010–20), which often led to biodiversity-positive policy decisions (especially in Colombia, Costa Rica, and Guatemala),[3] and even though the World Bank has expanded this type of analytical work to 31 countries, we only identified five CPFs that articulate how World Bank support for natural capital accounting has informed sustainable development planning: Cameroon, Lao PDR, Rwanda, São Tomé and Príncipe, and Zambia.

Figure 3.1. Country Partnership Frameworks with Climate and Nature-Related High-Level Objectives



Source: Independent Evaluation Group.

Note: Individual subobjectives were categorized into themes based on their dominant focus, while recognizing that there is overlap across these themes. CPF = Country Partnership Framework; HLO = high-level outcome.

Country Climate and Development Reports

Most CCDRs identify and address the need to use and conserve countries' biodiversity-rich natural ecosystems to achieve national climate mitigation goals. Eighty percent of all CCDRs disclosed at the time of this review (57, covering 69 countries) identify and recommend that the World Bank help conserve natural ecosystems, especially forests, to support countries' climate mitigation goals. Most recommend addressing deforestation, which is often caused by unsustainable agricultural expansion and livestock systems, to ensure that standing carbon sinks are not depleted and unable to contribute to meeting GHG reduction aims. There are missed opportunities in desert ecosystems, like in Jordan and Morocco, and in small island developing states in the Organisation of Eastern Caribbean States to support terrestrial forests in addition to ocean resources. A growing number of CCDRs recommend using and conserving marine ecosystems as carbon sinks, including in Ghana, Maldives, Mozambique, and members of the Organisation of Eastern Caribbean States.

Only half of the CCDRs recommend conserving biodiversity to achieve adaptation goals. These CCDRs identify and recommend ways to conserve forests and strengthen protected areas to exploit nontimber value chains and develop ecotourism for the benefit of rural livelihoods, especially for resource-dependent communities. Less frequently, other CCDRs focus on increasing the sustainability of agriculture to boost productivity or on supporting sustainable fisheries management, including through blue economy approaches that recommend developing marine protected areas to benefit both fisheries and tourism. Several CCDRs also propose nature-based solutions, including the conservation of mangroves and wetlands and the enhancement of coastal zones.

Fewer CCDRs recommend restorative activities to enlarge mitigation opportunities while enhancing biodiversity benefits. Of the 45 CCDRs that recommend using existing ecosystems as carbon sinks, only 14 recommend habitat restoration. Many other CCDRs recommend tree planting for carbon capture and local economic benefits but do not articulate whether they recommend native or exotic fast-growing species, the latter of which may run counter to biodiversity aims. Although restoration is not always

possible—due to severely degraded areas not being capable of recovery or due to climate change and shifting biomes, for example—restoration is typically preferable because it maintains biodiversity and ecosystem stability (Busch et al. 2024). Other forms of natural restoration, such as wetland restoration, are highly effective for flood control and water purification. Grassland restoration is cheaper than afforestation and supports biodiversity and carbon sequestration.

CCDRs also infrequently diagnose the risks that climate change poses to biodiversity. One-third (19 out of 57) of the CCDRs explicitly identify and address such risks. The diagnosis of risks is absent in many of the CPFs that look toward countries' natural forests to support their nationally determined contributions. These risks are also undiagnosed in many countries with low resilience to climate change and a high reliance on biodiversity, such as those in Africa. Comprehensive discussions on climate change risks to forest ecosystems were found in the CCDRs for Romania, Senegal, and the Western Balkans. The Independent Evaluation Group's evaluation on the blue economy also found that CCDRs only partially identify the risks posed by climate change to marine and coastal areas, with scant reference to the impact of emerging marine sectors on the coastal and marine environment.

[1] Ghana's CPF (FY22–26), under its objective on improved management of natural resources and climate change risks, includes technical and advisory support for updating the national biodiversity strategy and action plans, institutionalizing natural capital accounting, and strengthening biodiversity monitoring to help integrate environmental and sustainability considerations into natural resource management. Mexico's CPF (FY20–25) has an objective to "support the government in reaching its climate change goals," which cites cross-sectoral instruments including the National Climate Change Strategy, the National Reducing Emissions from Deforestation and Forest Degradation Strategy, the 2015 Law on Energy Transition, and the National Strategy on Biodiversity as being relevant to its Bank Group engagement agenda. Zambia's CPF (FY25–29) links its objective to improve natural resources management and climate-smart agriculture with its second national biodiversity strategy and action plan (2015–25), which emphasizes conservation, sustainable resource management, and biodiversity protection.

[2] Albania, Bangladesh, the Plurinational State of Bolivia, Chad, the Comoros, Ethiopia, Haiti, Kazakhstan, the Kyrgyz Republic, Lesotho, Moldova, Nepal, Niger, Rwanda, Senegal, Somalia, Tajikistan, and Togo.

[3] Since 2010, the World Bank has supported countries to develop natural capital accounts through three donor-funded programs: WAVES, WAVES+, and the Global Program on Sustainability.

4 | Integrating Biodiversity into Production Sectors

Highlights

Sustainable production practices are a powerful means to address the multifaceted drivers of biodiversity loss while achieving sustained yields, nutritious foods, and jobs. We identified World Bank and International Finance Corporation lending projects that demonstrate the plausibility of achieving economic–ecological win–wins that could be adapted to various contexts, replicated, and scaled, although these projects are not yet commonplace.

World Bank and International Finance Corporation support for climate-smart agriculture has enhanced resilience to shocks, but some practices can harm biodiversity because of negative environmental effects.

The World Bank's use of forest carbon finance within landscapes has contributed to increased yields and revenues, while meeting targets for avoided deforestation and carbon sequestration. Forest carbon programs have fallen short of targets to restore degraded forest landscapes and have missed opportunities to track biodiversity gains.

There is limited assurance of biodiversity outcomes in the forest production sector because of weak tracking of the implementation of sustainable forest management plans. Reporting on forest certification was also frequently lacking in project documentation. A systematic rationale for species selection was absent in half of the forestry projects, constraining assessment of likely biodiversity outcomes and ecosystem resilience.

The World Bank is advancing elements of fisheries management with potential biodiversity gains, but there is uneven application across Global Practices, and most projects are struggling to reconcile the long-term need for enhanced fisheries management with short-term food security and income needs.

We identified four key factors of effectiveness in World Bank and International Finance Corporation support for integrating biodiversity into production areas: fostering interministerial collaboration and strong information flows, aligning finance with emerging sustainability regulations and markets, reducing adoption costs and risks through innovative financing and strengthening land and resource tenure and rights, and identifying entry points where production systems are reaching biological limits.

Sustainable production practices are a powerful means to address the multifaceted drivers of biodiversity loss while achieving sustained yield, jobs, and income gains. As stated by the World Bank, solutions to the global biodiversity crisis inevitably lie in the economic sectors that exert the greatest pressure on nature, including food, land use, and ocean use.[1] As stated in *Unlocking Nature-Smart Development*, these economic sectors find themselves at a crossroads: they are central to achieving the Sustainable Development Goals and satisfying the needs of a growing population, but their expanding footprint is also unsustainable (World Bank Group 2021). When soil, fish stocks, forests, and water supplies are degraded or destroyed, productivity drops and jobs disappear. Sustainable practices maintain or even improve these resources so that jobs can be sustained from one generation to the next. In this chapter, we cover World Bank and IFC efforts to integrate biodiversity into three production areas: (i) agriculture and agribusiness, (ii) forestry, and (iii) fisheries and aquaculture. We then present cross-cutting lessons across these areas, derived from our portfolio review, case studies, and interviews. In this chapter, we do not cover other competing land uses with large footprints, such as extractives, energy, or infrastructure, nor do we address the wider built environment.

World Bank Agriculture Investments

Integrating biodiversity into agriculture yields long-term benefits for productivity, human health, and welfare. Biodiversity supports ecosystem services such as pollination and soil fertility, enhancing crop productivity. Biodiverse systems offer resilience to climate variability, disasters, and diseases, ensuring stable food production (Halwart 1998; Jarvis 2007; Pullin and White 2011). Mixed farming systems contribute to better nutrition and health, while local economies benefit from diversified income sources and sustainable agriculture jobs (Garrity et al. 2010). The use of natural predators and crop diversity also lowers pesticide dependence and reduces health and nutrition risks (IPBES 2016, 2019).

The World Bank has long championed biodiversity-positive approaches in agricultural production systems. In *Biodiversity and Agriculture*, it was stated that "without biodiversity, agriculture cannot progress" (World Bank 1996, vii) to maintain ecological balance and productivity; *Integrating Biodiversity*

in Agricultural Intensification developed strategies for incorporating agrobiodiversity into intensified agricultural systems (World Bank 1999); and in *Biodiversity, Climate Change, and Adaptation*, the World Bank advocated for genetic diversity and ecosystem-based approaches to achieve resilient production systems (World Bank 2008). The World Bank's forthcoming report, *Reboot Development: The Economics of a Livable Planet*, examines the interconnectedness of agriculture and biodiversity, demonstrating how agriculture affects and depends on biodiversity and ecosystem services, and how sustainable solutions can enhance agricultural resilience while preserving biodiversity.

Climate-smart agriculture projects enhance resilience to shocks, but some practices may harm biodiversity because of negative environmental effects. Climate-smart agriculture is a suite of farming practices and technologies that can boost productivity, enhance resilience, and reduce GHG emissions.[2] The World Bank approved 247 agriculture lending projects between FY15 and FY24.[3] Over this period, the percentage of these projects that indicate they apply climate-smart agriculture tools has grown from 30 percent to 90 percent. Although climate-smart agricultural practices and technologies can contribute to resilience (FAO 2013, 2021; World Bank 2020), those involving improved or modified varieties and intensified use of chemical inputs may generate negative environmental externalities—including elevated emissions, nutrient runoff, and degradation of soil and water resources—particularly where safe use and regulation are weak (Giller et al. 2021; Hellin and Fisher 2019; Sumberg et al. 2023). Most climate-smart agriculture projects do not clarify how they followed environmental and social criteria to evaluate trade-offs of high-input models, balancing yield maximization and short-term productivity with emission reductions, long-term sustainability, and labor demands (FAO 2013, 2021; Giller et al. 2021; Hellin and Fisher 2019; Sumberg et al. 2023). Managing these trade-offs is crucial to adapting strategies to local contexts and optimizing benefits across food security, livelihoods, adaptation, mitigation, and biodiversity goals (FAO 2013, 2021; Saj et al. 2017).

We identified World Bank agricultural projects that demonstrate that economic–ecological win–win projects are possible, although these projects are not yet commonplace. Seventeen of 247 agriculture lending projects in 10 countries (including 6 projects in China and 2 each in Panama and

Zambia) had explicit designs that aligned with the literature on how to achieve biodiversity-positive outcomes.[4] These projects demonstrated how to achieve and measure ecological and economic gains by using biodiversity-compatible approaches aligned with good practices in the literature. These practices included agroforestry, intercropping, composting, cover cropping, and integrated pest management—practices that have demonstrated strong potential to enhance resilience while sustaining environmental integrity and reducing reliance on external inputs (FAO 2013, 2021; Lipper et al. 2014; Saj et al. 2017; Tripathi et al. 2022). Although other projects may be achieving biodiversity gains, these are neither explicitly defined nor tracked with proxies that can be validated in line with metrics in the literature. On completion, 7 closed and validated projects, rated moderately satisfactory or higher, enhanced productivity, income, and yield sustainability. Specific results included increased plant and crop diversity, increased organic matter in soil, reduced deforestation and agrochemical use, and increased certification (for example, organic farming, sustainable agricultural practices, and reduced emissions). Illustrative results follow; a deeper analysis, including of contextual factors, is required to support the needed replication and scale.

- The China Climate Smart Staple Crop Production Project (FY15–21), rated satisfactory, reduced fertilizer and pesticide use, increased crop residue retention, and integrated trees into croplands, increasing yields by 8 percent and incomes by 14 percent.[5]
- The Panama Sustainable Production Systems and Conservation of Biodiversity Project (FY15–20), rated satisfactory, mainstreamed biodiversity-friendly practices across 1,611 hectares of certified production landscapes. Business alliances and targeted support to more than 33,000 beneficiaries, including Indigenous and women farmers, generated an average internal rate of return of 36 percent and reinforced the market value of sustainable farming.[6]
- The Viet Nam Sustainable Agriculture Transformation Project (FY15–22), rated highly satisfactory, demonstrated that integrated technology packages reduced fertilizer and pesticide use by 35 percent and 48 percent, respectively; increased net profits by 32 percent; and raised rice yields by 5–10 percent, while also reducing postharvest losses and GHG emissions (box 4.1).

Box 4.1. Scaling Biodiversity-Friendly Rice Cultivation in the Mekong Delta

Viet Nam's Mekong Delta drives economic growth and food security through intensive rice production, making it a leading exporter. However, practices such as double and triple cropping have caused deforestation, wetland degradation, pollution, biodiversity loss, and high greenhouse gas emissions. Viet Nam has identified the need to transition to more sustainable agricultural practices. The World Bank's highly satisfactory–rated Sustainable Agriculture Transformation Project (FY15–22) helped demonstrate the potential benefits of using new farming practices, such as 1M5R (One Must Do, Five Reductions), which requires the use of certified seed along with reductions in (i) seed sowing rates; (ii) pesticide, fertilizer, and water use; and (iii) postharvest losses. It also helped demonstrate the positive gains that can be achieved from the alternate wetting and drying technique, which supports soil aeration, leading to diverse soil organisms and methane emission reductions, both of which are good for ecosystem health.

The achievements demonstrated by this project and these technologies have been multifaceted, with benefits exhibited for productivity, profit, and the environment. The adoption of the technology packages reduced fertilizer use by 35 percent and pesticide costs by 48 percent among participating rice farmers. Ninety-nine percent of participating farmers adopted alternate wetting and drying, reducing irrigation frequency by more than 30 percent. These efficiency gains contributed to a 32 percent increase in net profits per hectare, driven by lower input costs and improved product quality. Average rice yields rose to 7.5–7.8 tons per hectare—a 5–10 percent increase—while postharvest losses declined by 30 percent because of investments in improved storage, drying, and logistics infrastructure.

Factors of effectiveness included the successful transmission of applied research information among the International Rice Research Institute, the World Bank, various levels of government—especially decentralized levels—and farmer organizations and cooperatives. Also, lessons on livelihood diversification were made available by the Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project (FY16–24), which also featured effective provincial agency coordination. The two investment operations, along with timely advisory services and analytics, informed the formulation of new government policies, strategies, regional main plans, and investment plans. This policy framework will be critical for the sustainable, biodiversity-friendly, and resilient development of the Delta region.

Source: Independent Evaluation Group.

The World Bank has also positioned itself as a leader on the issue of repurposing perverse agricultural subsidies whose environmental harm undermines productivity and intended long-term welfare gains, but it is too soon to evaluate results. The World Bank's 2023 report *Detox Development: Repurposing Environmentally Harmful Subsidies* highlights the role of perverse agricultural subsidies in causing deforestation, soil degradation, GHG emissions, and inefficient resource allocation and in further entrenching inequality (Damania et al. 2023). The World Bank has led this dialogue, as exhibited at COP28 in 2023, where it issued the Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action. This leadership led to 160 governments making a pledge to revisit their agrifood system policies to achieve more sustainable and equitable food systems. Pursuant to this, the World Bank catalyzed the Food Systems 2030 Multi-Donor Trust Fund, housed in the World Bank, which is supporting 40 Agricultural Public Expenditure Reviews to identify reform options, together with seven pilot operations focused on repurposing perverse subsidies.

International Finance Corporation's Agriculture Investment and Advisory

Integrating biodiversity considerations into agribusiness delivers strong financial, risk mitigation, and reputational returns, including in emerging markets. Biodiversity-friendly practices—such as agroforestry, integrated pest management, and landscape restoration—have been shown to enhance yields and quality, reduce input costs, and provide access to green finance and premium markets. They also mitigate climate, pest, and supply chain risks; support compliance with tightening sustainability regulations (for example, the EU Regulation on Deforestation-free Products); and strengthen brand value amid rising consumer and investor demand for sustainable sourcing. Conversely, biodiversity loss increases exposure to yield volatility, regulatory penalties, and reputational damage. Integrating biodiversity is thus not only environmentally beneficial but also a core business strategy that supports long-term profitability, resilience, and market competitiveness.

A quarter of IFC's agricultural investments included practices with potential biodiversity benefits. Twenty-seven of 107 IFC-financed investments in the agricultural industry (crop and animal production, excluding aquaculture)

approved between FY15 and FY24 included practices with potential biodiversity benefits.[7] Most investments focused on coffee (also in combination with other crops, such as cashew, cocoa, cotton, various spices, nuts, and tea) and sugarcane. Half of the projects (54 percent) were in Africa: there were several in Côte d'Ivoire, Ethiopia, Madagascar, South Africa, and Zambia, along with single projects in Malawi, Senegal, and the East Africa region, and an Africa regional project. Twenty percent were in Latin America (mostly in Brazil), and 15 percent were in East Asia and Pacific (mostly in Viet Nam).

Three-quarters of IFC's sustainable agribusiness investments use internationally recognized traceability and certification systems, which are promising for achieving positive biodiversity outcomes. Internationally recognized systems include Good Agricultural Practices certification for soil, water, and pesticide management; the BONSUCRO system addressing biodiversity risk management in the sugarcane sector; and Rainforest Alliance certification for habitat and species protection, wildlife corridors, and pollution control. Proprietary systems such as Nespresso AAA and the Olam Sustainability Framework are improving environmental criteria but often lack independent verification.

IFC agribusiness investments with effective certification schemes often occur in vertically integrated models, with companies committed to sustainability. Ten sustainable investments were mature and reviewed, revealing greater success in biodiversity outcomes for projects linked to vertically integrated models. For example, an Asian fiberboard plant showed successful certification for a small plantation extension, and a southern African fruit producer expanded existing certifications to 180 hectares. Conversely, landscape-level efforts yielded less positive results in addressing the drivers of biodiversity loss, such as unsuccessful deforestation-free cocoa shares in West Africa and nonreporting on traceability by an agribusiness distributor in Latin America. An exploratory case study in Brazil examined successful soy certification schemes amid high deforestation rates in a biodiverse region (box 4.2). Many of the bigger brands represented in this portfolio are pledging sustainable sourcing to gain competitive advantages in certain growing market segments.

Box 4.2. International Finance Corporation: Preferential Finance and Traceability Schemes in Tackling Commodity-Induced Deforestation, Brazil

In Brazil, the International Finance Corporation piloted a financial mechanism to incentivize good forest management in the soy industry, aiming to retain more biodiverse areas adjacent to profitable but responsible soy cropping. The investment involved one of the country's largest soy exporters. In exchange for engaging in net-zero deforestation commitments, the exporter received funding to set up an onlending program to farmers, which featured preferential interest rate rebates conditioned on meeting green lending targets (initially set at 50 percent, and increasing to 100 percent over time). The agreement required that the exporter not make purchases from supplier farms where habitat conversion had occurred and used stricter cut-off dates than previous commitments made by industry players. In practice, the exporter client provided preferential financing and bonus payments to farmers that "gave up" their excess natural reserves, compensating them for land that could have been legally deforested for soy production under Brazilian law. As of 2023, the investment had helped achieve 26,943 hectares of avoided deforestation, a sizable achievement compared with the 30,000-hectare goal set for 2027.

The investment was complemented by an advisory services to support traceability and monitoring of the supply chain and to help farmers obtain the Round Table on Responsible Soy certification—a holistic certification plan lasting five years that ensures zero deforestation and conversion in soy production. The advisory support helped establish new certified production groups covering about 58,000 hectares, with results including (i) a 43 percent increase in one of the client's sourced volumes of Round Table on Responsible Soy certified soy in 2024; (ii) a major soy trader ensuring that soy from third-party farms is deforestation-free and compliant with environmental, human rights, and labor laws, as well as sectoral agreements such as the Soy Moratorium; and (iii) a trader increasing direct sourcing traceability in the Cerrado from 88 percent in 2022 to 95 percent in 2023.

Although the International Finance Corporation is exploring opportunities to replicate this model, incentives are proving insufficient to cover the opportunity cost of integrating natural reserve conservation into soy production in perpetuity, estimated at US$200 per hectare per year. Moreover, only a small share of producers benefit from

(continued)

Box 4.2. International Finance Corporation: Preferential Finance and Traceability Schemes in Tackling Commodity-Induced Deforestation, Brazil (cont.)

price premiums for certified deforestation-free soy, and the cost of compliance limits engagement. Low soy prices and market volatility have also reduced the focus on sustainability and led to cuts in sustainability expenses by large traders. In addition, it is challenging for the government to regulate the use of reserves beyond legal compliance since a significant percentage of Brazil's natural reserve is on privately owned land. A suggestion made by the International Finance Corporation in interviews is to fully use carbon markets to pool and use carbon credits from across plots, but this approach is untested. Requiring more discussion is the need to focus on the Forest Code and to introduce more sustainable and well-resourced payment for environmental services for targeted forest conservation goals. Much more work is needed on developing guidelines and metrics to measure and track biodiversity outcomes in soy production overall.

Source: Independent Evaluation Group.

Three IFC agribusiness investments show the potential of supporting regenerative agricultural practices. Regenerative agriculture aims to improve soil health and ecosystems by rebuilding soil structure, sequestering carbon, and enhancing biodiversity. These principles can be applied throughout the agribusiness value chain, from farm inputs to consumer markets. We found three IFC projects using regenerative agriculture: Bhutanese farmers planting hazelnut trees to retain soil, offset carbon dioxide, and prevent deforestation; a Brazilian sugarcane project implementing sustainable practices to restore native vegetation; and an African coffee revival project planting native trees to protect rainforests.

One-quarter of IFC's agriculture- and agribusiness-related advisory projects are potentially supporting more sustainable practices. IFC implemented 67 advisory projects in Manufacturing, Agribusiness, and Services between FY15 and FY24. Of these, 17 may yield sustainability benefits, mostly in Africa (35 percent) and Latin America and the Caribbean (35 percent). Identified sustainable practices include crop rotation, soil management techniques,

avoided deforestation, and certification or traceability schemes. The crops and locations for such work were varied and included projects focused on soy, sugar, mangos, pepper, rice, and coffee. A lack of appropriate indicators limits our ability to validate outcomes. However, avoided deforestation goals—included in 7 of the 17 good practice advisory projects—have the potential to protect biodiversity and ecosystem services. Certification and traceability mechanisms using internationally accepted standards—also identified in 7 projects—are a good proxy for biodiversity protection. A good practice example was IFC's support for sustainable pepper production in Viet Nam, which supported a company to build a 100 percent sustainable, traceable, and certified pepper supply chain. These advisory services responded to a set of push and pull factors, including soil and land degradation resulting from conventional agricultural practices; overuse of agrochemicals, fertilizers, and other nonsustainable practices; and global and regional policy shifts, such as the EU Regulation on Deforestation-free Products.

It is difficult to identify examples of the World Bank and IFC working together in production areas to achieve biodiversity outcomes. As the Bank Group has identified agribusiness (and relatedly, agribusiness jobs) as a priority client engagement area, it will be incumbent on the Bank Group to identify complementary actions to support sustainable agrifood system transformations at the country level. One good practice example from the portfolio is IFC's and the World Bank's support for sustainable, high-quality coffee in Ethiopia. IFC complemented a loan transaction to a multinational company known for its premium portioned coffee systems with an advisory initiative to increase farmer productivity by integrating a broad range of ecological considerations and wildlife preservation in the region of Oromia (Ethiopia). The BioCarbon Fund was leveraged to support training on shade trees, prevention of deforestation, and improvement of the quality of coffee produced in line with the company's certification requirements.

Sustainable Forest Management

Healthy forests—and the ecosystem services they provide—underpin resilient production landscapes. Forests mitigate climate change. They store about 861 gigatons of carbon (nearly a century's worth of current annual fossil fuel emissions) and absorb approximately 7.6 billion tons of carbon

dioxide each year (about 1.5 times the United States' annual emissions), yet their clearance releases 12–20 percent of global GHG emissions (Harris et al. 2021; WRI 2022).[8] Forests regulate local temperature and rainfall, enrich soils, recharge water, and supply habitat for pollinators and pest control species, cutting reliance on synthetic inputs.[9] Globally, they generate $1.5 trillion for national economies and support more than 19 million jobs, and it is estimated that the economic value of biodiversity to commercial forest productivity is up to $490 billion per year (Liang et al. 2016). Integrating trees into fields and pastures through agroforestry and silvopastoral systems diversifies incomes and strengthens resilience (FAO 2022b), while production forests—whether natural or plantation—provide timber and nontimber products vital to rural and Indigenous communities.[10] Sustainable forest management can balance economic, social, and ecological goals,[11] but progress is challenged by habitat fragmentation, undervalued ecosystem services, limited PES or biodiversity credits, tenure insecurity, fragmented mandates, weak enforcement, and critical data gaps on ecological thresholds.[12]

Forest Carbon Finance

World Bank investments in forest carbon have contributed to increased yields and revenues for farmers, while meeting targets on avoided deforestation and on carbon sequestration through the implementation of integrated mosaic approaches. Avoided deforestation preserves biodiversity and species habitats (Betts et al. 2017). The Forest Carbon Partnership Facility (FCPF) and the Forest Investment Program are two of the largest trust funds, globally, that focus on avoided deforestation, sustainable forest management, and integrated land use, with a combined total approved financing of $1.9 billion. Many of the carbon projects have implemented mosaic approaches—a patchwork design of different land uses that can support biodiversity conservation and productive livelihoods. As of December 2024, FCPF projects achieved 188 percent of the program target for avoided deforestation, totaling 14.5 million hectares across Costa Rica, Côte d'Ivoire, Indonesia, and Viet Nam.[13] FCPF activities in Ghana are credited with increasing average farm yields by 25 percent in rehabilitated areas and increasing revenues for tree nurseries (Baastel 2024).

However, forest carbon programs have fallen short on targets to restore degraded forest landscapes and have missed opportunities to systematically monitor and report on biodiversity gains. As of December 2024, FCPF Emission Reductions program countries had achieved just 1.5 percent of the end-of-project target of 18.5 million hectares of restored forest (FCPF 2024). The BioCarbon Fund has faced similar challenges. Projects funded through the Initiative for Sustainable Forest Landscapes aim to reforest or afforest 162,500 hectares of land by FY31. However, as of 2024, only 8 percent of this target had been achieved (BioCarbon Fund ISFL 2024). Moreover, attributing biodiversity benefits to these programs is challenging because of a lack of monitoring, with only 3 of 70 World Bank–financed forest carbon projects including relevant biodiversity indicators. The Forest Investment Program midterm evaluation reached similar conclusions, finding that biodiversity benefits may be present but that "quantitative monitoring of biological diversity has been sparse" (Indufor and ICF 2024). Several FCPF countries attempted to capture biodiversity gains as well, but these efforts—undertaken in Indonesia, Madagascar, Mozambique, and Viet Nam—were not systematic and not validated and thus could not be aggregated and used for decision-making.

Forest Production

There is limited assurance of biodiversity outcomes in the forest production sector because of weak implementation tracking of sustainable forest management plans. The World Bank's sustainable forest management portfolio of 83 lending projects shows the potential to contribute to biodiversity outcomes by promoting practices that conserve forest ecosystems. However, the absence of systematic reporting on the implementation of sustainable forest management plans—including key elements such as zoning, biodiversity safeguards, and enforcement measures—limits the ability to verify whether the intended biodiversity benefits are being realized. Of the 35 projects that included support for sustainable forest management plans, only 4 reported on actual implementation practices. As a result, the World Bank lacks a reliable basis to assess the effectiveness of its forestry investments in delivering biodiversity-positive results. A good practice project—the Belarus Forestry Development Project—monitored and reported on thinning practices in

young and middle-aged production forests according to approved management plans; thinning can lead to biodiversity benefits by increasing habitat complexity and supporting various plant and animal communities.

Reporting on forest certification, which is required by the safeguard policies and the ESF, was also lacking in project documentation. Certification verifies sustainable harvesting practices, responds to negative trends, and protects biodiversity. Despite the safeguard policies and the ESF requiring certification, only six production forest projects documented certification or traceability in their project documentation. For example, Ghana's Tree Crop Diversification Project monitors traceable tree crop area, certification in cocoa, and price premiums for certified cocoa, and the Lao PDR Landscapes and Livelihoods Project reports on the production forest area certified for controlled wood or sustainable forest management. Some development policy operations focused on forest governance (that are not covered by the safeguard policies and ESF) also provide relevant information on forest management, including in the Lao PDR Green Resilient Growth development policy operations (1 and 2), which tracked certified areas for sustainable management. The Madagascar Reengagement development policy operation had a governance indicator on transparency regarding seized precious wood logs. The limited reporting on these metrics reveals a gap in ensuring the sustainable and lawful management of production forests that can maintain biodiversity benefits.

A lack of systematic articulation of species selection in one-half of the forestry projects—particularly the rationale for choosing native versus exotic species—limits the ability to assess the projects' biodiversity outcomes and long-term ecosystem resilience. Half of the forest production projects that include tree planting specify whether they support the restoration or planting of native species. The remaining projects either do not clarify the species used or favor fast-growing, often exotic, monocultures for quicker economic returns and ease of management—particularly where supply chains favor uniform products such as eucalyptus or pine. However, this flexibility comes at a cost: monocultures reduce ecological resilience, provide limited habitat for native fauna, and weaken key ecosystem functions such as pollination, soil regeneration, and water retention. Using native species in forest production is critical to sustaining biodiversity, as native trees maintain local

ecological networks, provide habitats and food for indigenous fauna, and support long-term sustainability by enhancing the regenerative capacity of ecosystems (Chazdon et al. 2020). The absence of explicit trade-off analysis in project design—especially on balancing short-term productivity with long-term biodiversity gains—undermines the potential to achieve both environmental and economic outcomes. Projects such as the Côte d'Ivoire Forest Investment Program (FY18–23) stand out by planting native mahogany, tiama, and medicinal trees in cocoa agroforestry systems, and the Côte d'Ivoire Forest Investment Project Phase 2 (FY22–) commits to native species restoration in sensitive areas (box 4.3). The Rwanda Volcanoes Community Resilience Project (FY24–) requires that at least 20 percent of the species used be native and empowers local communities to grow and supply these seedlings.

Box 4.3. Approach to Sustainable Land Management and Production Forestry in Côte d'Ivoire

The Côte d'Ivoire Forest Investment Program (FY 2018–23) and the subsequent Forest Investment Project Phase 2 (FY22–) have used innovative project design within a landscape approach to strengthen state enforcement capacity in protected areas, formalize land tenure for cocoa farmers, and institute community-led forest management plans. Côte d'Ivoire has experienced significant deforestation, losing 5 million hectares since 1990. Current forest cover is estimated at just 9.2 percent of total land territory. Cocoa plantations are a key driver of this deforestation, with an estimated 40 percent of total cocoa production taking place illegally within state forests, national parks, and other protected areas.

Much of this production occurs in state-owned gazetted forests in the southwest of the country, where such planting was previously prohibited, and adjacent to one of the country's few remaining biodiversity-rich areas, Taï National Park. Given that many gazetted forests adjacent to Taï National Park were degraded at a level of 75 percent or more and that enforcing the planting prohibition carried socioeconomic risks for smallholder farmers, the government of Côte d'Ivoire revised the country's Forest Code to sanction cocoa planting within an agroforestry model. To continue cocoa cultivation within the designated gazetted forests, farmers must enter into a contract

(continued)

Box 4.3. Approach to Sustainable Land Management and Production Forestry in Côte d'Ivoire (cont.)

that stipulates they will plant between 50 and 400 trees per hectare, with the actual number based on the conservation value of the land. The farmers, who are paid for their agroforestry work, must also commit to zero-deforestation production, refrain from slash-and-burn practices, and limit further encroachment.

The first Forest Investment Program was successful in restoring 22,719 hectares of degraded forests through agroforestry and restoration activities (reaching 111 percent of its target). Importantly, 66 percent, or nearly 15,000 hectares, of this restoration took place in key biological buffer zones between the Classified Forests of Haute Dodo and Rapides Grah and Taï National Park. The project's active second phase is taking a biodiversity-conscious approach to agroforestry in these areas by limiting restoration planting to 20 preselected native species trees, including tiama and sipo mahogany.

In addition to the innovative land tenure and agroforestry approach instituted in the southwest of the country, the Forest Investment Project Phase 2 has selected highly degraded areas in the center-north of the country for the development of 20,000 hectares of sustainably managed production forests. The project will fund plantations of teak, gmelina, and cassia siamea, the latter being a fast-growing species popular in Côte d'Ivoire for wood energy. In addition to these two activities, the project provides funding for enforcement, capacity strengthening, and other activities around Taï National Park. As the project includes activities in degraded state forests, protected areas, and community lands, cross-ministerial coordination is vital to ensure success, with several ministries and government agencies involved in overseeing these activities. The second phase represents a significant increase in scope and budget, with funding increasing from US$15 million in phase 1 to US$148 million in phase 2 and land area targets increasing from 20,400 hectares to 1 million hectares.

Sources: Independent Evaluation Group; World Bank 2024b, 2025b.

Sustainable Fisheries and Aquaculture

The fisheries and aquaculture sector is one of the most consequential drivers of change in marine and coastal ecosystems. As such, effective fisheries

management is needed to address biodiversity loss resulting from unsustainable practices. Unsustainable fisheries deplete fish stocks and damage ecosystems. Unsustainable aquaculture leads to habitat destruction, pollution, disease, and invasive species, threatening aquatic environments. Unsustainable practices decrease sector productivity, negatively affecting livelihoods, food security, and economic opportunities for coastal communities (Crowder et al. 2008; Dulvy et al. 2006; McClanahan 2022). Effective fisheries management—including implementing sustainable fishing practices, enforcing regulations, reducing bycatch, and protecting habitats—is needed to ensure sustainable production.

Blue Biodiversity Analytical Work

Although the World Bank's *Blue Biodiversity* report identifies unsustainable fisheries and aquaculture as key threats to aquatic biodiversity and highlights the importance of protection, it does not adequately address the complementary role of improved fisheries management (World Bank 2024a). Effective biodiversity outcomes require not only conservation but also the integration of sustainable fisheries practices that balance ecological integrity with the social and economic needs of coastal communities. Marine protected areas and marine spatial planning—proposed as solutions in the *Blue Biodiversity* report—can contribute to long-term economic, social, and environmental benefits (for example, fisheries productivity, tourism, and climate and disaster resilience) but require complementary fisheries management to secure these benefits. Effective fisheries management ensures sustainable fishing within and around marine protected areas, promoting healthy ecosystems. Fisheries management is also essential for clients to improve their percentage of fish stocks "within biologically sustainable levels," a monitored Corporate Scorecard indicator.[14]

Small-Scale Fisheries Investments

The World Bank is advancing elements of fisheries management, including by supporting fishing controls and rebuilding fish stocks, but these advances are concentrated in the Environment, Natural Resources, and Blue Economy Global Practice. The World Bank approved 51 fisheries-related lending projects between FY15 and FY24 (of which 48 are investment project financing

and 25 are closed); these were mainly implemented by the Environment, Natural Resources, and Blue Economy (69 percent) and Agriculture and Food (20 percent) Global Practices and were mainly located in East Asia and Pacific (43 percent) and in Eastern and Southern Africa, South Asia, Western and Central Africa, and Latin America and the Caribbean (11–14 percent each). Europe and Central Asia and the Middle East and North Africa have minimal involvement, with 1 and 2 projects, respectively. About 45 percent of projects explicitly seek to support an ecosystem-based approach to fisheries management, with all but one of these projects led by Environment, Natural Resources, and Blue Economy (in Mozambique, where new fisheries shifted pressure to unassessed stocks and habitats). Evidence shows that an ecosystem-based approach to fisheries management—which balances sustainable fishing with ecosystem health by considering multiple species, habitats, and ecological interactions—is good economics. A systematic literature review indicates that an ecosystem-based approach to fisheries management can lead to higher productivity and income in fisheries (Cucuzza et al. 2021).[15] Table 4.1 presents the integration of fisheries management techniques by Global Practice. These activities include direct reduced fishing efforts, enabling activities that support the control of fishing, activities explicitly designed to address environmental impacts, and proactive efforts to rebuild fish stocks.

Table 4.1. Effective Fisheries Management Techniques by Global Practice (percent)

Global Practice	Reducing Fishing Efforts	Enabling Fishing Efforts to Be Controlled	Addressing Impacts on Environment	Rebuilding Depleted Stocks
AGF (*n* = 10)	10	10	20	20
ENB (*n* = 35)	17	60	83	77
FCI (*n* = 1)	0	0	0	0
MTI (*n* = 3)	0	0	33	0
WAT (*n* = 2)	50	0[a]	100	100
Total (of 51)	16	43	67	60

Source: Independent Evaluation Group.

Note: AGF = Agriculture and Food; ENB = Environment, Natural Resources, and Blue Economy; FCI = Finance, Competitiveness, and Innovation; MTI = Macroeconomics, Trade, and Investment; WAT = Water.
a. In Cambodia, measures already existed that enabled the government to control fishing efforts, and the project added additional protection zones.

A particular challenge faced by the fisheries sector in implementing the ecosystem-based approach to fisheries management is reconciling the need to control fishing with the aims of achieving food security and employment. This challenge is most acute in the artisanal fishing sector. Approximately 500 million people depend on small-scale fisheries for their welfare, mainly in developing countries (FAO et al. 2023). In the least-developed countries, seafood is the primary protein source for more than 50 percent of people and serves as an important social safety net (FAO 2022a). Although properly managed artisanal fisheries can be sustainable and have minimal negative environmental impacts, unsustainable practices within these fisheries can lead to overfishing, resource depletion, and ecosystem degradation, depending on the fishing methods employed and the effectiveness of the regulatory frameworks governing these practices.

Few World Bank fisheries projects have demonstrated measurable income gains while also reducing pressure on fisheries and achieving environmental benefits. Although nearly all fisheries projects in the portfolio aimed to address livelihood constraints among small-scale fishers and aquaculture farmers—including through strategies intended to ease pressure on overexploited fisheries—only one closed project clearly demonstrated increased incomes alongside positive environmental outcomes. Although 90 percent of projects included small-scale fisheries as primary beneficiaries, and 85 percent financed interventions such as value chain development, fishery diversification, and postharvest loss reduction, only four projects reported measurable income gains (SWIOFISH [South West Indian Ocean Fisheries Governance and Shared Growth], Lake Victoria Environmental Management Project, and Peru National Program for Innovation in Fisheries and Aquaculture) and fishing restrictions that allowed stocks to recover (SWIOFISH and Togo Agricultural Sector Support Project). Even among these, only one project achieved outcomes that supported biodiversity and resource recovery while simultaneously improving livelihoods (SWIOFISH). This highlights a key implementation gap: although traditional small-scale fisheries can be environmentally sustainable when properly managed, the regulatory and monitoring frameworks needed to capture such benefits were often weak or absent. In some cases, expected social and ecological benefits

were likely but unverifiable because of insufficient data collection, such as for projects in Madagascar and Mauritania.

Peru's plan to transform its fisheries and aquaculture sector to simultaneously enhance livelihoods, food security, and marine ecosystem health yields lessons for future small-scale fisheries investments. The World Bank–supported National Program for Innovation in Fisheries and Aquaculture 2017–23 is the first of a multiphase approach designed to diversify the country's fisheries sector to create jobs and stimulate growth, while reducing pressure on capture fisheries and, for aquaculture, improving productivity and species diversification while minimizing environmental impact. Thus, we undertook an exploratory case study to distill and share lessons on what works to achieve holistic fisheries management (box 4.4).

Box 4.4. Case Study: World Bank Assistance to Peru's Fisheries Sector

In Peru, artisanal marine capture fisheries and emerging aquaculture subsectors had received little attention, despite their potential to expand opportunities for improved livelihoods and sustainable growth. A lack of data and basic and applied research was holding the sector back. The National Program for Innovation in Fisheries and Aquaculture (PNIPA) 2017–23 was conceived to support the government's strategy to transition from an almost exclusive focus on the industrial exploitation of a single species—anchoveta—to a more diversified sector that is increasingly reliant on productive activities (aquaculture) as opposed to extractive overexploitive activities (capture fisheries).

PNIPA demonstrated that supporting innovation in fisheries and aquaculture can generate solutions that address sustainability challenges, including reducing pressure on wild stocks. This was particularly successful where institutions and stakeholders worked together at local levels to generate situation-specific solutions. The project funded more than 1,800 innovation subprojects, developed through basic and applied research, with a focus on aquaculture as a strategy to reduce pressure on wild fisheries. The project implemented mechanisms that have the potential to positively impact biodiversity, spanning innovations in fisheries management and ecosystem health, sustainable aquaculture technologies, governance and policy contributions, and climate resilience. The best evidence for improved performance of the aquaculture value chain comes from data on changes in production and profitability at the subproject

(continued)

Box 4.4. Case Study: World Bank Assistance to Peru's Fisheries Sector (cont.)

level. The project avoided deepening reliance on capture fisheries by focusing on fishing projects that would increase value-added without increasing extraction—for instance, by improving cold chains—and on improving alternative activities to diversify income within the fishing subsector, through tourism.

A key factor of success has been PNIPA's support for policy and institutional strengthening, including support for the coordination and alignment of mechanisms across regulatory, technical, and implementing agencies. The World Bank helped strengthen the capacity of the Ministry of Production, formalize SNIPA (the national innovation system), and influence the development of the national aquaculture policy. These engagements helped address coordination challenges among agencies, which were also affected by political instability.

But while proxies suggest biodiversity gains can be achieved through these actions, biodiversity outcomes were not tracked, and a shift in funding emphasis from capture fisheries to aquaculture limited direct conservation impacts on marine biodiversity. This shift was in part attributed to the challenges of reforming artisanal fisheries where overcapacity was an issue. Although some projects supported habitat restoration, the lack of explicit ecosystem management principles meant that broader marine biodiversity benefits were not systematically measured.

Source: Independent Evaluation Group.

The most constraining factor in understanding whether fisheries management is leading to environmental and economic outcomes is the inconsistency of reporting on fisheries management plans. The adoption or use of a fisheries management plan was the most consistently used indicator in the portfolio (present in about half of the portfolio). If progress against the various activities articulated in the fisheries management plan is clearly elucidated in project reporting, then the fisheries management plan can be a good proxy for understanding productivity and biodiversity. Projects varied in their engagement in biological, economic, and social data collection, complicating the use of certain indicators as proxies for biodiversity. Only

three projects included ancillary data collection to ensure proper implementation of fisheries management plans. For example, the West Africa Regional Fishery Program's project in Liberia uses World Bank Fishery Performance Indicators to measure ecological sustainability (Anderson et al. 2015). Similar efforts are seen in projects in Cambodia and Indonesia. Most projects, however, track only the establishment of the plan.

Aquaculture

A key question for projects that support aquaculture is how to deliver increased production without irreversibly damaging associated ecosystems. Aquaculture can be damaging to marine environments if sustainable practices are not followed. Fish and shrimp farms discharge nutrient-rich effluents into surrounding waters, causing eutrophication that harms marine habitats and production (Abdullah et al. 2019). Mangroves and seabeds are often cleared for aquaculture, reducing biodiversity. High-density farms can spread disease and parasites, and antibiotics and chemicals harm other marine species. Regenerative aquaculture restores ecosystems, can improve biodiversity, and has the potential to support food and job security. Thirty percent of the World Bank fisheries projects feature aquaculture as a novel or supplementary source of food and income, including to offset livelihood impacts on fisheries. Good practices in the World Bank's portfolio include actions to integrate multitrophic aquaculture for the efficient use of effluents for filter feeders, such as mussels, oysters, and seaweed. IFC's experience in Ecuador provides transferable insights into how aquaculture can work with nature to deliver sustainable production and environmental outcomes (box 4.5).

Box 4.5. International Finance Corporation Environmental and Social Services in Ecuador: Supporting Environmental Management in the Shrimp Sector

The International Finance Corporation (IFC) has played a key role in Ecuador's transition to becoming a global leader in sustainable and responsible shrimp production. IFC has assisted two major shrimp producers and exporters in Ecuador to build sufficient capacity to meet global industry certification standards by improving practices

(continued)

Box 4.5. International Finance Corporation Environmental and Social Services in Ecuador: Supporting Environmental Management in the Shrimp Sector (cont.)

and preparing for various certifications. IFC's environmental and social support has helped companies monitor and report on specific biodiversity indicators to ensure limited mangrove conversion and to encourage habitat restoration. Evidence indicates that shrimp production now complies with IFC and global certification standards, reducing pollution and contributing positively to the environment. IFC's efforts have influenced the shrimp supply chain through the demonstration and replication of good practices. For example, the entire shrimp production industry has transitioned from using antibiotics to probiotics after an IFC demonstration.

Challenges remain in promoting standards in Ecuador's shrimp industry, especially for small producers. Reforestation efforts are minimal compared with ongoing degradation and urban expansion. Low market prices and slim profit margins make it costly for small producers to adopt certification practices. Security issues add to the costs, despite investments in surveillance. The limited capacity of regulatory bodies hinders effective control of illegal mangrove deforestation and shrimp theft. The energy efficiency efforts supported by IFC are not scalable, and power is unreliable.

Source: Independent Evaluation Group.

Factors of Effectiveness Across Production Sectors

We identified four key factors of effectiveness in World Bank and IFC support for integrating biodiversity in production areas: (i) fostering interministry collaboration and strong information flows, (ii) aligning finance with emerging sustainability regulations and markets, (iii) reducing adoption costs and risks through innovative financing while strengthening land and resource tenure and rights, and (iv) identifying entry points where production systems are reaching biological limits. These factors are now discussed in turn.

Interministerial collaboration and strong information flows facilitated the effective integration of biodiversity into production systems. This included coordination between environmental and production ministries and the translation of applied research into practical guidance delivered to firms, cooperatives, and resource users via provincial and regional offices and extension services. Production and environment ministries often have conflicting policies. Production subsidies often favor high-input monocultures, rather than diversified or biodiversity-friendly systems. Technical advice to farmers and fishers rarely includes biodiversity, and there is a limited understanding of biodiversity benefits at the extension and resource user level. In successful experiences, such as Viet Nam's Sustainable Agriculture Transformation Project, extension advice was shifted from a top-down structure to co-learning with lower levels of government and cooperatives, focusing on site-specific trials and training on innovative technologies.

The World Bank and IFC have been able to tackle commodity-driven deforestation by strategically aligning development finance with emerging regulatory drivers—such as the EU Regulation on Deforestation-free Products—which create new markets for certified sustainable goods. In countries producing cocoa, coffee, and other forest-risk commodities, the Bank Group has effectively used the regulation as a policy entry point to support no-deforestation value chains. This support includes financing traceability systems, geolocation tools, and the certification processes required for market access. Although the EU Regulation includes incentives for governments and cooperatives to create deforestation-free supply chains, there are few direct incentives for individual farmers. Compliance is associated with high up-front and recurring costs for farmers and cooperatives, many of whom lack the institutional or financial capacity to absorb these costs independently. Therefore, effectiveness in this context also requires implementing complementary financing mechanisms during and after project closure to avoid a return to unsustainable practices once external support ends. The World Bank's Forest Investment Program in Côte d'Ivoire has effectively targeted farmers by financing zero-deforestation contracts, creating participatory forest management plans with biodiversity considerations, and mapping flora and fauna to protect high-biodiversity areas.

World Bank and IFC support for innovative financing mechanisms has helped reduce the costs and risks of adopting sustainable practices, but these efforts need to be deepened. There are also missed opportunities related to limited support for land and resource tenure and rights. Few subsidies, price premiums, or market mechanisms reward biodiversity-positive approaches, and there are high transaction costs in switching to integrated systems (for example, agroforestry or organic farming). Innovative finance can help internalize environmental externalities and incentivize sustainable land use (Dasgupta 2021; FAO 2023). At the portfolio level, 13 of the 17 good practice World Bank agriculture projects were supported by trust funds, including the Global Environment Facility, the Korea Green Growth Trust Fund, PROGREEN, the BioCarbon Fund, and Food Systems 2030. Facilitating access to premium pricing was also a core incentive. In Zambia, under the World Bank Community Markets for Conservation Landscape Management Project, producers readily adopted sustainable practices in response to premium pricing and structured, compliance-based rewards. Preferential loan rates supported by IFC in Brazil have been key to promoting sustainable soy production. Missed opportunities are associated with the identified need to strengthen resource and land tenure rights to promote more effective resource management.

Identifying entry points where production systems are reaching ecological limits—such as degraded soils due to overexploitation—offers opportunities to promote biodiversity-positive approaches that regenerate natural capital and ensure long-term productivity and jobs. Declining soil health and fertility, falling water tables, dwindling fish stocks, and accelerated forest loss have increasingly signaled that input-intensive models are no longer viable for long-term growth, prompting producers and projects to adopt more sustainable, nature-smart practices.[16] In contexts where overexploitation has triggered productivity declines, the World Bank and IFC often focused on short-term recovery or resilience measures rather than on biodiversity-positive approaches that could regenerate natural capital and restore long-term productivity. This constrained the potential for transformative outcomes in agriculture, forestry, and fisheries, where embedding biodiversity into production strategies could have aligned environmental recovery with economic revitalization.

[1] The need to support sustainable production practices is a core commitment in the GBF. The GBF target 10 aims to "ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity-friendly practices, such as sustainable intensification, agroecological and other innovative approaches."

[2] Although rooted in existing agricultural knowledge and principles, climate-smart agriculture is distinct in its explicit focus on addressing climate change in the agrifood system; its consideration of synergies and trade-offs among productivity, adaptation, and mitigation; and its context-specific application across diverse agroecological and socioeconomic contexts (World Bank Group 2024a).

[3] The World Bank's agriculture practice approved 247 projects (227 investment project financing, 1 development policy financing, and 19 Program-for-Results projects) between FY15 and FY17, of which 40 percent are in Africa; 12–20 percent are in Latin America and the Caribbean, East Asia and Pacific, and South Asia; and 6–9 percent are in the Middle East and North Africa and Europe and Central Asia. Of these projects, 102 were closed as of December 2024, of which 77 have an Implementation Completion and Results Report and 53 have an Implementation Completion and Results Report Review (with an 87 percent rating of moderately satisfactory or higher). Project components include research, extension and advisory services; irrigation and farm infrastructure; processing, marketing, and market linkages; livestock health; and food security and safety.

[4] Four projects in Africa (one in Ethiopia, one in Ghana, and two in Zambia), one project in Bangladesh, six projects in China, one project in Kazakhstan, three projects in Latin America and the Caribbean (one in Mexico and two in Panama), one project in Myanmar, and one project in Viet Nam, as follows: Bangladesh Program on Agricultural and Rural Transformation for Nutrition, Entrepreneurship, and Resilience in Bangladesh (PARTNER); China Climate Smart Staple Crop Production; China Hubei Smart and Sustainable Agriculture Project; China Climate Smart Management of Grassland Ecosystems; China Green Agricultural and Rural Revitalization Program-for-Results—Phase I; China Green Agricultural and Rural Revitalization Program-for-Results (Hubei and Hunan); China Sustainable Fodder Production and Low Methane Livestock Development Program-for-Results; Ethiopia Second Agricultural Growth Project; Ghana Tree Crop Diversification Project; Kazakhstan Sustainable Livestock Development Program-for-Results; Mexico Sustainable Productive Landscapes Project; Myanmar National Food and Agriculture System Project; Panama Sustainable Production Systems and Conservation of Biodiversity; Panama Sustainable Rural Development and

Biodiversity Conservation; Viet Nam Sustainable Agriculture Transformation Project; Zambia Integrated Forest Landscape Project; and Zambia Growth Opportunities Program.

[5] The Global Environment Facility–funded Climate Smart Staple Crop Production Project in China (P144531, FY15–21) demonstrated strong environmental and development outcomes across 6,667 hectares of rice–wheat and wheat–corn systems. The project achieved a reduction of 29,782 tons of carbon dioxide equivalent emissions, 41 percent above target, and sequestered 99,565 tons of carbon dioxide equivalent, more than double the original goal. These gains were driven by improved management of fertilizer and pesticide use, resulting in 572 tons of fertilizer reduction and 121 kilograms of pesticide reduction, as well as water-saving irrigation practices that conserved 1.45 million cubic meters of water. The project also promoted crop residue retention techniques, tree planting around croplands, and the integration of trees into cropping systems, which enhanced soil organic carbon and sequestered carbon in aboveground biomass. Participating farmers increased crop yields by 8 percent and net farm incomes by 14 percent, while exposure to climate-smart agriculture technologies through 30 farmer field schools and more than 25,000 training days built lasting capacity. The project also created approximately 2,000 rural jobs for women and lifted all participating households—12 percent of whom were initially below the national poverty line—out of extreme poverty by project close. The project also influenced national climate-smart agriculture policy and practice through the development of technical guidelines and monitoring methodologies.

[6] The Global Environment Facility–funded Panama Sustainable Production Systems and Conservation of Biodiversity Project (P145621, FY15–20) mainstreamed biodiversity-friendly practices in productive activities in buffer zones and established business alliances for the marketing of certified biodiversity-friendly products. The project supported the implementation of 30 business plans across more than 300 farms focused on organic agriculture, agroforestry, ecotourism, and sustainable livestock. As a result, 1,611 hectares of productive landscapes were certified under biodiversity-sensitive standards, exceeding the original target by 34 percent. Of the total certified land area, 626 hectares received the biodiversity-friendly products certification from the National Environmental Authority of Panama; 77 hectares received the organic products certification from the Authority of Panama for Control and Certification of Organic Products, under the Ministry of Agriculture and Livestock; and 908 hectares received the appellation of origin certification from the Ministry of Commerce and Industry, which requires compliance with a set of sustainability and biodiversity-friendly practices. These outcomes were supported by technical assistance and capacity building through 192 field school days, 153 training workshops, and regular on-site follow-up, reaching 33,806 beneficiaries—47 percent of whom were women and

60 percent were Indigenous. Five business alliances were formed to facilitate long-term marketing channels for certified products, with cooperatives and associations involved in the export of organic coffee, cacao, bananas, fruits, and horticulture. An economic analysis of 19 subprojects showed a strong internal rate of return of 36 percent, with an average net benefit of $192 per beneficiary per year—highlighting the financial viability and environmental value of investing in biodiversity-friendly production.

[7] We identified other IFC investments that included broad sustainability language but did not articulate specific mechanisms aligned with the literature on biodiversity-positive practices.

[8] At a global level, forests mitigate climate change impacts that threaten agricultural stability through extreme weather and shifting growing conditions (IPCC 2022). Approximately 10 million hectares of forest are lost annually (FAO 2022b). If this trend persists, the cumulative release of carbon could contribute to a 2.8–3.4°C rise in global temperatures above preindustrial levels, exacerbating biodiversity loss and food insecurity.

[9] At local levels, forests regulate climate, precipitation, and temperature, helping reduce heat stress and protect soil moisture, thereby creating favorable conditions for crops. They maintain soil fertility through their root systems, which prevent erosion and enhance soil structure (Bonan 2008). Forests' organic matter enriches agricultural lands with essential nutrients, and they play a vital role in the water cycle by supporting groundwater recharge, irrigation flows, and water quality (Ellison et al. 2017). Forests provide habitats for pollinators and natural pest predators, reducing reliance on synthetic inputs and enhancing crop resilience (IPBES 2016).

[10] Production forests, which include both natural forests and plantations, supply timber and nontimber forest products—such as nuts, fruits, resins, medicinal plants, and fibers, which provide critical income and food security for rural and Indigenous communities—and support biodiversity and carbon sequestration.

[11] Sustainable forest management is widely recognized as a leading approach to managing production forests by balancing timber production with environmental and social sustainability. Defined by the United Nations and the Food and Agriculture Organization of the United Nations as a "dynamic and evolving concept, which aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations," sustainable forest management offers significant environmental, economic, and social benefits in managing production forests. Environmentally, sustainable forest management reduces deforestation and degradation by maintaining canopy cover and soil stability, which helps conserve biodiversity. Economically, sustainable forest management

ensures long-term timber yield through practices such as selective logging and provides market access and certification, enhancing profitability. Socially, sustainable forest management involves local communities in decision-making, supporting livelihoods and reducing conflicts, while promoting legal compliance and governance to curb illegal logging. Although alternative approaches such as reduced-impact logging, agroforestry systems, and strict protection with plantation offsets offer complementary strategies, sustainable forest management remains the most widely endorsed framework for achieving sustainable forests, contingent on strong governance, financial support, and effective implementation.

[12] Timber extraction often fragments forests, harming habitats, reducing species richness, and disrupting ecological processes. Short-term profit motives and undervalued ecosystem services discourage biodiversity-friendly practices, especially where PES or biodiversity credits are lacking. Tenure insecurity, limited involvement of IPLCs, and competing stakeholder interests further complicate sustainable forest management. Fragmented mandates in forestry, conservation, and land-use planning across agencies hinder integrated landscape management, and weak sector governance and enforcement in the sector is pervasive. Lack of biodiversity data, unclear ecological thresholds, and mismatched monitoring scales also impede effective adaptive management.

[13] In Côte d'Ivoire, the Forest Investment Program (FY18–23) successfully piloted a performance-based plan for the planting of native trees across nearly 20,000 hectares of cocoa farms, mostly situated in biologically important buffer zones within state-owned forests (World Bank 2024b). In Indonesia, the BioCarbon Fund's Jambi Sustainable Landscape Management Project promoted sustainable forest management alongside agricultural intensification and diversification, bringing 320,792 hectares of land under sustainable management and reestablishing 2,623 hectares of forests through planting and agroforestry schemes (BioCarbon Fund ISFL 2024).

[14] This is the client context indicator being monitored by the Corporate Scorecard. It assesses whether fishing is conducted in a manner that does not deplete stocks or harm the overall health of the marine ecosystem. It aligns with Sustainable Development Goal indicator 14.4.1 on life under the sea: "proportion of fish stocks within biologically sustainable levels." The proportion of fish stocks within biologically sustainable levels has been declining year on year. Globally, the proportion of overfished fisheries has risen from 10 percent in 1974 to 37 percent in 2021 (FAO 2024b), and in terms of biodiversity there is a persistent trend toward unsustainability (Cheung et al. 2025).

[15] Specific activities that enhance effectiveness include building climate resilience into fisheries management plans and strengthening the capacities of fisheries management bodies (including to enforce regulations), implementing inclusive governance, and transitioning to lower-impact fishing methods (Cheung et al. 2025).

[16] For example, soil degradation, which affects 33 percent of global soils, has led to stagnating yields and rising input costs, with ongoing erosion expected to reduce crop productivity by up to 10 percent by 2050 (FAO and ITPS 2015). Similarly, groundwater depletion in regions such as South Asia has undermined irrigation systems, posing risks to agricultural productivity (FAO 2021a; Jasechko et al. 2024). In response, projects that diagnosed these limits early and paired technical packages with results-based incentives have shown success in raising yields while reducing fertilizer and pesticide costs (for example, projects in China and Viet Nam, and farmer-managed natural regeneration in Africa). In marine and coastal areas, ecosystem-based approaches have been crucial in restoring fish populations that underpin food security and livelihoods. These cases demonstrate that restoring natural capital is not an environmental co-benefit but a prerequisite for sustaining productivity once agroecosystems near their ecological thresholds.

5 | Biodiversity Offsets

Highlights

Biodiversity offsets are increasingly used in global conservation efforts, including in the World Bank Group's Environmental and Social Frameworks. The last step in the mitigation hierarchy, biodiversity offsets are difficult to implement effectively since they require long-term, sustained financial and technical support to deliver their intended conservation outcomes.

There are capacity and skills gaps related to identifying, supervising, and managing biodiversity offsets within the Bank Group, and the extent of these gaps varies across the three institutions.

There has been uneven and inconsistent updating of offset information after project Board approval, undermining transparency. The methods used to calculate biodiversity losses and gains are also rarely transparent, leading to potential inaccuracies in offset design and monitoring. Both of these performance gaps diverge from international best practice.

Although implementation status and quality vary, most implementation activities are delayed or incomplete, undermining the ability to estimate whether offsets will likely deliver their intended conservation outcomes.

This chapter focuses on Bank Group (World Bank, IFC, and MIGA) use of biodiversity offsets to address the significant residual adverse biodiversity impacts arising from development. To derive lessons from the Bank Group's use of biodiversity offsets, we used a sequenced approach. First, we identified projects with offset activities. Then, we assessed (i) the alignment of biodiversity offset development against Bank Group environmental and social requirements and Bank Group supervision of client implementation (survey work, stakeholder engagement, and documentation), and (ii) outcomes to the extent that monitoring and reporting data were available (including the principles of no net loss or net gain). Lastly, we conducted interviews with 20 senior experts in environmental and social fields to derive explanatory factors.

The World Bank, IFC, and MIGA include biodiversity offsets within their ESFs, and their requirements have become more aligned over time (box 5.1). Biodiversity offsets are defined under ESS6 and PS6 as "measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development, and persisting after appropriate avoidance, minimization, and restoration measures have been taken." In simpler terms, this means taking actions such as protecting or restoring biodiversity in another location to compensate for unavoidable impacts that remain after all feasible steps to avoid or reduce harm have been taken. Positioned as the final step in the mitigation hierarchy—after avoidance, minimization, and restoration—offsets aim to balance biodiversity losses with equivalent or greater gains. The objective is to achieve no net loss or even net gain in biodiversity; in other words, to ensure that development does not come at the cost of irreversible impacts on biodiversity values. Today, the offset requirements in both PS6 and ESS6 are largely based on international best practice, or the international Business and Biodiversity Offset Program. IFC's extended exposure to and experience with implementing offsets, relative to the World Bank, is reflected in the maturity of the approaches to offsetting within the institutions' respective portfolios.

Box 5.1. Evolution of World Bank Environmental and Social Framework and International Finance Corporation Sustainability Framework Requirements for Biodiversity Offsets

The International Finance Corporation's 2006 Performance Standard on Environmental and Social Sustainability highlighted offsets for achieving no net loss. This approach was further developed in the 2012 Performance Standard update and the associated 2019 Guidance Note. The Multilateral Investment Guarantee Agency adopted its Performance Standards, which align with those of the International Finance Corporation and include references to offsets, in 2013. The World Bank's Operational Policy 4.04 (Natural Habitats; 2001, updated in 2013) required impacts to habitats to be mitigated through avoidance, minimization, and restoration but did not explicitly mention offsets. However, the policy included similar actions, such as establishing protected areas. Unlike the Performance Standard on Environmental and Social Sustainability, Operational Policy 4.04 did not aim for no net loss or reference the Business and Biodiversity Offset Program's biodiversity offset principles, thereby allowing for flexibility. With the World Bank's Environmental and Social Framework, launched in October 2018, the offset requirements among the World Bank Group institutions became better aligned.

Source: Independent Evaluation Group.

Biodiversity offsets are an increasingly used tool in global conservation efforts, often driven by regulatory requirements, lender policies, and reputational risk management. The more frequent appearance of offsets may reflect not an increase in impact severity, but rather the more explicit and stringent requirements of ESS6, compared with the previous safeguard policies. For example, the prior OP 4.04 required mitigation of habitat impacts but did not mandate no net loss or explicitly require offsets. ESS6 now includes clearer expectations regarding critical habitat, residual impacts, and offset use as a last resort, bringing the World Bank in line with international good practice. Nevertheless, in practice, when no financing component for biodiversity offsets is included in the design of public sector projects, financing them can be a major constraint.

We identified a portfolio of 54 projects approved during the evaluation period (FY15–24) that either explicitly indicated that biodiversity offsets would

be incorporated per ESS6 and PS6 requirements or signaled requirements for potential offset measures if risks materialized downstream. This portfolio included 19 World Bank projects, 22 IFC projects, and five MIGA guarantees. In addition, there were eight joint operations (six jointly implemented by IFC and MIGA, one by IFC and the World Bank, and one by MIGA and the World Bank). The regional distribution of these projects is as follows: Latin America and the Caribbean, 13 projects; Western and Central Africa, 12 projects; South Asia, 11 projects; Eastern and Southern Africa, 7 projects; Europe and Central Asia, 6 projects; East Asia and Pacific, 2 projects; and Middle East and North Africa, 3 projects.

Offset projects across IFC, the World Bank, and MIGA vary in sector and scope, addressing both small- and large-scale biodiversity impacts. For IFC, many of the smaller-scale offsets were associated with solar or wind projects. For the World Bank, offset projects primarily focused on energy and infrastructure development. These included rural and regional transport connectivity operations, as well as energy-related initiatives such as gas or hydropower operations. MIGA operations with offsets were mainly hydropower, wind power, and other energy-related operations, plus one mining and two infrastructure projects. All projects were rated high environmental and social risk, with one exception.

Capacity Constraints

There are capacity and skills gaps related to identifying, supervising, and managing biodiversity offsets at the World Bank. There was consensus among the 20 environmental and social experts and environmental specialists interviewed that there are significant capacity gaps within the World Bank related to identifying the need for biodiversity offsets and guiding their effective design and implementation, in line with ESS6. The World Bank lacks global and regional biodiversity leads to facilitate learning on biodiversity offsets and ensure the consistent use of knowledge about standards and best practices. There was a focal point for offsets at the World Bank, but they have retired. Interviews indicate that there is insufficient guidance, training, peer-to-peer learning, and mentorship for staff working on offsets at the World Bank. However, IFC now has global and regional technical leads for biodiversity who provide support, guidance, and a level of consistency

for projects implementing PS6. MIGA has limited staff capacity in this area. Interviewees raised concerns about the difficulty of supervising offsets while also managing new projects, despite knowing that close monitoring of offset projects is critical to ensuring compliance and effectiveness and to generating lessons and knowledge.

Information Disclosure Post-Board Approval

A lack of visibility on biodiversity offsets after project Board approval reduces transparency for public oversight and institutional learning and is out of step with evolving global best practices. Bank Group projects typically disclose only preliminary information about biodiversity offsets before project Board approval. However, no evidence was found of post-Board disclosure of updates, even though all offsets reviewed had updates. This lack of visibility matters because much offset-related documentation is prepared post-Board approval because offsets take time to plan and implement. Not releasing updated offset information on key mitigants for the project (including biodiversity action plans or biodiversity management plans post-Board approval) undermines accountability, public oversight, institutional and client learning, risk management, and—ultimately—better outcomes. Global frameworks such as the Taskforce on Nature-related Financial Disclosures, the Global Reporting Initiative, and the European Sustainability Reporting Standards push for greater transparency on nature-related risks, including transparency for biodiversity offsets.

Implementation

Although the extent of offset implementation varied across projects, there is a tendency across the portfolio for the necessary assessments and subsequent implementation of enabling activities to be very delayed. These delays suggest that many projects will not be able to confidently say that offsets will be implemented according to the guidance after project end. It takes 20–30 years to achieve no net loss or no net gain. Therefore, we examine implementation status and quality during the project cycle to understand the probability of achieving positive biodiversity offset impacts over time. Since offsets vary in type, size, and scale, we examine implementation across cohorts. The main patterns emerged less by institution

and more by sector; therefore, the remainder of the chapter highlights challenges on a sector basis.

Hydropower and Renewable Energy

Offset implementation in the nine hydropower cases in the portfolio is significantly constrained by sector-specific complexities and inadequate financing, in part due to a lack of granularity on offset requirements in project documents. Strengthening early-stage assessments and upstream interventions can help enhance avoidance and result in more effective and adequately funded offsets. Biodiversity offsets in the hydropower sector included supporting terrestrial and riverine protected areas, rivers outside of the area of influence, afforestation, and species translocation. Implementation was behind schedule for five of the nine projects with offsets that were three or more years into implementation (and some were still preparing key documents six years after financing). Another closed project revealed unsatisfactory offset implementation. Implementation was progressing satisfactorily or well in only two projects. The challenges in hydropower projects stem from sector-specific factors, including the need to address both terrestrial and aquatic impacts; the increasing concentration of projects within the same basin, which creates complex cumulative effects that are difficult to mitigate; limited budgets; very weak institutional capacity (Nepal and Pakistan); and a lack of capable implementing partners. In some projects, assessments also were insufficient. Two projects relied on controls on overfishing and riverine sand mining, despite no feasibility assessment on incentives and enforcement mechanisms. Reliance on afforestation implemented by state authorities, with funding limited to three to five years, raises concerns about the long-term sustainability of these measures.

The seven wind and solar projects in the portfolio, which involve smaller-scale and less complex offsets, are being implemented well, in line with the relevant guidance. For instance, one solar project created additional wetland areas to support a range-restricted frog species. Another wind project has been collaborating with regional landowners to enhance cattle management practices, improving habitat quality for a threatened species of bird.

Mining

Strong financing, expert engagement, and established environmental capacity within mining companies have enabled more effective biodiversity offset implementation. Mining projects (n = 3) exhibited more advanced implementation of offsets. A key factor is the choice and capacity of the client. In all cases, the clients were well-capitalized private sector firms, with advanced environmental, social, and governance programs. Implementation progress across mining projects is progressing well, including the establishment of a new national park in Western Africa to protect a large concentration of chimpanzees. All three projects had strong long-term financing, had engaged with both species and offset experts, and had capable implementation partners. Mining companies tend to have stronger, more established environmental, social, and governance capacity than hydropower companies, which may have contributed to more effective implementation.

Transport

The implementation of offset activities in transport infrastructure is, in most cases, challenged by a lack of information in project documentation about implementation status, by dropped components, or by delays. Of nine mature transport projects that included offsets, three reported activities as "in progress," with one completing a dolphin study to inform national conservation plans, assess potential impacts, and validate management measures but offering no other details, such as on the status of the species. Two projects removed components with high environmental risks and the related ESS6 actions. Offset implementation is delayed on another road project, pending detailed engineering design. Only two projects showed offset progress: one is in the final stages of establishing protected areas for threatened primates and wetland ecosystems, and the other has built underpasses for tiger connectivity and undertaken restoration efforts.

High-Integrity Verification

Establishing the credibility and effectiveness of offsets remains a challenge. Interviews with leading environmental and social experts suggested that, to ensure high-integrity biodiversity offsets, it would be worth exploring a

verification framework akin to other rigorous certification models. Without robust verification systems, offsets risk becoming paper commitments rather than delivering real conservation outcomes. Key attributes of high-integrity offsets include standardized metrics of net loss and net gain, long-term monitoring to assess ecological effectiveness, independent verification to ensure transparency, engagement of IPLCs, and sustainable funding for long-term stewardship. An innovative, though challenging, idea expressed in the interviews was the development of a new verification body—potentially within the Bank Group, the International Union for Conservation of Nature, or a United Nations–linked organization—that could certify and monitor offsets globally. Outcome data could be hosted on open-access platforms such as the Global Biodiversity Information Facility database or the UN Biodiversity Lab to enhance public accountability. In practice, such a change would be a long-term endeavor, but there are precedents for the effectiveness of verification practices in biodiversity and nature-based schemes where outcomes are monetized.

6 | Conclusions, Implications, and Recommendations

Conclusions

The Bank Group has laid a credible foundation for biodiversity action but now faces a critical implementation test: translating its high-level commitments into measurable biodiversity outcomes that deliver on human well-being, food security, sustainable production, and jobs. The Bank Group has reframed its development vision to include a "livable planet," articulated biodiversity-related corporate indicators tied to land and marine resource-use targets, and launched high-profile initiatives such as the Global Challenge Program on Forests for Development, Climate, and Biodiversity, signaling that biodiversity is no longer peripheral but central to its development mandate. The 2021 Joint Statement by the Multilateral Development Banks on Nature, People and Planet and the World Bank's embrace of "nature-smart development" reflect growing recognition that biodiversity underpins climate mitigation, ecosystem resilience, and human welfare. Turning this vision into action will require connecting nature and climate objectives more systematically and financing integrated solutions that sustain ecosystems and the services they provide.

Without stronger ecological monitoring, consistent inclusion of IPLCs, broader biome coverage, and renewed investment in sustainable conservation financing, the World Bank's contributions to biodiversity conservation will fall short of supporting countries in achieving the 30×30 target under the GBF. The World Bank has supported more than 880 protected areas, primarily in tropical forests. Tree cover analysis suggests that these investments have likely helped maintain biodiversity, but the absence of ecological outcome monitoring means actual biodiversity gains remain unverified. Moreover, the World Bank has not systematically engaged IPLCs or strengthened their tenure rights, despite clear evidence of their effectiveness as stewards of biodiversity. Finally, the World Bank has not maintained its

leadership in sustainable conservation financing, which is important to the durability of conservation gains after projects close.

The integration of biodiversity in production sectors remains ad hoc and underleveraged, despite proven opportunities for scale. World Bank and IFC operations show that it is possible to reconcile biodiversity goals with economic growth, jobs, food security, and climate aims across agriculture, forestry, and fisheries. However, the current approach remains fragmented, with biodiversity integration being concentrated in a few country contexts and progressive firms rather than embedded across the portfolio.

Biodiversity-positive outcomes in production sectors are more likely when World Bank and IFC support is grounded in four enabling conditions (or factors of effectiveness). First, interministerial collaboration and robust information flows—particularly between agricultural and environmental ministries—are essential to overcoming fragmentation and scaling integrated solutions. Second, aligning public and private finance with emerging sustainability regulations and markets (such as the EU Regulation on Deforestation-free Products) helps create real economic incentives for biodiversity protection. Third, and relatedly, resource users are more likely to adopt biodiversity-positive practices when financial instruments reduce up-front costs and buffer risk and when they have secure land and resource tenure and rights. Finally, identifying entry points where production systems are reaching ecological limits—such as degraded soils due to overexploitation—offers opportunities to promote biodiversity-positive approaches that regenerate natural capital and ensure long-term productivity and jobs.

Biodiversity offsets are increasingly used across the Bank Group to manage residual environmental impacts, yet their effectiveness remains limited because of weak institutional capacity, lack of transparency, and inconsistent implementation. Offsets are unevenly and inconsistently updated or transparently monitored after project approval, and the methodologies used to estimate biodiversity loss and gains are often unclear, falling short of international best practice. These gaps undermine the credibility of offsets and reduce the likelihood that they will deliver their intended conservation outcomes. Significant institutional, technical, and financial strengthening is required to ensure that offsets function as credible, outcome-based conservation tools.

Implications

Based on these conclusions, we propose four recommendations to help the Bank Group support clients in achieving their livable planet goals. These recommendations align with the Bank Group's mission to end poverty on a livable planet, which reframes natural capital as a foundational asset for prosperity, jobs, resilience, and debt sustainability. The Corporate Scorecard necessitates a focus on biodiversity to achieve livable planet goals, including changes in renewable natural-capital wealth, the share of fish stocks within biologically sustainable limits, and the percentage of terrestrial and aquatic areas under protection. Delivering on the Bank Group's jobs agenda requires agrifood, fisheries, and forest value chains that remain productive as ecological limits tighten. Soil depletion, water stress, and declining fish stocks are already flattening yield curves and raising input costs; continued input-intensive growth risks lower long-term productivity and higher fiscal burdens.

Clients are counting on the Bank Group to help them deliver on their global biodiversity goals, including commitments to conserve 30 percent of the world's land and oceans by 2030. This commitment hinges on the equitable participation of IPLCs, whose territories overlap with a large share of the planet's remaining high-biodiversity areas. The Joint Statement by the Multilateral Development Banks on Nature, People and Planet and the Bank Group recognize IPLCs as essential stewards and commit to meaningful engagement, benefit sharing, and rights-based approaches.

A focus on sustainable production will likely be a central feature of the new country engagement model. As most clients prioritize the sustainable use of their natural resources in CPFs, it is likely that the Bank Group will be asked to play a strong role in helping clients to implement their sustainable growth strategies over the long term. As the Bank Group rethinks and evolves its country engagement approach (World Bank 2025d), there will be opportunities to embed integrated climate and nature objectives where they matter most, including for growth, jobs, and macro-stability. By adopting a whole-of-economy, nature-smart approach, country engagements can harness the comparative strengths of the World Bank, IFC, and MIGA to create enabling environments, steer private capital, and de-risk investments toward

sustainable models that deliver measurable economic, environmental, and social outcomes.

Recommendations

The Bank Group should assist clients to identify, finance, and measure biodiversity outcomes. To support this goal, the Bank Group should strengthen its internal capabilities. This will involve: (i) utilizing existing country diagnostics (for example, CCDRs and CPFs) to identify biodiversity-relevant entry points; (ii) integrating biodiversity finance initiatives into broader economic development strategies and making explicit the linkages between commitments and finance across biodiversity, climate, and land degradation; (iii) conducting ecological monitoring including by using a combination of technology (for example, earth observation tools) and validation methods (for example, habitat and species monitoring, soil health analysis) to improve measurement and reporting; and (iv) addressing internal biodiversity capacity constraints.

The World Bank should engage, empower, and protect IPLCs to achieve sustainable and inclusive biodiversity outcomes at scale. This entails (i) internalizing and raising awareness about the role of Indigenous Peoples as effective stewards of biodiversity-rich landscapes; (ii) enhancing the identification of IPLCs and placing these groups at the center of biodiversity solutions; (iii) strengthening resource rights to ensure sustainable biodiversity outcomes; and (iv) in conservation efforts, enhancing collaboration between social development, Indigenous Peoples specialists, and environmental teams.

The World Bank and IFC should proactively replicate and scale proven biodiversity-positive production models that deliver positive ecological, economic, and social outcomes. This involves (i) finding opportunities to introduce new production and agribusiness methods, supported by policies, regulations, and incentives that encourage biodiversity investment; (ii) tailoring successful interventions to local ecological and cultural contexts; (iii) augmenting the capacity of extension networks and revisiting advice provided by firms; and (iv) helping raise consumer awareness and demand for sustainable products. When piloting new approaches, underpin projects with

robust monitoring, reporting, and adaptive learning systems to help teams track and adapt.

The World Bank, IFC, and MIGA should actively address the gaps in offset projects regarding staff capacity, information disclosure, and project life cycle monitoring and supervision. The Bank Group should establish functional, recognized, and appropriately resourced biodiversity focal points across the Bank Group to provide access to experts and opportunities for sharing, peer review, and learning from offset practice. Third-party verification for high-risk or high-impact projects, as a good practice, is encouraged.

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APPENDIXES

Independent Evaluation Group

Biodiversity for a Livable Planet

Appendix A. Evaluation Methods

This appendix explains the methodological approach used in this evaluation. It includes a description of the evaluation design and questions, scope, portfolio identification and description, methods applied, and limitations.

Evaluation Design and Questions

This evaluation asked the overarching question: How well is the World Bank Group supporting clients to address biodiversity loss? This question was examined through two main evaluation questions (EQs):

- EQ1: How well is the World Bank addressing biodiversity challenges through conservation-focused activities?
- EQ2: How well are the World Bank and the International Finance Corporation (IFC) supporting activities with potential biodiversity benefits in key production sectors, and are those activities likely to achieve such benefits?

A third EQ—How well is the Bank Group supporting clients to manage risks affecting biodiversity at the project level?—was subsumed within the analyses of EQ1 and EQ2 and is also addressed through a dedicated analysis of biodiversity offsets that covers the World Bank, IFC, and the Multilateral Investment Guarantee Agency (MIGA).

To answer these questions, we triangulated findings generated through a set of mixed methods, both qualitative and quantitative. The questions were also further subdivided into a set of subquestions, as per the Approach Paper(World Bank 2024).

The subquestions for EQ1—on conservation-focused activities—are as follows:

- EQ1a. How well is the World Bank applying good practice approaches in its biodiversity conservation activities?
- EQ1b. To what extent are biodiversity conservation activities designed to leverage the World Bank's advantages?
- EQ1c. How well are biodiversity projects achieving their biodiversity goals?

» EQ1d. How well are biodiversity projects articulating and achieving their multiple benefits (economic, development, climate)?

The subquestions for EQ2—on integrating biodiversity into key production sectors—are as follows:

» EQ2a. What has worked to enable the integration of activities with biodiversity benefits in engagements in key production sectors—in the Bank Group, with clients, and with resource users?

» EQ2b. Do projects with potential biodiversity benefits include evidence on proxies for biodiversity benefits, and are they achieving those proxies?

» EQ2c. How have activities with potential biodiversity benefits contributed to climate change benefits?

The subquestions for EQ3—on biodiversity risk management—are as follows:

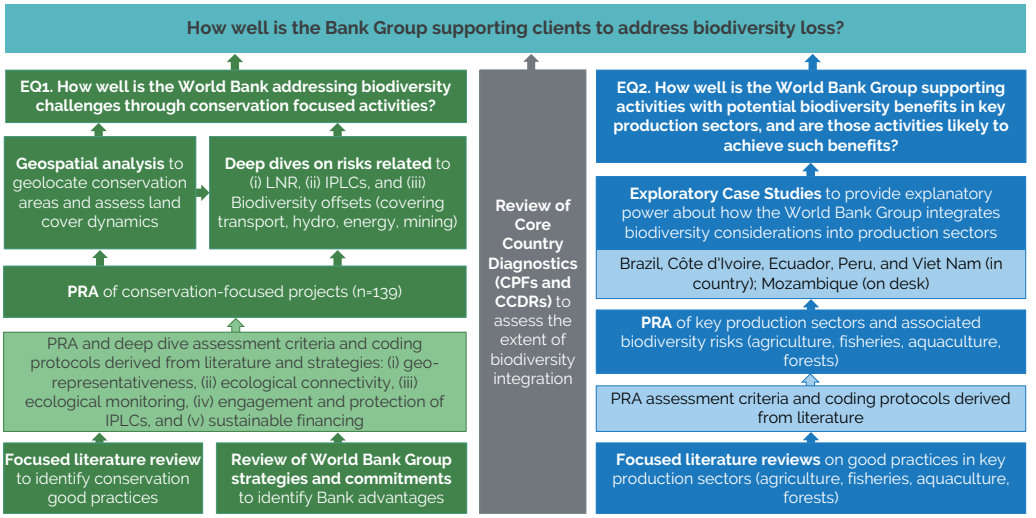
» EQ3a. How well have biodiversity risk management policies been used to inform the design and support the effective implementation of projects that could have an adverse effect on biodiversity?

» EQ3b. To the extent that evidence is available, has the application of biodiversity-related risk management policies mitigated biodiversity loss?

Figure A.1 presents the evaluation design. For EQ1, which assesses the extent to which the World Bank is achieving biodiversity outcomes through conservation-focused activities, methods include focused literature reviews, strategy reviews, portfolio review and analysis, geospatial analysis, and deep dives on (i) Indigenous Peoples and local communities (IPLCs), (ii) land and natural resource rights (LNR), and (iii) biodiversity offsets. For EQ2, which examines how well the World Bank and IFC are supporting biodiversity outcomes in key production sectors, the methods include focused literature reviews, portfolio reviews and analyses, and exploratory case studies. EQ3, on how well the Bank Group is supporting clients to manage risks affecting biodiversity at the project level, was addressed through the dedicated analysis of biodiversity offsets (covering the World Bank, IFC, and MIGA), the integration of environmental and social risk-related analysis into the portfolio review and deep dives under EQ1, and the sectoral portfolio and case study reviews under EQ2. This appendix also describes the methodology

used to analyze core country-level diagnostics—Country Partnership Frameworks (CPFs) and Country Climate and Development Reports (CCDRs).

Figure A.1. Evaluation Design



Source: Independent Evaluation Group.

Note: EQ3—on how well the World Bank Group is supporting clients to manage risks affecting biodiversity—was integrated into the analyses of EQ1 and EQ2. Specifically, EQ3 was examined through a dedicated analysis of biodiversity offsets (covering the World Bank, IFC, and MIGA), and integrated into the portfolio review and deep dives under EQ1 and the portfolio and case study reviews under EQ2. CCDR = Country Climate and Development Report; CPF = Country Partnership Framework; EQ = evaluation question; IFC = International Finance Corporation; IPLCs= Indigenous Peoples and local communities; LNR = land and natural resource rights; MIGA = Multilateral Investment Guarantee Agency; PRA = portfolio review and analysis.

Evaluation Scope

This evaluation was scoped along three dimensions: time frame, institutional coverage, and level of engagement.

Time frame. The evaluation includes World Bank, IFC, and MIGA projects approved during FY15–24, except for the conservation-focused portfolio, which includes projects approved from FY10 to FY24. This extended time frame was used to ensure the inclusion of closed projects with evaluative evidence on results, as EQ1 examines both the evolution of the World Bank's engagement in conservation and the extent to which environmental and development results were achieved.

Institutional coverage. As outlined in the Approach Paper, EQ1 on conservation-focused activities covers the World Bank only, as IFC and MIGA do not

implement biodiversity conservation operations. EQ2 on biodiversity integration into key production sectors covers both the World Bank and IFC. EQ2 excludes MIGA because the evaluation scope, as per the Approach Paper, did not include these activities. MIGA may undertake some relevant activities, but consultations with MIGA during the Approach Paper stage suggested that these are relatively few, and the evaluation might not add much value by covering them. The biodiversity offsets analysis includes all three Bank Group institutions: the World Bank, IFC, and MIGA.

Engagement level. To manage scope, the evaluation focuses on national-level issues rather than the global convening power of the World Bank (for example, its activities at the Conferences of the Parties), as specified in the Approach Paper. Evaluating the Bank Group's global convening efforts would have required a distinct methodological approach. Lessons on convening were also generated by a separate Independent Evaluation Group (IEG) evaluation of the Bank Group's global convening efforts in 2020. In addition, the evaluation does not assess IFC's Biodiversity Finance Reference Guide, which was launched alongside the evaluation and is too recent to evaluate.

Evaluation Portfolio Identification and Classifications

This section has two parts: the first describes the process used to identify the portfolios included in the evaluation for each EQ, and the second provides a description of these portfolios.

EQ1. Biodiversity Conservation

World Bank

First, we identified the universe of potentially relevant projects. To identify the World Bank's conservation-focused portfolio (FY10–24), we first began by identifying projects tagged with the biodiversity theme code (theme code 834). Using this output, we manually screened projects (that is, their project development objectives, component titles, and indicator titles) to develop a search taxonomy of biodiversity-related terms, as outlined in box A.1. We then used this taxonomy for text mining to supplement the theme code

search to ensure comprehensiveness. To do this, a string search was conducted in key text descriptions of projects (that is, project titles, project development objectives, key lending project document abstracts, project descriptions, activity summaries, component titles, component descriptions, and indicator titles).

Box A.1. Search Taxonomy Used for Text Mining to Identify Conservation-Focused Portfolio

biodiversity, biological corridor, biological divers, conservation area, conservation corridor, critical habitat, ecological corridor, ecosystem value, fauna, flora, marine reserve, natural capital, natural habitat, payment for ecosystem service, payment for environmental service, payments for ecosystem service, payments for environmental service, poaching, protected area, specie, WAVES, wildlife.

Source: Independent Evaluation Group.

Next, to determine the relevant in-scope portfolio from the universe of potentially relevant projects, we used AI-assisted manual screening supported by an off-line, open-source, Mistral 7b model running on a World Bank power desktop machine with an NVIDIA GPU card.

We developed specific prompts to categorize projects as in or out of scope based on a set of instructions and examples. We developed three prompts tailored to the three lending instruments, and for each lending instrument, we used different text fields (that is, project development objectives, components, and indicators for investment project financing; project development objectives and disbursement-linked indicators for Program-for-Results; and project development objectives and prior actions for development policy operations). The prompts and text data were fed to the model systematically for the projects for which all necessary text data were available. The model was instructed to provide an "in/out" categorization for each project, along with a brief explanation—grounded in the data—for its decisions. The model's generation parameters and the prompts were optimized for accuracy (as opposed to creativity) through iterative testing with examples.

This preliminary AI-assisted categorization served to efficiently narrow the pool of projects by identifying those that potentially met or did not meet our evaluation scoping criteria. Subsequently, we conducted a manual verification to ensure the accuracy of the AI categorization and to adjust for any nuances or specific details the model might have missed. The manual verification involved reviewing the relevant text, including project development objectives, components, and indicators for each of the projects identified by the AI categorization process, to ensure that false positives were omitted from the portfolio. To reduce the chances of false negatives occurring, the search taxonomy used (see box A.1) was deliberately broad, with spot checks being conducted on projects to reduce the likelihood of relevant projects being omitted from the portfolio. This blended approach helped achieve both efficiency and thoroughness in our identification process.

During the portfolio review and analysis process, the portfolio was further refined to exclude false positives and negatives, with projects omitted or included based on the results of a detailed review and analysis of project documents including the Project Appraisal Documents (PADs) and Implementation Completion and Results Reports (ICRs).

International Finance Corporation and Multilateral Investment Guarantee Agency

As per the evaluation Approach Paper, IFC and MIGA were not included in the EQ1 portfolio because they do not undertake conservation-focused activities.

EQ2. Biodiversity Integration in Key Production Sectors

This section outlines the methods used to identify the portfolio of World Bank and IFC projects with relevant production sector activities. As per the Approach Paper, the analysis focused on three sectors: (i) agriculture and agribusiness, (ii) forests, and (iii) fisheries and aquaculture.

World Bank Lending

Agriculture. To conduct the analysis of World Bank agriculture projects, we identified the universe of projects approved by the Agriculture and Food Global Practice during the evaluation time frame (FY15–24).

Forests. Because forest-related projects are financed across Global Practices, we used relevant sector codes (AT—Forestry; AK—Public Administration—Agriculture, Fishing, and Forestry; AZ—Other Agriculture, Fishing, and Forestry) and theme codes (831—Forests Policies and Institutions) to identify the forests portfolio. We also pulled all projects that included relevant keywords (that is, forest, wood, timber) in their project name, project development objective, component title, and indicators. Using this combined output, we manually screened projects (that is, their project names, project development objectives, component titles, and indicator titles) to identify those with in-scope activities such as forest carbon and forest production.

Fisheries and aquaculture. To identify the fisheries and aquaculture portfolio, we used relevant sector codes (AF—Fisheries; AZ—Other Agriculture, Fishing, and Forestry) and theme codes (832—Fisheries Policies and Institutions). Using this output, we manually screened projects (that is, their project development objectives, component titles, and indicator titles) to identify those with in-scope activities such as fisheries management and aquaculture.

International Finance Corporation Investments

Step 1: Data extraction. We extracted project text data from the IFC Disclosure Portal for projects approved during the evaluation period covering the following: (i) project description, (ii) overview fund, (iii) risk impact, (iv) environmental and social action plan, (v) review scope, (vi) environmental and social information, (vii) impact, (viii) result, (ix) risk assessment, (x) role, (xi) contribution, (xii) environmental and social issues, (xiii) sponsor, (xiv) cost nature, (xv) investment, (xvi) location, (xvii) environmental and social categorization rationale, (xviii) risk fund, (xix) risk impact, (xx) stakeholders, and (xxi) mitigation measures.

Step 2: Data consolidation. We consolidated the text data, originally stored in multiple columns, into a single comprehensive text field for each project.

Step 3: Keyword search. Using R, we conducted a search for predefined biodiversity-related keywords and phrases across all the text columns mentioned in step 1 within the aggregated text. The list of keywords can be found in box A.2.

Box A.2. Additional Keyword Taxonomy Used for Text Mining to Identify International Finance Corporation Portfolio

climate smart ag; climate-smart ag; deforestation; Eucalyptus; fish; forest; good agricultural practice; good agriculture practice; Pulp mill; smallholder; sustainable ag; traceability.

Source: Independent Evaluation Group.

Step 4: Initial project inclusion. Projects that contained at least one occurrence of the keywords and phrases were included in our initial longlist.

Step 5: Sector-based inclusion. In addition to keyword-triggered projects, we included projects from relevant sectors in our longlist. The list of relevant sectors is available in table A.1.

Step 6: Manual preliminary screening (i): intercoder reliability exercise. We manually reviewed the text column of projects in the longlist, focusing on those that proactively adopted sustainable measures benefiting biodiversity in land- or seascape production sectors. To ensure consistency, the team conducted a simultaneous review of 10 randomly selected projects, comparing results to ensure intercoder reliability.

Step 7: Manual preliminary screening (ii): coding and validation. After ensuring consistency among coders through the intercoder reliability exercise, we divided the longlist among team members. Each member coded the projects assigned to them.

Step 8: Final selection. After the manual validation from steps 6 and 7, we identified 87 investment projects out of the initial 948 projects in the longlist.

International Finance Corporation Advisory

Step 1: Data extraction. We extracted text data for advisory projects approved during the evaluation period, covering the following: (i) objectives statement, (ii) statement of market failure, (iii) statement of market failure original, (iv) strategic relevance, (v) expected development impact for public disclosure, (vi) project description for public disclosure, (vii) project

description, (viii) IFC role and additionality, (ix) context, (x) upstream comments, and (xi) MFD comments.

Step 2: Data consolidation. We consolidated the text data, originally stored in multiple columns, into a single comprehensive text field for each project.

Step 3: Keyword search. Using R, we conducted a search for predefined biodiversity-related keywords and phrases within the aggregated text. The list of keywords can be found in box A.1.

Step 4: Initial project inclusion. Projects that contained at least one occurrence of the keywords or phrases were included in our initial longlist.

Step 5: Primary business line–based inclusion. In addition to keyword-triggered projects, we included projects from relevant primary business lines in our longlist. The list of relevant primary business lines is provided in table A.1.

Step 6: Manual preliminary screening (i): intercoder reliability exercise. We manually reviewed the text column of projects in the longlist, focusing on those that proactively adopted sustainable measures benefiting biodiversity in land- or seascape production sectors. To ensure consistency, the team conducted a simultaneous review of 10 randomly selected projects, comparing results to ensure intercoder reliability.

Step 7: Manual preliminary screening (ii): coding and validation. After ensuring consistency among coders through the intercoder reliability exercise, we divided the longlist among team members. Each member coded the projects assigned to them.

Step 8: Final selection. After the manual validation from steps 6 and 7, we identified 63 advisory projects out of the initial 218 projects in the longlist.

Table A.1. International Finance Corporation Business Lines and Sector Codes Used to Identify Evaluation Question 2 Portfolio

Business Line for IFC Advisory Projects	Tertiary Sector Name for IFC Investment Services
ESG ESG—E&S Risk Management ESG—Integrated ESG and Sustainability MAS MAS—Agri Expertise MAS—Agribusiness: Industry Standards MAS—Agribusiness: SME Productivity MAS—Agribusiness: Strategic Community Investment MAS—Agribusiness Other MAS—Crop Production MAS—Sustainable Protein MAS—Forestry and Land Uses	Animal Aquaculture Cattle Farming Coffee, Cocoa, Tea Dairy Products Diversified Edible Agricultural Crops Production Fishing Fruits and Vegetables Horticultural Products (Flowers) Grains and Beans Natural Fibers (Cotton, Sisal, Jute, and so on) Other Animal Production Other Vegetable Oil Crops (Coconut, Rapeseed, Peanut, Sunflower, and so on) Palm Oil Plantations Palm Vegetable Oil Paperboard (Including Boxboard, Fiberboard) Plantation Forests Poultry Farming Sugarcane and Beets

Source: Independent Evaluation Group.

Note: E&S = environmental and social; ESG = environmental, social, and governance; IFC = International Finance Corporation; MAS = Manufacturing, Agribusiness, and Services; SME = small and medium enterprise.

Biodiversity Offsets

The biodiversity offsets portfolio across the World Bank, IFC, and MIGA was identified through a combination of counterpart collaboration and systematic portfolio reviews.

World Bank. For the World Bank, 16 projects under the Environmental and Social Framework (ESF) and 5 projects under the safeguard policies were identified as having offsets. The ESF projects were identified using the ESF 5.0 Master Report by filtering for projects that marked biodiversity offsets as relevant. Safeguard policies projects were identified through a structured document review process, leveraging AI-assisted keyword searches to detect offset-related language in PADs and Integrated Safeguards Data

Sheets, followed by a manual verification by the evaluation team. The manual verification process involved reviewing the text excerpts identified by the keyword search tool to ensure projects that referred to offsets or other relevant terms in project documents included offset activities within the project's scope. False positives, such as instances where offsets or related terms were mentioned in a cursory fashion or in an irrelevant context, were screened out. The final list was also validated in semistructured interviews with environmental and social specialists during data collection activities.

IFC. The IFC environmental, social, and governance (ESG) team provided a list of 22 active and 7 closed projects approved within the evaluation timeline (FY15–24) that include biodiversity offsets as part of Performance Standard on Environmental and Social Sustainability (PS6) requirements. The evaluation team requested no-objection from investment officers and managers to access project documents. We received a few questions on how the project information would be used and clarified that the evaluation would present only portfolio-level trends and findings, with no reference to specific projects or partners. After this no-objection process, the IT/ESG360 team shared a bulk download of the available environmental and social files from the ESG dashboard. Several environmental and social documents related to biodiversity offsets were not available in the ESG dashboard, and the team requested these directly from project teams in coordination with the IFC ESG team. The evaluation team followed IFC's privacy protocols throughout the evaluation process to ensure the confidentiality of sensitive information, including by following established guidelines on data protection, and ensured that all data were handled securely.

MIGA. MIGA counterparts provided a list of 44 active and 12 terminated projects that applied PS6. The evaluation team identified 12 projects that involved biodiversity offsets. The final list was confirmed by MIGA's ESG team.

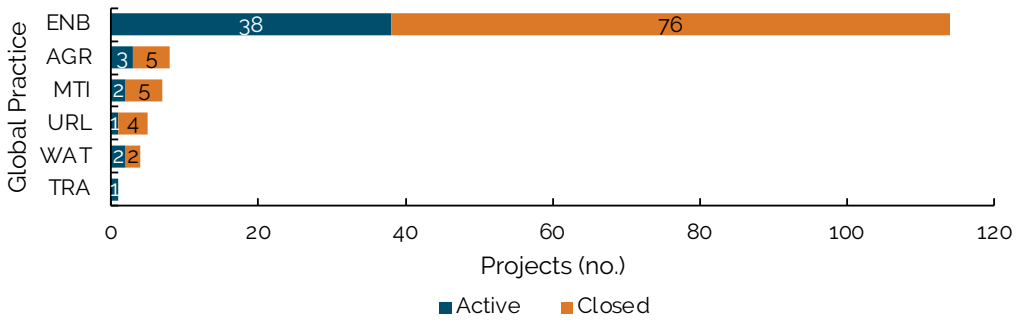
Portfolio Description

EQ1. Biodiversity Conservation

There were 139 World Bank lending projects (and 23 additional financing projects) approved between FY10 and FY24 within the scope of biodiversity

conservation activities, of which 47 are active and 92 are closed. Most of these projects are financed by the Environment, Natural Resources, and Blue Economy Global Practice (n = 114; 83 percent). Of the 92 closed projects, 73 projects have ICRs, of which 62 have Implementation Completion and Results Report Reviews (ICRRs), according to data from the IEG DataHub (as of March 2025). Eighty-four percent of the closed and validated projects were rated moderately satisfactory or higher. A breakdown of the portfolio is provided in figures A.2–A.4.

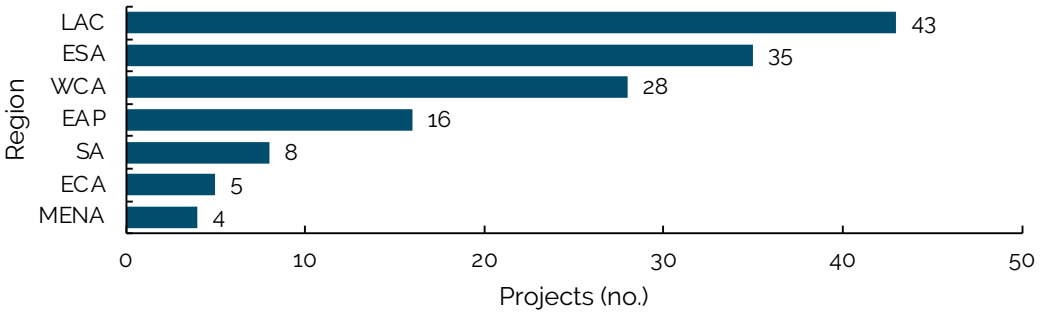
Figure A.2. World Bank Conservation Portfolio by Global Practice and Project Status



Source: Independent Evaluation Group.

Note: AGR = Agriculture and Food; ENB = Environment, Natural Resources, and Blue Economy; MTI = Macroeconomics, Trade, and Investment; TRA = Transport; URL = Urban, Disaster Risk Management, Resilience, and Land; WAT = Water.

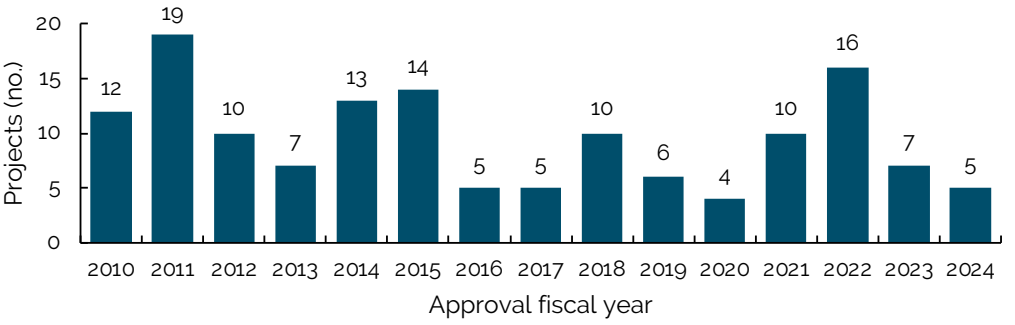
Figure A.3. World Bank Conservation Portfolio by Region



Source: Independent Evaluation Group.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; ESA = Eastern and Southern Africa; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SA = South Asia; WCA = Western and Central Africa.

Figure A.4. World Bank Conservation Portfolio by Approval Year



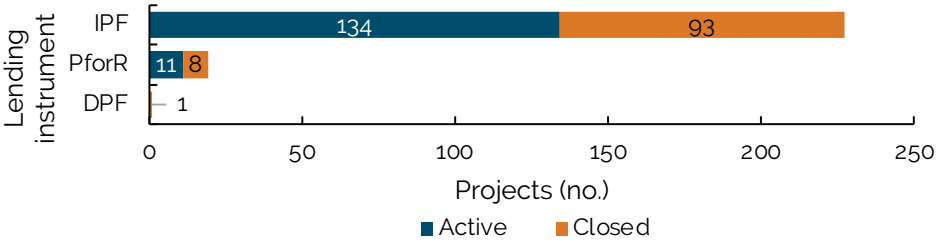
Source: Independent Evaluation Group.

EQ2. Biodiversity Integration in Key Production Sectors

World Bank Lending

Agriculture. There were 247 World Bank lending projects financed by the Agriculture and Food Global Practice approved between FY15 and FY24. Of these, 145 are active and 102 are closed. Of the 102 closed projects, 72 projects have an ICR, of which 53 have an ICRR (data from IEG DataHub as of March 2025). Eighty-seven percent of the closed and validated projects were rated moderately satisfactory or higher. A breakdown of the portfolio is provided in figures A.5–A.7.

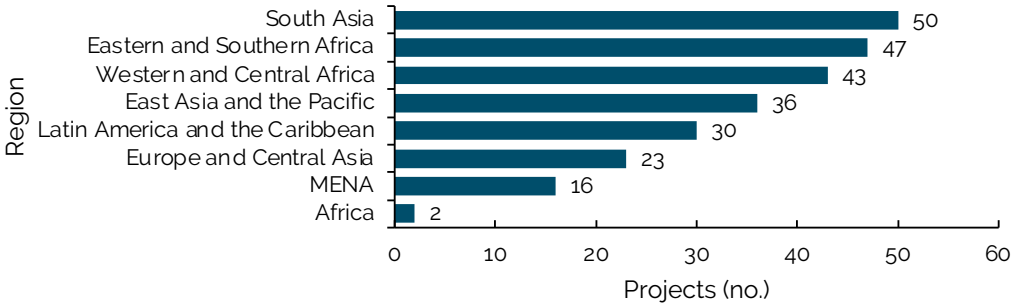
Figure A.5. World Bank Agriculture Portfolio by Lending Instrument and Project Status



Source: Independent Evaluation Group.

Note: DPF = development policy financing; IPF = investment project financing; PforR = Program-for-Results.

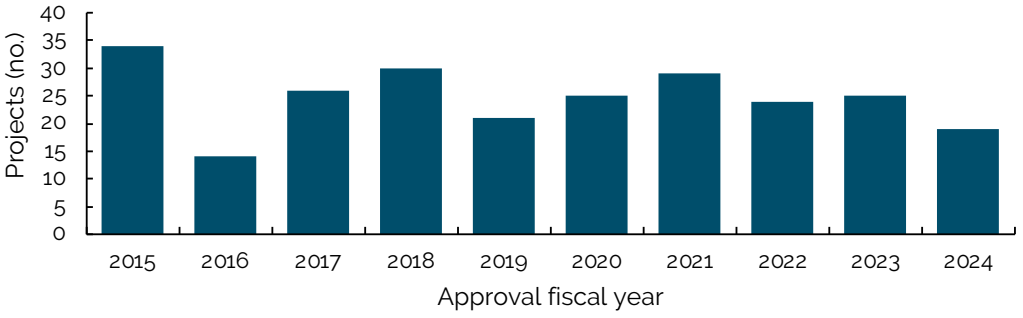
Figure A.6. World Bank Agriculture Portfolio by Region



Source: Independent Evaluation Group.

Note: MENA = Middle East and North Africa.

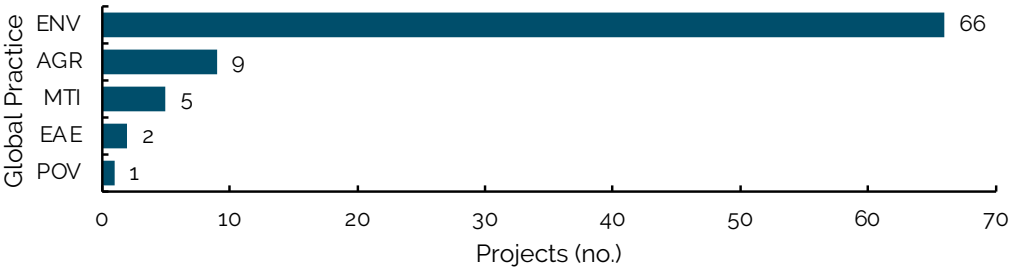
Figure A.7. World Bank Agriculture Portfolio by Approval Year



Source: Independent Evaluation Group.

Forestry. There were 83 World Bank lending projects approved between FY15 and FY24 with in-scope forest production activities, of which 41 are active and 42 are closed. Most of these projects (n = 66; 80 percent) are financed by the Environment, Natural Resources, and Blue Economy Global Practice. The remainder are divided among the Agriculture and Food (n = 9; 11 percent); Macroeconomics, Trade, and Investment (n = 5; 6 percent); Energy and Extractives (n = 2; 2 percent); and Poverty and Equity (n = 1; 1 percent) Global Practices. Of the 42 closed projects, 35 projects have ICRs, of which 28 have ICRRs (data from IEG DataHub as of April 2025). Eighty-six percent of the projects were rated moderately satisfactory or higher. A breakdown of the portfolio is provided in figures A.8–A.10.

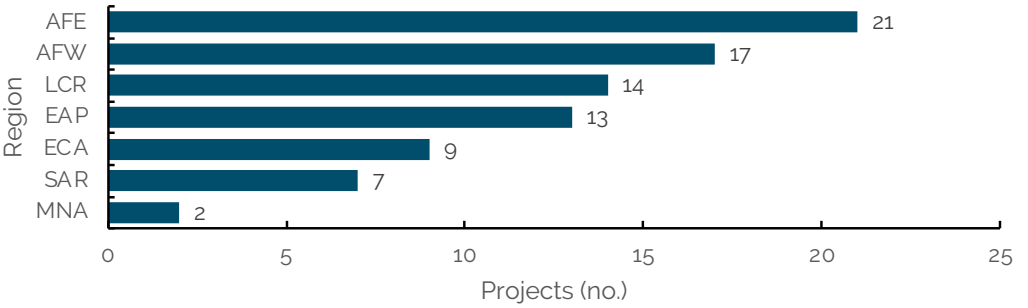
Figure A.8. World Bank Forest Production Portfolio by Global Practice



Source: Independent Evaluation Group.

Note: AGR = Agriculture, and Food; EAE = Energy and Extractives; ENB = Environment, Natural Resources, and Blue Economy; MTI = Macroeconomics, Trade, and Investment; POV = Poverty and Equity.

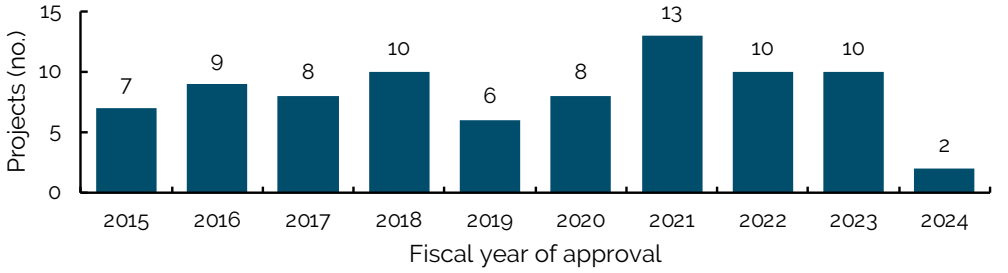
Figure A.9. World Bank Forest Production Portfolio by Region



Source: Independent Evaluation Group.

Note: AFE = Eastern and Southern Africa; AFW = Western and Central Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LCR = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

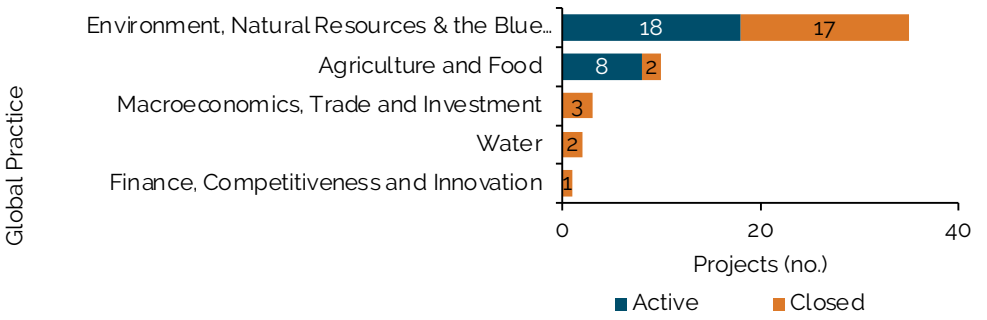
Figure A.10. World Bank Forest Production Projects (no.) Portfolio by Approval Year



Source: Independent Evaluation Group.

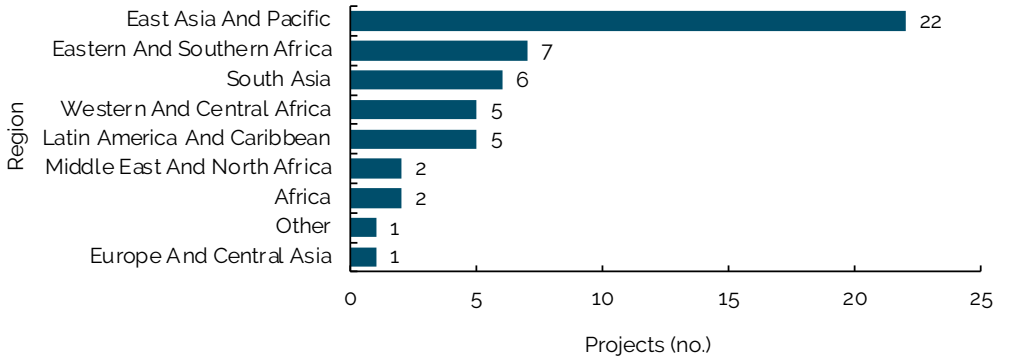
Fisheries and aquaculture. There were 51 World Bank lending projects approved between FY15 and FY24 with in-scope fisheries activities, of which 26 are active and 25 are closed. Most of these projects (68.6 percent; $n = 35$) are financed by the Environment, Natural Resources, and Blue Economy Global Practice, while 20 percent ($n = 10$) are financed by the Agriculture and Food Global Practice. The remainder are divided among the Macroeconomics, Trade, and Investment ($n = 3$); Water ($n = 2$); and Finance, Competitiveness, and Innovation ($n = 1$) Global Practices, respectively. Of the 25 closed projects, 20 projects have ICRs, of which 18 have ICRRs (data from IEG DataHub as of March 2025). Fifty percent of the projects were rated moderately satisfactory or higher. A breakdown of the portfolio is provided in figures A.11–A.13.

Figure A.11. World Bank Fisheries Portfolio by Global Practice and Project Status



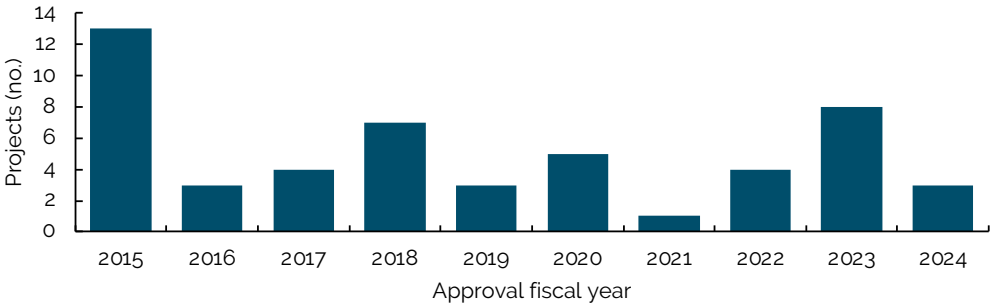
Source: Independent Evaluation Group.

Figure A.12. World Bank Fisheries Portfolio by Region



Source: Independent Evaluation Group.

Figure A.13. World Bank Fisheries Portfolio by Approval Year



Source: Independent Evaluation Group.

International Finance Corporation Investments and Advisory

Agriculture. During FY15–24, IFC approved 107 investments in the agricultural crop production and animal production (excluding aquaculture and fishing) sectors. Of these, 60 projects are active and 47 are closed. IEG validated the results of 21 of these investment projects. Moreover, there were 37 advisory projects in these sectors, with implementation ongoing for 17 projects and completed for 20 projects. Among the completed projects, IEG has validated results for 9 projects.

Forestry. Between FY15 and FY24, IFC approved 15 investments in the forestry sector. These included 4 investments in plantation forests, 8 in pulp and paper manufacturing, and 3 in wood panel and wood product manufacturing. Of these, IEG has evaluated 2 investments, both of which were in the wood panel and wood product and pulp and paper manufacturing sectors. Additionally, there was one IFC advisory project mapped to the plantation forests (90 percent) and paperboard (10 percent) sectors, which has not been validated by IEG. No other advisory projects were identified in the pulp, paper, or wood manufacturing sectors.

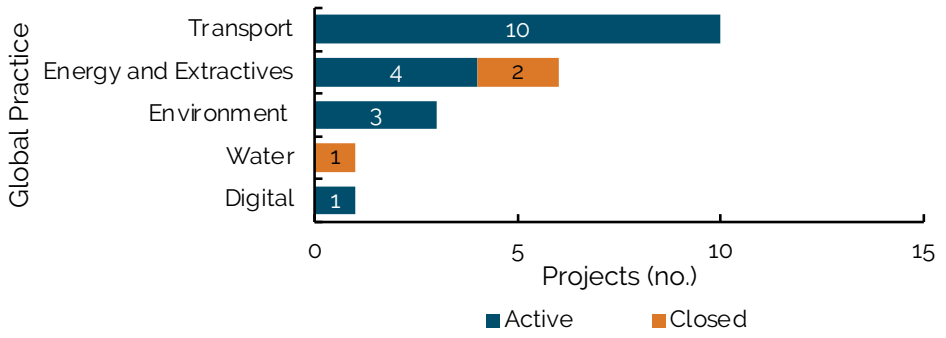
Fisheries and aquaculture. During FY15–24, IFC approved eight investments in the fisheries and aquaculture sector. This included seven investments in aquaculture and one in fishing. Of the seven aquaculture projects, five were in Ecuador and were covered in our Ecuador case study (refer to the Exploratory Case Studies section). The remaining two

aquaculture projects were in China and focused on aquafeed production. The single fishing investment was in the Solomon Islands, where IFC financed the purchase of an additional fishing vessel, which triggered PS6. Additionally, there were three IFC advisory projects mapped to the aquaculture and fishing sectors. IFC self-evaluated these advisory projects at completion, but only one of them has been validated by IEG.

Biodiversity Offsets

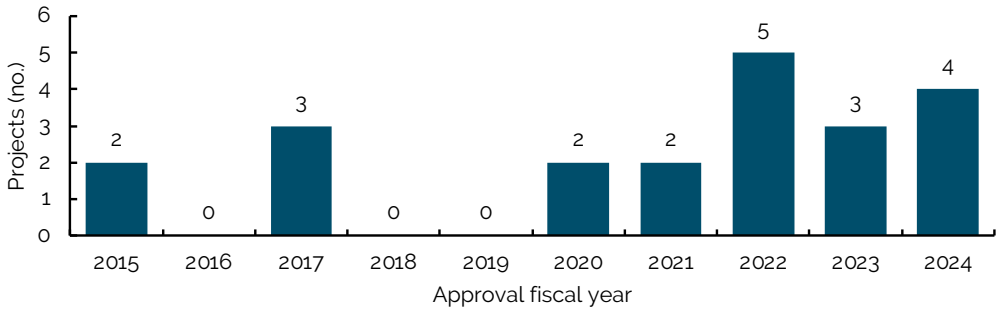
World Bank. For the World Bank, 16 projects under ESF and 5 projects under the safeguard policies were identified as having offsets. A breakdown of the portfolio is provided in figures A.14–A.16.

Figure A.14. World Bank Biodiversity Offsets Portfolio by Global Practice and Project Status



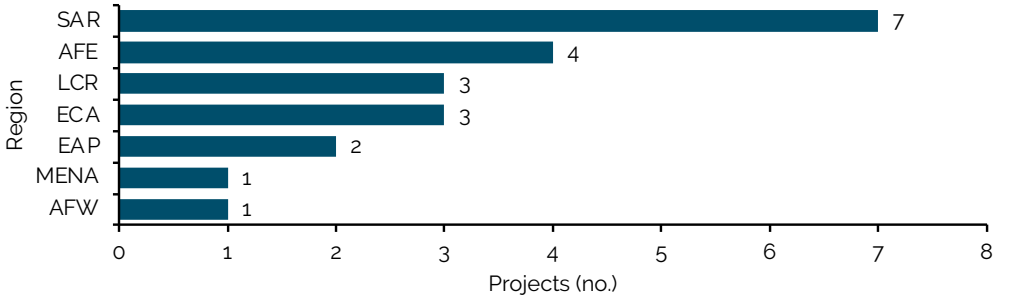
Source: Independent Evaluation Group.

Figure A.15. World Bank Biodiversity Offsets Portfolio by Approval Year



Source: Independent Evaluation Group.

Figure A.16. World Bank Biodiversity Offsets Portfolio by Region

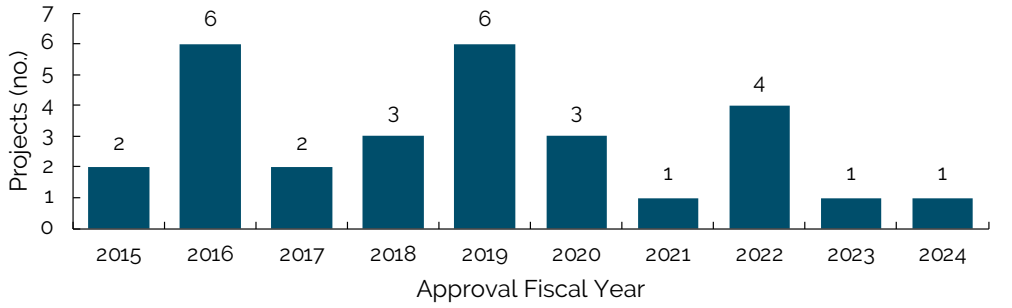


Source: Independent Evaluation Group.

Note: AFE = Eastern and Southern Africa; AFW = Western and Central Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LCR = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = South Asia.

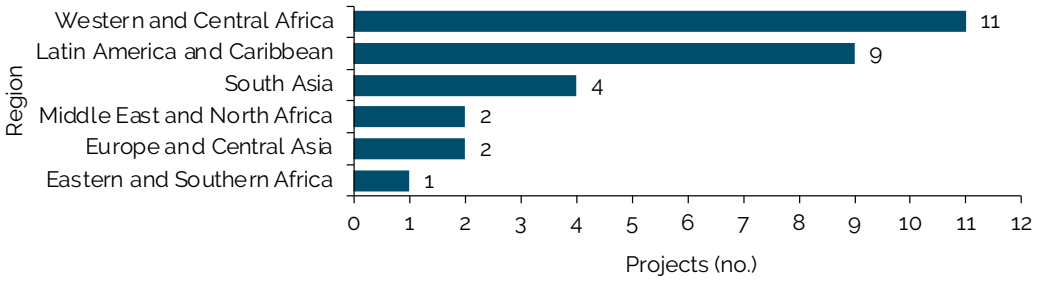
IFC. For IFC, 29 projects were identified as having offsets as part of PS6 requirements (22 active and 7 closed) approved within the evaluation timeline (FY15–24). A breakdown of the portfolio is provided in figures A.17–A.18.

Figure A.17. International Finance Corporation Biodiversity Offsets Portfolio by Approval Year



Source: Independent Evaluation Group.

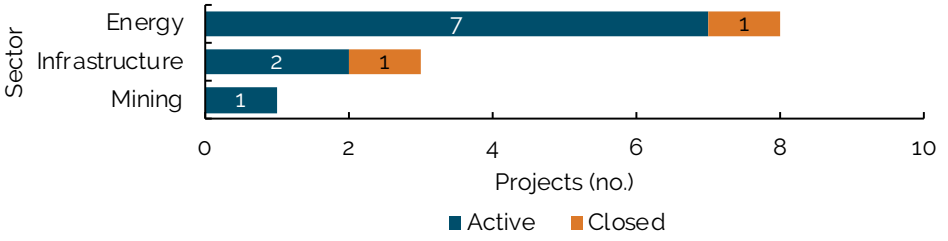
Figure A.18. International Finance Corporation Biodiversity Offsets Portfolio by Region



Source: Independent Evaluation Group.

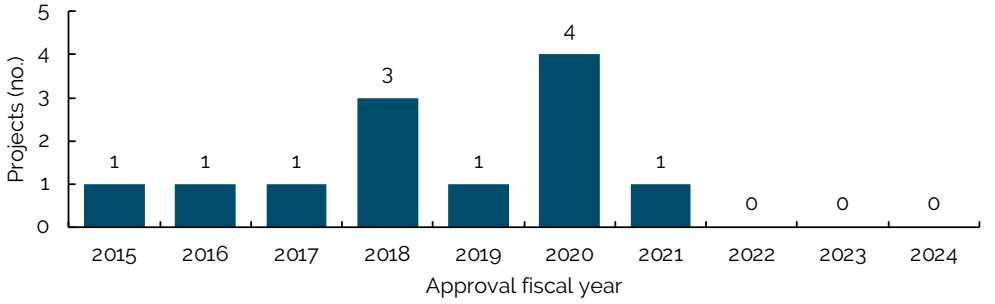
MIGA. Twelve MIGA projects in scope involved biodiversity offsets. A breakdown of the portfolio is provided in figures A.19–A.21.

Figure A.19. Multilateral Investment Guarantee Agency Biodiversity Offsets Portfolio by Global Practice and Project Status



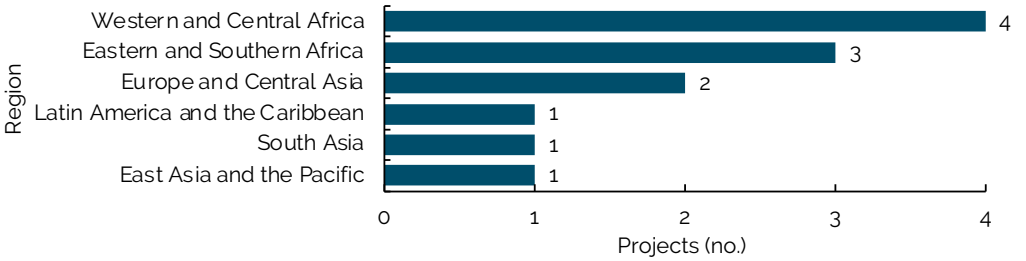
Source: Independent Evaluation Group.

Figure A.20. Multilateral Investment Guarantee Agency Biodiversity Offsets Portfolio by Approval Fiscal Year



Source: Independent Evaluation Group.

Figure A.21. Multilateral Investment Guarantee Agency Biodiversity Offsets Portfolio by Region



Source: Independent Evaluation Group.

EQ1 Methods: How Well Is the World Bank Achieving Biodiversity Aims Through Its Conservation-Focused Activities?

To assess the relevance and effectiveness of World Bank support for biodiversity conservation, we used several triangulated methods, including literature review, portfolio review and analysis, the geolocation of conservation activities, and three thematic deep dives. We expand on these methods below.

Focused Literature Review and Review of World Bank Group Strategies and Commitments

First, we identified good practice conservation approaches enshrined in the global biodiversity conventions and associated targets, which were developed based on scientific literature. This included (i) the Convention on Biological Diversity (CBD) adopted in 1992; (ii) the Aichi Biodiversity Targets 2011–2020; and (iii) the Kunming-Montreal Global Biodiversity Framework (GBF) adopted in 2022, and associated targets. In total, 196 countries are members of the CBD, signifying near-universal participation among nations, which is also the case for the Kunming-Montreal GBF.

Second, we identified the Bank Group's advantages by reviewing its strategies and corporate commitments. This included (i) the World Bank's Environment Strategy (2012–22), which lays out the World Bank's commitments for supporting client countries to conserve and restore critical biodiversity, and (ii) the 2021 Approach Paper entitled *Unlocking*

Nature-Smart Development: An Approach Paper on Biodiversity and Ecosystem Services, which placed a renewed emphasis on biodiversity and nature. We also reviewed the commitments enshrined in the World Bank's *Global Challenge Program Forests for Development, Climate, and Biodiversity*, which seeks to scale sustainable forest landscapes and ecosystem solutions to enhance development, climate, and biodiversity outcomes.

Portfolio Review and Analysis

The literature review yielded five themes that reflect a combination of global best practice with the World Bank's comparative advantage. The themes identified were as follows:

1. Geographic representativeness, or the equitable and proportional representation of different biomes, ecosystems, and taxonomic groups. Analyzing the portfolio through the lens of geographic representativeness is important for determining the relevance of World Bank conservation activities in relation to the protection and conservation of critical biomes and areas of high endemism.

2. Ecological connectivity, or the unimpeded movement of species and flow of natural processes that sustain life across ecosystems. Research indicates that enhancing the connectivity of protected areas and conservation areas is critical in improving genetic diversity, enabling the movement of wildlife species and enhancing ecosystem resilience through the reduction of habitat fragmentation.

3. Ecological monitoring and reporting of biodiversity outcomes. Quantitative ecological monitoring is crucial for understanding biodiversity outcomes. It is a priority within the GBF, providing essential data to assess and guide conservation actions.

4. Engagement and protection of IPLCs. The biodiversity Approach Paper highlights the essential role of IPLCs in achieving biodiversity goals (World Bank Group 2021). Local communities have deep, place-based ecological knowledge developed over millennia, enhancing biodiversity preservation. Good governance, including land tenure security, equitable

benefit sharing, and preserving local knowledge, is crucial for their contribution to effective conservation.

5. Sustainable financing. Sustainable financing is crucial for biodiversity conservation because it ensures long-term funding to protect ecosystems, species, and natural resources. Many conservation initiatives face financial shortfalls, leading to habitat degradation, species loss, and reduced ecosystem services.

These five themes were incorporated into a portfolio coding protocol that also included basic project data, project theory, and other relevant variables. The result of this process was a detailed codebook that included all underlying portfolio variables, any relevant extracts from within project documents relevant to those themes, available results and indicator data for each project, and a series of flags for emergent issues identified in inductive coding. The enumerated parameters included in the coding protocol are outlined in box A.3.

Box A.3. Coding Protocol for Conservation-Focused Projects

Basic project data

Project ID, name, country, source of finance, amount of finance

Project development objective

Project components

Project indicators

Intended beneficiaries, also disaggregated

Location of biodiversity areas (if possible)

Project lessons

Project theory as it pertains to biodiversity aims

Stated theory or implicit theory

Explicit or implied outcomes not included in the results framework

(continued)

Box A.3. Coding Protocol for Conservation-Focused Projects (cont.)

Identification of good practice approaches, including measurement thereof

Ecological connectivity (for example, corridors, transfrontier areas)

Use of climate science, or other scientific evidence to make conservation planning decisions

Use of Indigenous knowledge to make conservation planning decisions

Sustainable financing at the national and park level (for example, recurrent finance/national budget; endowment funds; payment for environmental service)

Inclusion of Indigenous Peoples and local communities

Support for land tenure security, access, or resource-use rights

Use of relevant ecological monitoring techniques and indicators (for example, management effectiveness tracking tools, quantitative monitoring of species or species markers, remote sensing/habitat assessments using satellite/LIDAR)

Other (open cell for observations)

Source: Independent Evaluation Group.

This coding protocol was then used as the basis for an in-depth portfolio review exercise across each variable, with each following a similar approach of keyword search, extraction, and content analysis.

Keyword search and extraction. To test the keyword search and extraction process, the team undertook a pilot exercise with a selection of project documents (PADs, ICRs) from a subset of the portfolio to determine the suitability of using a proprietary keyword search tool developed by the evaluation team. The tool is a script, built with a Python backend, and a graphical user interface, built with React, that allows for systematic searches for keywords using defined parameters within a collection of PDF documents. The tool is based on both the String-Similarity JavaScript library and proprietary searching and matching processes to account for fuzzy matching (where a specified percentage of characters in a word needs to match the chosen keyword to be

considered a keyword mention) and intraword matching. The other features of the tool include data visualization, Excel exporting, and PDF viewing.

The tool allowed for a parametric search based on identified keywords, including exact text, whole words, and proximity words, extracting all relevant data from the documents uploaded. The excerpts extracted by the tool were then exported to an Excel file and organized into a matrix that was combined with the portfolio codebook variables in box A.3. As a control measure, a manual review of the same subset of projects was undertaken using typical qualitative coding and extraction, with the results of the two exercises being compared. This allowed for the refinement of the parameters included in the keyword search tool.

Having undertaken this pilot, we built out a finalized series of keywords for each thematic area. These keywords were searched for in PADs or equivalents (for example, program documents) and ICRs or equivalents of all 139 projects in the conservation portfolio using a proprietary keyword search and extraction tool developed by the evaluation team. The excerpts for each thematic area were exported to Excel and consolidated into a comprehensive portfolio matrix.

For projects with completed and validated ICRs, the extraction and analysis of results indicators were undertaken. Where relevant, data from the geospatial analysis on variables such as tree cover change or crop change were also extracted.

Content analysis. The consolidation of the above data into a comprehensive portfolio matrix allowed for detailed quantitative and qualitative analysis that ultimately comprised:

- The relevance of the portfolio's activities in each thematic area in terms of alignment to best practice, the World Bank's areas of comparative advantage, and strategic priorities.
- The effectiveness of included activities for closed projects in each thematic area, based on the achievements of relevant intermediate results indicators and project development objectives and any explanatory factors included in project documents (ICRs, ICRRs, and Project Performance Assessment Reports, where available).

» A synthesis of lessons to identify evidence of best practices and any missed opportunities.

Geospatial Analysis

We conducted geospatial analyses to map the full range of conservation activities supported by the World Bank between FY10 and FY24, with the aim of evaluating relevance, effectiveness, and sustainability and identifying patterns across the portfolio. This involved identifying and geocoding unique conservation sites and performing geospatial analysis to assess land cover dynamics over time. For each geolocated protected area, we calculated annual tree cover percentages, along with other land cover categories such as cropland and built-up areas, using consistent spatial and temporal resolution. This marks the first time that the full range of identifiable World Bank–financed conservation sites has been systematically mapped. We identified the presence of protected or physically conserved areas in 130 of the 139 projects, encompassing 884 unique sites, including 605 protected areas validated against the April 2025 release of the World Database on Protected Areas (WDPA), which includes 305,198 registered sites. This section describes the geospatial analysis methodology in detail.

Identifying Protected Areas

First, we used the IEG bulk download tool to download available PADs (or equivalent) and ICRs (or equivalent) for each project in the conservation-focused portfolio.

Second, we undertook a project document review of projects in the portfolio to identify relevant protected areas supported by the World Bank. This involved using AI-assisted text extraction to identify relevant passages of the documents and mentions of specific protected area names. This helped narrow the process of identifying individual protected areas. To complement this process, we conducted a thorough manual review of the surrounding text, as well as key components of the project documents, including project development objectives and project components, paying close attention to review any tabular or graphic information for the presence of protected area lists or maps. The protected areas identified during this process were

recorded in a matrix with adjacent columns containing additional variables (such as project ID, country, Region, and approval year).

Third, any relevant details on the protected area in question were recorded in adjacent columns. These details included whether the protected area was national or regional, the protected area's location, and in what way the protected area was supported by the corresponding project, among other things.

Fourth, using the April 2025 edition of the WDPA, the team searched for the relevant country to identify either a verbatim or proximate protected area match with the name of each protected area identified in the project document review. Once a match was identified, it was recorded in an adjacent column of the protected area matrix. The WDPA is the most comprehensive global database of marine and terrestrial protected areas. It is a joint project between the United Nations Environment Programme and the International Union for Conservation of Nature and is managed by the United Nations Environment Programme World Conservation Monitoring Centre in collaboration with governments, nongovernmental organizations, academia, and industry.

The following is the complete list of parameters in the finalized protected area data set:

1. The project ID and project name
2. The country and Region
3. The name of the protected area found in the project documentation
4. Important details corresponding to the protected area, if pertinent
5. The official WDPA indexed name of the protected area, if available
6. The official WDPA ID number of the protected area, if available

Data Preparation

The methodology relies on two primary spatial data sources: (i) the Global Edge-matched Subnational Boundaries data set for administrative boundaries (https://fieldmaps.io/data), and (ii) the WDPA from Protected Planet (https://www.protectedplanet.net/en). These sources were selected for their global coverage, standardization, and regular updates. To accommodate the

various combinations of location information found in project documents, a comprehensive spatial database was created through a systematic union (https://gisgeography.com/union-tool) of administrative boundaries and protected areas.

Data processing and structure. The data processing workflow involves several key steps:

1. Spatial data integration. Administrative boundaries and protected areas are processed through a union operation, creating comprehensive spatial units that capture all possible combinations of administrative areas and protected areas. This includes generating separate layers for:
    a. Administrative boundaries (levels 0, 1, and 2)
    b. Protected areas
    c. Combined administrative-protected area units

Only polygons were used (that is, shapes that represent actual areas on a map, such as the full boundary of a district or a protected area), while points (which represent locations without area, like a single GPS coordinate) were excluded from the analysis.

2. Coordinate generation. Centroid coordinates (longitude and latitude) are calculated for each spatial unit to facilitate location data extraction (https://support.esri.com/en-us/knowledge-base/how-to-find-the-centroid-of-polygons-using-calculate-ge-000021849). This includes centroids for:
    a. Individual administrative units at each level
    b. Protected areas
    c. Combined administrative-protected area units
3. Data entry system. A structured data entry template was developed using spreadsheet functionality to ensure consistent data capture. The template features:
    a. Nested dropdown menus for standardized selection of administrative units and protected areas

b. Dynamic validation rules using array formulas to ensure data integrity

c. Automated coordinate assignment based on selected locations

d. Capability to record multiple locations per project

Quality assurance and data management. To maintain data quality and facilitate analysis, several control measures were implemented:

1. Standardization. All geographic names are standardized against authoritative sources, with relationships maintained between local and international nomenclature.

2. Flexibility. The data structure accommodates varying levels of geographic specificity, allowing for the recording of locations at any administrative level or protected area, either individually or in combination.

3. Automation. Python scripts were developed to:

   a. Organize and manage project documentation

   b. Clean and process spatial data

   c. Convert finalized data to GeoJSON format for visualization and analysis

4. Visualization. Final outputs were visualized using QGIS software, enabling both quality control and analytical representation of the project portfolio's spatial distribution.

Assessing Land Cover Dynamics

This section outlines the approach used to examine land cover dynamics within specific protected areas. The analysis focuses on assessing annual land cover changes from 2016 to 2024 (the period for which satellite imagery and data are available, as noted in the Limitations section), employing a series of data processing techniques designed to ensure the accuracy and reliability of the results while addressing potential gaps and inconsistencies in the data.

Data Sources

Land cover data. The primary data source for the land cover analysis is the Dynamic World data set, which offers global near-time land cover classification at a high spatial resolution of 10 meters. This data set provides a comprehensive classification of land cover into nine distinct categories, enabling detailed assessments of land use and land cover dynamics over time (table A.2).

Table A.2. Land Cover Classes

Class	Description
Class 0	Water—Includes both permanent and seasonal water bodies, such as lakes, rivers, and wetlands
Class 1	Trees—Encompasses primary and secondary forests, as well as large-scale plantations
Class 2	Grass—Natural grasslands, livestock pastures, and parks
Class 3	Flooded vegetation—Mangroves and other inundated ecosystems
Class 4	Crops—Includes row crops and paddy crops
Class 5	Shrub and scrub—Sparse to dense open vegetation consisting of shrubs
Class 6	Built area—Low- and high-density buildings, roads, and urban open space
Class 7	Bare ground—Deserts and exposed rock
Class 8	Snow and ice—Permanent and seasonal snow cover

Source: Brown et al. 2022.

Protected areas data. The unit of analysis for this study is the protected area. The geocoded project data used in this analysis, identified 605 unique and matched protected areas. These protected areas encompass a range of categories, including marine, terrestrial, and hybrid protected areas. As the focus of the land cover analysis is solely on terrestrial ecosystems, marine areas were excluded from the analysis. Consequently, the analysis focuses on 526 protected areas, of which 469 are terrestrial and 57 are hybrid in nature. A map illustrating the location of these protected areas is provided in figure A.22.

The spatial boundaries of the protected areas were derived from the WDPA, a globally recognized repository that provides accurate geospatial data on the location and extent of protected areas, which allows for precise linking of

spatial data to specific protected areas globally. Protected areas comprised of multiple polygons were dissolved for the analysis.

To capture the broader land cover dynamics surrounding the protected areas, a 5-kilometer buffer zone was applied to each protected area boundary after reprojection of the original protected area boundaries into an appropriate coordinate reference system. This buffer accounts for potential external land cover changes that could influence the protected areas, thereby providing a more comprehensive assessment of land cover dynamics.

Figure A.22. Protected Areas (Including a 5-Kilometer Buffer) Included in the Analysis

Source: Independent Evaluation Group (based on protected area data from the World Database on Protected Areas).

Note: This map has been cleared by the World Bank Group cartography unit.

Data Processing

The land cover analysis was performed using Google Earth Engine with JavaScript, leveraging its powerful processing capabilities for large-scale geospatial data.

Temporal range and data filtering. The analysis covers a nine-year period, from 2016 to 2024. For each year, land cover data are filtered to match the specific temporal and spatial boundaries of the protected areas. It is important to note that Dynamic World data are available from June 27, 2015. To

ensure consistency and comparability across time, only complete years were included; therefore, 2015 was excluded from the analysis.

Land cover classification. For each protected area and year, the Dynamic World data set provides pixel-level classifications of land cover. To derive the dominant land cover type for each protected area, a mode composite approach was applied. This technique selects the most frequent land cover classification per pixel across the year, effectively capturing the primary land cover type within each protected area. The mode composite approach accounts for temporal variations, such as seasonal or yearly fluctuations, ensuring that the selected classification represents the most consistent land cover type during the given period.

Pixel counting and statistical aggregation. The analysis aggregates pixel-level land cover data within the spatial boundaries of each protected area. For each year and protected area, the total number of pixels corresponding to each land cover class is displayed as a histogram. This histogram approach quantifies the distribution of land cover types, allowing for the clear identification of the extent of each class within the protected area. The pixel counts are unweighted, meaning each pixel is treated equally, providing a straightforward assessment of land cover types based on the frequency of each classification within the spatial boundaries. This aggregation facilitates the quantification of land cover changes over time and enables the identification of trends across the nine-year study period.

Batch processing and data export. To manage the large scale of the data set, the data were processed in batches. This approach facilitates the efficient handling of the computational resources required for the analysis. Once the processing for each batch was complete, the results were exported in CSV format. The exported data included key information such as the protected area identifier, the year of analysis, and the pixel counts for each land cover class.

Example Analysis: Land Cover Change in Mamunta-Mayosso Protected Area

To illustrate the methodology applied in this study, this section presents a detailed analysis of land cover change in the Mamunta-Mayosso Protected Area

(WDPA ID 555720436) over 2016–24. This example highlights key trends in deforestation and reforestation, as well as shifts in land cover composition.

Land cover trends. Table A.3 presents the percentage distribution of land cover classes within the protected area for each year.

Table A.3. Land Cover Distribution in Mamunta-Mayosso, Sierra Leone (2016–24) (percent)

Year	Trees	Grass	Flooded Vegetation	Crops	Shrubs and Scrub	Built Up	Bare	Water	Snow and Ice
2016	46.46	6.42	0.11	1.70	43.64	0.31	0.19	1.18	0.00
2017	65.82	12.24	0.10	0.38	19.96	0.37	0.01	1.12	0.00
2018	63.05	5.45	0.09	0.32	29.70	0.29	0.02	1.09	0.00
2019	52.05	2.12	0.06	1.46	42.94	0.21	0.07	1.09	0.00
2020	53.22	3.70	0.08	1.31	40.16	0.32	0.09	1.12	0.00
2021	49.01	5.34	0.05	0.79	43.40	0.30	0.06	1.06	0.00
2022	54.94	3.39	0.06	0.84	39.11	0.26	0.31	1.09	0.00
2023	53.37	2.66	0.06	0.76	41.78	0.25	0.04	1.09	0.00
2024	56.37	2.40	0.07	1.11	38.61	0.20	0.14	1.10	0.00

Source: Independent Evaluation Group (based on Dynamic World data, accessed and processed using Google Earth Engine).

The data indicate an overall increase in tree cover from 46.46 percent in 2016 to 56.37 percent in 2024, though with notable fluctuations. The peak occurred in 2017 at 65.82 percent, followed by a decline until 2021, when tree cover reached its lowest point at 49.01 percent. Afterward, it gradually recovered. This suggests periods of afforestation or natural regeneration, potentially influenced by conservation efforts or environmental factors.

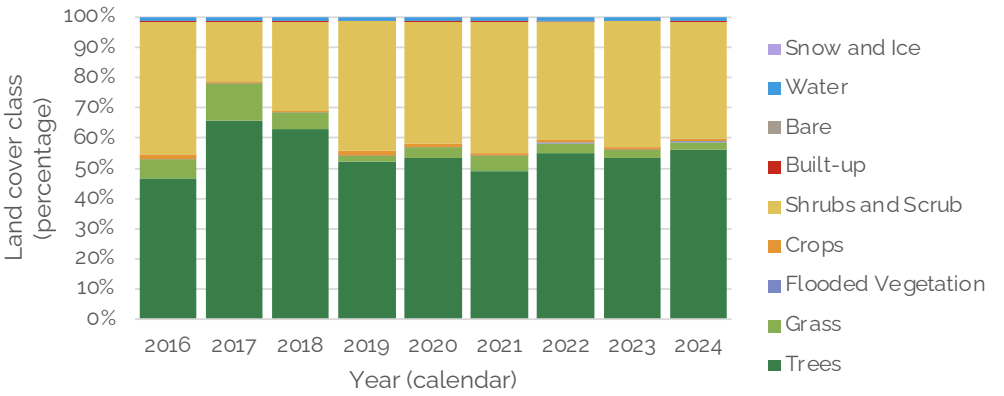
Shrub and scrub cover has generally declined over time. Initially high at 43.64 percent in 2016, it dropped sharply to 19.96 percent in 2017 before partially recovering in subsequent years. By 2024, it stood at 38.61 percent, indicating a gradual transition of shrubland into either tree cover or other land types. Grass cover has followed a similar pattern, peaking at 12.24 percent in 2017 but then decreasing steadily to 2.40 percent in 2024, further supporting the notion of vegetation succession or land-use change.

Agricultural land, represented by crop cover, fluctuates without a clear trend. It started at 1.70 percent in 2016, dropped to a low of 0.32 percent in 2018, and then gradually increased to 1.11 percent by 2024. Built-up areas remain relatively stable, ranging between 0.20 percent and 0.37 percent, showing no significant expansion of urbanization. Meanwhile, bare land, though minimal, has slightly increased over time, from 0.01 percent in 2017 to 0.14 percent in 2024, suggesting minor land degradation.

Water coverage has remained largely stable, fluctuating between 1.06 percent and 1.18 percent, while snow and ice are consistently absent throughout the data set. Overall, the trends suggest a general shift toward increasing tree cover at the expense of shrubs and grasslands, with relatively minor changes in agricultural, urban, and bare land.

Visualization of land cover change. To further illustrate these trends, the stacked bar chart in figure A.23 depicts the relative proportion of each land cover class annually.

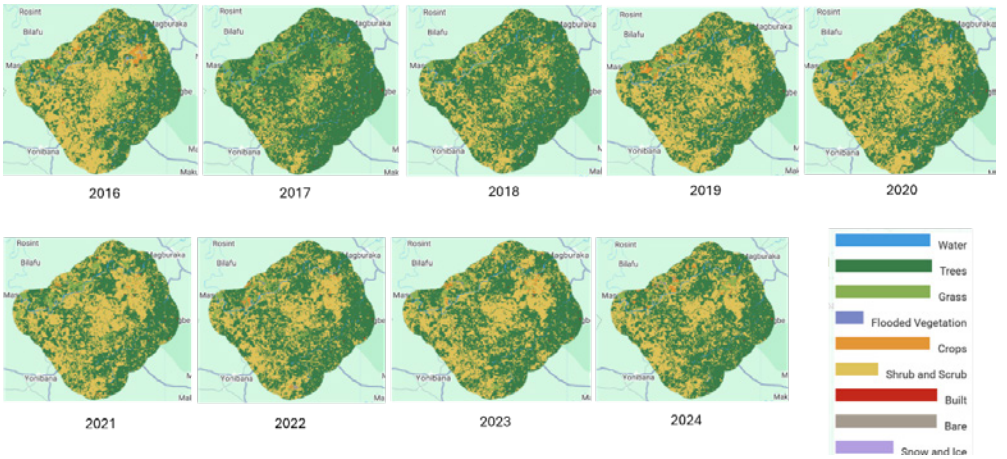
Figure A.23. Annual Land Cover Composition in Mamunta-Mayosso, Sierra Leone (2016–24)



Source: Independent Evaluation Group (based on Dynamic World data, accessed and processed using Google Earth Engine).

In addition to the statistical trends, spatial patterns of land cover change are visualized through a series of annual land cover maps (figure A.24). These maps provide insights into the geographic distribution of different land cover types and help identify specific areas where deforestation, regeneration, or conversion to other land uses has occurred.

Figure A.24. Annual Land Cover Maps of Mamunta-Mayosso (2016–24)



Source: Independent Evaluation Group (based on Dynamic World data, accessed and processed using Google Earth Engine).

Deep Dives

To supplement and deepen the portfolio analyses, we commissioned industry and legal specialists to conduct thematic deep dives on (i) IPLCs, (ii) LNR, and (iii) biodiversity offsets. The selection of these three issues reflects their significance to the achievement of biodiversity outcomes, and the relative specialization associated with evaluating the aims and results of associated activities. We used emerging findings from these deep dives to guide interviews with senior experts from the World Bank (and IFC and MIGA in the specific case of offsets) in these associated fields to add explanatory power to these sections of the report.

Indigenous Peoples and Local Communities

To capture a holistic view of the engagement of IPLCs and other project-affected groups in the conservation-focused portfolio (see box A.4 for definitions and criteria), we employed a two-pronged approach that evaluates (i) the application of the Operational Policies (Safeguards) and the ESF to assess IPLC engagement, empowerment, and protection from a risk management perspective and (ii) geospatial analysis to provide insights into the spatial distribution of World Bank–supported conservation activities in relation to IPLC lands.

Box A.4. Definitions and Criteria

Indigenous Peoples: The World Bank generally understands Indigenous Peoples to be distinct social and cultural groups that share collective ancestral ties to the lands and natural resources they inhabit or occupy, or from which they have been displaced. Under the Environmental and Social Framework, a group must possess four characteristics for Environmental and Social Standard (ESS) 7 to be applicable. These criteria can be summarized as follows: self-identification as a distinct Indigenous group that is recognized by others, collective attachment to geographically distinct areas, distinct customary institutions, and a distinct language or dialect (ESS7, para. 8).

Local communities: The term "local communities" refers to groups of people residing in the same local area, possessing a long association with lands and natural resources, and embodying traditional lifestyles. The Environmental and Social Framework refers to local communities as project stakeholders, project-affected communities, and Sub-Saharan African Historically Underserved Traditional Local Communities that satisfy the criteria for ESS7.

Other rural groups: This term refers to groups actually or potentially affected by a World Bank–financed conservation-focused project that are not Indigenous Peoples or local communities. They may include rural communities that have recently immigrated to a project area, displaced persons, and other rural residents in the area of a World Bank–supported conservation project.

Sources: ESF ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) Guidance Note; Independent Evaluation Group.

Safeguard policies and ESF analysis. To assess the engagement, empowerment, and protection of IPLCs in conservation-focused projects, we conducted an analysis from a risk management perspective. This involved (i) examining the application of the World Bank's Operational Policy 4.10 on Indigenous Peoples and the subsequent ESF Environmental and Social Standard (ESS) 7 on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities and (ii) identifying trends and factors influencing their application.

First, we examined the incidence of conservation-focused projects that apply these policies by analyzing data exported from the World Bank's Standard Reports. While the ESF data on standards application was found to be reliable, safeguard policies data were found to be incomplete and manually gap-filled from the operations portal and relevant project documentation.

We then performed a trend analysis, comparing the results from the two cohorts (that is, projects under the safeguard policies versus those under the ESF), including regional and country-specific trends. This analysis identified the regions and countries where Indigenous Peoples are more consistently recognized and included in conservation projects.

Additionally, we conducted project document reviews (for example, PADs, Environmental and Social Review Summaries, Environmental and Social Commitment Plans, Implementation Status and Results Reports, ICRs, and a select number of additional environmental and social analyses and risk management documents) to collect qualitative data and deepen our understanding of how projects engaged, empowered, and protected Indigenous Peoples.

Lastly, to validate our findings and explore explanatory factors, we conducted interviews with relevant staff and management.

Geospatial analysis. To further understand the relationship between the conservation-focused portfolio and IPLCs, we conducted a geospatial analysis to assess the extent to which World Bank–supported conservation activities are situated within IPLC territories. We used geospatial data from the LandMark platform and conducted spatial analyses to estimate the proportion of protected areas located within IPLC lands. We applied a spatial overlay technique to categorize project-supported protected areas based on their proximity to IPLC lands, distinguishing among sites located within IPLC territories, within 10 kilometers, 10–30 kilometers, or more than 30 kilometers away from IPLC lands.

Recognizing the limitations of the LandMark data set, particularly its underidentification of Indigenous lands in Africa, we conducted additional analyses using a data set constructed by Garnett et al. (2018). This data set provided a broader perspective on Indigenous land stewardship by incorporating de facto land management. We mapped the project sites using

this data set to identify those within Indigenous Peoples' lands, ensuring a comprehensive understanding of the spatial relationship between conservation-focused projects and IPLC territories. It is important to note that this data set does not distinguish whether the Indigenous Peoples' areas are formally recognized by the government (box A.5).

Box A.5. Technical Details of Data Sources

LandMark: The LandMark data delineating Indigenous areas is sourced from a combination of official government records, community maps, and other verified sources to ensure accuracy and reliability. It includes spatial boundaries of Indigenous and community lands worldwide, distinguishing between lands that are legally recognized by governments and those where Indigenous Peoples have a claim but lack formal recognition. The data set is regularly updated and refined through collaboration with local organizations, governments, and Indigenous communities to reflect evolving land tenure status. By providing clear distinctions between recognized and unrecognized lands, LandMark highlights gaps in legal recognition and supports efforts to secure Indigenous land rights. Furthermore, the data set helps visualize the extent of Indigenous land stewardship, which is critical for conservation, climate resilience, and sustainable resource management.

Garnett et al. (2018): The Indigenous land-use data set created by Garnett et al. (2018) compiles data from 127 sources, including cadastral records, participatory mapping efforts, census-based models, and scholarly publications. It identifies Indigenous lands in 87 out of 235 countries or administratively independent entities, excluding uninhabited areas. The data set helps quantify the extent of Indigenous land management and its intersection with conservation priorities. By mapping these lands at a global scale, it provides a crucial foundation for recognizing Indigenous contributions to biodiversity protection and policy development.

The LandMark data set offers a conservative estimate of Indigenous Peoples and local community lands, as it includes only areas that meet strict criteria for documented tenure rights. It prioritizes legally recognized and publicly available data, drawing from government records, nongovernmental organization reports, and contributions from Indigenous organizations. In contrast, the Garnett et al. (2018) data set takes a more expansive approach, integrating multiple sources to provide a broader estimate of

(continued)

Box A.5. Technical Details of Data Sources (cont.)

Indigenous lands. It relies on peer-reviewed literature, academic books, and reputable data providers while also incorporating spatial data from platforms such as LandMark Global. By aggregating information from a wider range of sources, the Garnett et al. (2018) data set identifies more Indigenous Peoples and local community lands than LandMark, but it may also include territories with varying levels of formal recognition. These methodological differences highlight a key distinction: the LandMark data set offers a more conservative yet authoritative view of Indigenous Peoples and local community lands, whereas the Garnett et al. (2018) data set captures a wider spectrum of Indigenous land tenure, including areas with less formal documentation.

Sources: Garnett et al. 2018; LandMark (https://landmarkmap.org/data-methods/methodology).

Land and Natural Resource Rights

To further explore the extent to which LNR were considered and supported in project design, we conducted an in-depth analysis of a subset of World Bank conservation-focused projects that explicitly pursued a landscape approach (58 projects out of 139). This cohort was selected because landscape-level projects inherently involve complex spatial interactions among multiple stakeholders (see box A.5), integrating protected areas with restricted access alongside production zones, resource-use areas, and reforestation, afforestation, and restoration activities. As per the literature, these characteristics amplify potential LNR risks and opportunities, necessitating explicit consideration of land tenure, access rights, and resource governance within project design.

We conducted a review of project documents—including PADs, Implementation Status and Results Reports, and ICRs—focusing on identifying explicit considerations of, and activities supporting, land and resource tenure and rights within project design. Our review centered on several key criteria and LNR activities. First, we assessed the extent to which projects identified potential risks related to restrictions on rural communities' access to land and resources by examining project documents for explicit acknowledgments of such risks, as well as the application of relevant environmental and social risk management policies, specifically Operational Policy 4.12

(Involuntary Resettlement) and ESS5 (Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement).

We also coded project-financed activities according to the following LNR activities: (i) strengthening community participation and community-led land and resource governance, (ii) supporting tenure regularization or formalization, and (iii) reinforcing legislative or regulatory reforms related to land and resource rights. Additionally, we examined the presence and types of indicators used by projects to track achievements in line with these same activity bundles.

To identify trends over time, we analyzed the temporal distribution of projects that financed activities to strengthen community land and resource rights by categorizing projects based on their approval fiscal years. This analysis helped us understand the evolving commitment to these issues over different periods.

To illustrate the practical implementation and outcomes of LNR considerations, we drew on our Mozambique case study (see also the Exploratory Case Studies section) and a desk-based review of a project in Tanzania. These illustrated achievements in strengthening community land and resource rights, participatory governance, and biodiversity protection, as well as the potential risks and consequences of insufficient consideration of community land and resource rights in project implementation.

Biodiversity Offsets

We conducted a review of biodiversity offsets to explore the Bank Group's efforts in addressing significant residual adverse biodiversity impacts arising from development projects. Biodiversity offsets were analyzed as a deep dive under EQ1, given their relevance to conservation-focused activities and their role in mitigating residual impacts on critical habitats and natural ecosystems. Offsets are most often applied in contexts where development activities overlap with areas of high biodiversity value—such as critical natural habitats or restoration landscapes—which are central to the conservation objectives examined under EQ1.

To derive lessons from these initiatives, we employed a sequenced approach. First, we conducted a focused literature review to identify biodiversity offset good practice principles. Next, we conducted a portfolio review and analysis that (i) assessed the alignment of biodiversity offset development with

the Bank Group's environmental and social requirements, as well as the supervision of client implementation (including survey work, stakeholder engagement, and documentation), and (ii) evaluated the outcomes based on available monitoring and reporting data, focusing on principles such as no net loss or net gain. Finally, we derived explanatory factors through interviews with senior environmental and social experts.

Focused literature review. The literature review primarily referenced peer-reviewed articles published in reputable academic journals. The geographic scope of biodiversity offset literature remained somewhat limited since most studies have been conducted in Australia, North America, and Western Europe, where offset legislation had been established for many years. The review followed a partially chronological and thematic structure, beginning with the definition of biodiversity offsets and their theoretical foundations. It then examined regulatory frameworks before addressing offset challenges, highlighting the methodological and implementation difficulties that kept much of the literature theoretical. Finally, the review covered emerging research on real-world implementation, particularly in regions with long-standing offset mandates.

Portfolio review and analysis. The portfolio analysis involved systematically reviewing project documentation to assess the extent to which biodiversity offset good practice principles were met. Key questions included whether projects consistently identified and quantified residual impacts by applying the mitigation hierarchy; how offset activities were designed to achieve no net loss or net gain; the extent to which alternatives to offsetting were considered; whether stakeholder consultations reflected offset discussions; whether projects engaged independent experts; and the extent to which projects disclosed offsets-related documents. Additionally, it assessed financial provisions, long-term site security, and progress reported on offset implementation. The findings helped determine alignment with best practices, including compliance with ESS6 and PS6, and whether offset outcomes were achieved.

Stakeholder interviews. The evaluation team conducted interviews with 23 environmental and social specialists and coordinators. Interviews were conducted to gather internal perspectives on the implementation and effectiveness of biodiversity offsets and views on practical challenges and outcomes. Interview questions focused on the adequacy of guidance in safeguard policies, upstream

work, implementation and monitoring after project approval, offset due diligence, and institutional learning. The interview data were then analyzed thematically to identify recurring patterns and key insights.

EQ2 Methods: How Well Are the World Bank and IFC Supporting Activities with Potential Biodiversity Benefits in Key Production Sectors, and Are Those Activities Likely to Achieve Such Benefits?

We assessed the World Bank and IFC's support for integrating biodiversity into three key production sectors: (i) agriculture, including agroforestry and agribusiness; (ii) forestry; and (iii) fisheries and aquaculture. For each of these sectors, we gathered evidence using focused literature reviews and portfolio reviews and analyses, and to provide more explanatory power, we conducted exploratory case studies.

Focused Literature Reviews

We conducted AI-assisted focused literature reviews to identify good practices in the key production sectors covered—agriculture, including agroforestry and agribusiness; forestry; and fisheries and aquaculture—that have been empirically or theoretically linked to positive biodiversity outcomes. These reviews included academic research, technical guidance from reputable organizations, and relevant gray literature to establish a taxonomy of practices associated with biodiversity benefits within each sector. The resulting taxonomy served as an essential reference to define and inform coding protocols used in the subsequent portfolio reviews and analyses for each sector.

Portfolio Reviews and Analyses

The portfolio reviews systematically assessed the World Bank and IFC-supported projects within each sector covered to determine the extent to which biodiversity considerations were integrated into project design and implementation. Drawing directly from the taxonomies developed through the literature reviews, detailed coding protocols were established, focusing on activities indicative of good practice for biodiversity integration. For each project—focusing particularly on project-financed activities and results framework indicators measuring

associated results—we analyzed the presence and nature of biodiversity-related activities and assessed alignment with identified good practices. For active projects, the review focused on project design, while for closed projects, both design and evidence of results were assessed.

In addition, closed projects were reviewed for the application of the safeguard policies and ESF requirements to respond to EQ3b: To the extent that evidence is available, has the application of biodiversity-related risk management policies mitigated biodiversity loss?

Exploratory Case Studies

We conducted exploratory case studies to provide explanatory power about the ways that the Bank Group integrates biodiversity considerations into key production sectors. The unit of analysis was the technical or policy mechanisms identified in projects in each country. We used an exploratory case design because of the nascency of this work in the Bank Group. Cases conducted in Brazil, Côte d'Ivoire, Ecuador, Peru, and Viet Nam included local engagement with resources users; case studies conducted in Mozambique were conducted on desk with interviews.

We selected case studies with interventions that were explicit in their intent to achieve biodiversity outcomes, or proxies thereof, to maximize the learning potential from the cases. Other case selection criteria included (i) timing: activities needed to be mature enough for evaluation; (ii) geography: regional and country typology coverage; (iii) production sectors, covering agriculture, forestry, fisheries, and aquaculture; and (iv) project mechanisms. The presence of IFC activities was also included as a criterion in a subset of cases.

The case studies were guided by a detailed case protocol (see box A.6) to ensure data collection and analytic consistency across cases. Case authors were experienced researchers with a combination of biodiversity, production sector, country and regional, and evaluation expertise. For each case study, interviews were conducted with relevant World Bank staff, government ministries and agencies, local government, project management and implementation units, regional organizations, local subject matter experts, donor agencies, nongovernmental organizations, civil society, and associations.

The purpose of the exploratory case studies was to contextualize and derive explanatory factors on integrating biodiversity into production sectors, given the nascency of these activities. The case studies were designed to capture evidence on (i) the level of adoption of biodiversity-sensitive approaches by client governments, firms, and resource users across relevant activities; (ii) the factors that supported or challenged this adoption (including development outcomes); (iii) the extent to which adopted approaches led to biodiversity proxies and, where feasible, climate change outcomes; and (iv) explanatory factors that influenced these outcomes. Case studies adopted a systems approach using triangulated evidence: they identified the drivers of biodiversity loss in each landscape and how World Bank and IFC interventions addressed those drivers, assessed resource governance and incentives, identified trade-offs faced by clients and resource users in adopting biodiversity-relevant practices, and examined how the World Bank and IFC worked with other partners to achieve shared goals (where relevant). Case studies were designed to identify specific "mechanisms" used by the Bank Group to produce biodiversity benefits in each country and sectoral context. The case studies followed a structured approach outlined in box A.6.

Box A.6. Exploratory Case Study Approach

Step 1: **Identification of the commitments made by the country to the goals pertaining to sustainable production outlined in the Global Biodiversity Framework.**

A review of relevant country literature, including National Biodiversity Strategies and Action Plans, was undertaken to assess the extent of alignment with the commitments set out in the Global Biodiversity Framework. The review included an assessment of the recency of relevant commitments, their scale, and any financing committed for their fulfilment. This review was supplemented in primary data collection through semistructured interviews with in-country officials during the country visit.

Step 2: **Analysis of the role of the World Bank Group in the country in financing or contributing to sustainable production activities that enhance biodiversity outcomes.**

This step involved multiple components, including the following:

(continued)

Box A.6. Exploratory Case Study Approach (cont.)

The selection of projects identified for data collection as part of the case studies was based on a selection criteria exercise described in the section above.

An analysis of World Bank efforts in country to engage with government clients on activities at the policy or regulatory level that might contribute to enhancing biodiversity outcomes such as adjustments to policies that drive biodiversity loss, among other things.

A review of relevant World Bank country-level documents (Systematic Country Diagnostics, Country Climate and Development Reports, and Country Partnership Frameworks) to assess the extent to which they integrate biodiversity considerations.

Identification of all World Bank analytics and investments in the country that incorporate biodiversity considerations, and selection of a targeted group of projects within this portfolio to be explored in detail.

Analysis of the key sectoral events that coincided with and influenced the World Bank's engagement in the country during the evaluation period (FY 2010 and FY24). This analysis was underpinned by a review of literature, project documentation, and consultation with key stakeholders in country.

Step 3: **A focused literature review of the biodiversity considerations relevant to each subsector(s) selected in each country.**

The literature review included several components: a synthesis of the predominant challenges to achieving biodiversity outcomes in the chosen subsector; a description of the social, economic, and governance constraints to achievement of biodiversity outcomes; the integration of climate change as a cross-cutting consideration; an analysis of the chief long-term constraints to producing sustainable biodiversity outcomes in the subsector (for example, lack of financing, institutional capacity); and good practice examples of achievement of biodiversity outcomes in the chosen subsector(s).

Step 4: **An analysis of the specific mechanisms or approaches used in each relevant project by the World Bank that are likely to have biodiversity benefits.**

Efforts were made for each of these mechanisms to identify causal pathways through which they are expected to lead to behavior change and to document any relevant outcomes resulting from the use of this mechanism or approach. For example, this

(continued)

Box A.6. Exploratory Case Study Approach (cont.)

could entail the adoption of a climate and biodiversity-friendly agricultural practice likely to reduce the use of water and other natural resources, enhance soil health, and prevent land degradation.

Step 5: **The case analysis culminated in a case synthesis and overarching analysis, drawing on the multiple lines of evidence identified.**

This synthesis responded to the evaluation subquestions for EQ2, which included the documenting of good practice examples, innovations, lessons learned, any evidence of use of proxies for biodiversity benefits, and the contribution of biodiversity benefits to climate change benefits.

Source: Independent Evaluation Group.

Review of Core Country Diagnostics

To assess the extent to which the World Bank is using the country engagement process to identify integrated actions while building national capacity for biodiversity planning, we undertook a review of CPFs and CCDRs. We reviewed 113 CPFs—representing the most recent CPF available for every country—and all 57 CCDRs (covering 69 countries) disclosed at the time of this analysis. See appendix C for the list of CPFs and CCDRs included in the analysis. CPFs are the primary strategic document that outlines the Bank Group's engagement with a client country. CCDRs are designed to help countries prioritize actions to reduce greenhouse gas emissions, enhance adaptation, and achieve broader development goals.

Country Partnership Framework

Alignment with global climate and biodiversity commitments. We conducted parametric keyword searches and content analysis within the 113 CPFs to assess their alignment with global climate and biodiversity agreements. Each CPF was analyzed to determine whether it articulates climate priorities, including nationally determined contributions, the Paris Agreement, or Paris Alignment. Additionally, we examined whether CPFs

explicitly mention global biodiversity agreements such as the GBF, the CBD, or the Kunming-Montreal and Aichi Biodiversity Targets. We also identified whether CPFs articulate support linked to their respective National Biodiversity Strategies and Action Plans and Natural Capital Accounting.

CPF high-level outcomes and objectives. We manually extracted, and thematically coded, CPF high-level outcomes and subobjectives in line with relevant themes. Relevant CPF high-level outcomes and subobjectives were categorized into themes based on the dominant focus (including in their rationale), while recognizing that there is overlap across these themes (table A.4). This thematic coding allowed us to understand the distribution of thematic focus areas and assess the extent to which these focus areas provide opportunities—both taken and not taken—to engage with clients on biodiversity and capture biodiversity benefits.

Table A.4. Coding Categories for Country Partnership Framework Subobjectives

Thematic Code	Description
Climate Adaptation and Disaster Risk Management	Enhancing resilience against climate change impacts, natural hazards (floods, droughts, hurricanes, earthquakes, and so on), and related risks. Strengthening preparedness, early-warning systems, recovery, and adaptive capacity of infrastructure, livelihoods, and ecosystems. Examples: "Enhance resilience to natural shocks"; "Build resilience to climate-related events"; "Strengthen multihazard disaster resilience."
Climate Change Mitigation and Low-Carbon Transition	Reducing GHG emissions, promoting decarbonization, supporting low-carbon industries, and contributing to global climate goals (for example, the Paris Agreement, NDC implementation). Examples: "Scale up climate mitigation measures"; "Support the energy transition/reduce energy intensity."
Natural Resource Management	Sustainable management of forests, fisheries, land, ecosystems, and so on. Includes preserving habitats, reforestation, sustainable forestry, land degradation prevention, or conservation of wildlife. Examples: "Improved management of natural resources"; "Preserve and restore natural capital"; "Sustainable landscape management."
Water, Sanitation, and Waste Management	Ensuring water security, water resource management, sanitation, solid waste management, wastewater treatment, and related infrastructure. Examples: "Improve access to water, sanitation, and solid waste management"; "Enhance water security and sustainability"; "Efficient water resource management for resilience."

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Thematic Code	Description
Energy Sustainability and Efficiency	Increasing renewable energy capacity (solar, wind, hydro, geothermal), promoting energy efficiency, and ensuring a sustainable energy supply. Often linked to low-carbon development but can be distinguished if the focus is specifically on energy systems. Examples: "Expand clean energy matrix"; "Enhanced energy sustainability and renewable energy resources"; "Energy efficiency improvements in utilities and industries."
Pollution and Air Quality Management	Reducing ambient air pollution, industrial pollution, marine plastic pollution, and soil contamination, or improving broader environmental quality (apart from GHG-focused mitigation). Examples: "Reduce air pollution in urban centers"; "Address plastic waste in coastal regions"; "Improve air, soil, water pollution control frameworks."
Resilient Infrastructure and Urban Resilience	Resilience and sustainability in roads, transport, housing, and urban planning. Ensuring cities adapt to climate change impacts (sea-level rise, flooding), reduce congestion/pollution, and strengthen livability. Examples: "Improved transport connectivity and safety" (with an explicit climate/disaster lens); "Promote green and resilient cities"; "Sustain and strengthen urban infrastructure to withstand climate shocks."
Financial and Macroeconomic Resilience	Strengthening a country's financial capacity to cope with climate-related or disaster-related shocks. Building fiscal buffers, insurance mechanisms, contingent financing, or macrofiscal strategies for climate resilience. Examples: "Enhanced financial resilience"; "Strengthen capacity for macrofinancial sustainability/reduce vulnerability to external shocks"; "Risk financing for disasters/catastrophe insurance frameworks."
Governance and Institutional Capacity for Environment/Climate	Public sector reforms, policies, regulations, or institutional frameworks specifically geared toward better environmental or climate outcomes, for example, setting up climate governance structures, environmental agencies, or cross-sector coordination. Examples: "Improve government's effectiveness, efficiency, and transparency in climate/natural resource management"; "Strengthen institutional and financial framework for risk management"; "Enhance capacity for climate finance and green budgeting."
Productivity, Climate-Smart Agriculture, and Resilient Livelihoods	Focus on making agriculture, fisheries, or rural livelihoods more resilient and sustainable under climate variability (crop diversification, water-efficient irrigation, sustainable land practices, and so on). Examples: "Promote climate-resilient agriculture"; "Strengthen rural livelihoods through sustainable land and water use."
Biodiversity	Explicit mention of biodiversity in objective. Examples: "Improved management of mining, natural resources, and biodiversity"; "Improved and climate-adaptive management of forests, biodiversity, and protected areas."

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Thematic Code	Description
Social Protection and Safety Nets	Strengthening household and community resilience to shocks by enhancing social protection systems, improving livelihoods, and building crisis preparedness and response capacities, particularly for vulnerable and conflict-affected populations. Examples: "Strengthen crisis resilience for vulnerable, displaced, and conflict-affected populations"; "Improve efficiency and effectiveness of the social protection system"; "Strengthen mechanisms to protect people against shocks."
Land Administration	Example: "Improve Land Titling and Administration."

Source: Independent Evaluation Group.

Note: GHG = greenhouse gas; NDC = nationally determined contribution.

CPF metrics. We also manually extracted and analyzed the metrics measured in CPFs—at both the high-level outcome and sublevel objective—to identify those metrics that could serve as proxies for biodiversity-related outcomes.

Country Climate and Development Reports

We reviewed each CCDR to extract and analyze relevant information on climate mitigation, adaptation strategies, and the climate–biodiversity risk nexus. First, we focused our content analysis on identifying how each CCDR addressed the use and conservation of natural ecosystems, such as forests and coastal and marine ecosystems, to achieve national climate mitigation goals. Additionally, we examined the recommended practices for mitigation, for example, habitat restoration versus reforestation or afforestation activities. Second, we assessed the adaptation strategies presented to determine the extent to which CCDRs recommended using and conserving biodiversity-rich natural habitats to build resilience. Third, we explored the extent to which CCDRs diagnose the risks posed by climate change to biodiversity and the recommended measures to safeguard it.

Limitations

Portfolio Review and Analysis

Missing documentation. Some identified lending operations that were found to be relevant lacked sufficient evidence and documentation in the

operations portal and could not therefore be included in the portfolio review and analysis (especially smaller trust funded activities). We excluded these projects because the information required to determine and code variables relevant to biodiversity efforts was not available.

Geospatial Analysis

Missing protected area names. In 25 of the 130 conservation-focused projects that include support to protected areas, it was not possible to identify the names of the specific protected areas as they were not included in any project documentation. Furthermore, in 279 cases (out of 884), we could not match the names of the protected areas as found in the respective project documentation with the WDPA (despite extensive efforts to do so, including searches online). Last, 19 protected areas did not have shape files and were therefore excluded from the land cover analysis.

Land cover change analysis. The geospatial analysis of land cover change relies on several key assumptions and is subject to certain limitations inherent in the data and methodology. These considerations are important for interpreting the results accurately and understanding the potential sources of uncertainty.

- Probabilistic nature of the Dynamic World model. The land cover classifications used in this study are derived from the Dynamic World data set, which is a probabilistic model rather than a deterministic classification. This means that each pixel is assigned a probability of belonging to different land cover classes, and the final classification represents the most likely class rather than a definitive ground-truth label. As a result, some classification uncertainty is expected, particularly in transitional or heterogeneous landscapes where multiple land cover types coexist within a single pixel. Several recent studies have analyzed recently developed global land-use/land cover models (Kerner et al. 2024; Venter et al. 2022; Wang et al. 2023), and we refer to these resources for a more detailed assessment of the limitations.
- Impact of missing data and cloud cover. Optical satellite data, such as those used in Dynamic World, are susceptible to cloud cover, haze, and other atmospheric interferences, which can result in missing data for certain time periods. Although compositing techniques help mitigate these gaps, some

areas may have fewer valid observations, potentially introducing noise or inconsistencies in the temporal analysis. This issue is particularly relevant in tropical regions, where persistent cloud cover can reduce the frequency of high-quality observations.

» Although Dynamic World, which relies on Sentinel-2 L1C images, excludes images with cloud cover greater than 35 percent from its land cover calculations, we observed that in some years the coverage was incomplete, likely due to persistent cloud cover. To address potential data quality issues, we implemented the following decision rule: (i) if a protected area-year had fewer than 80 percent valid pixels, it was excluded from the analysis, and (ii) if a protected area-year had 80 percent or more valid pixels, it was included, with weights assigned according to the percentage of valid pixels. This approach allowed us to calculate the weighted average percentage of land cover for two periods, 2016–19 and 2020–24, and to estimate the change in land cover as the difference between these two periods.

» Influence of mixed pixels and land cover transitions. Given the 10-meter spatial resolution of the data set, some pixels are likely to contain a mixture of multiple land cover types. This can lead to misclassifications, especially in areas where tree cover, shrubs, and grasslands intermingle. Additionally, land cover transitions (for example, forest degradation, regrowth, or seasonal changes in vegetation) may not be fully captured if the dominant class in a pixel does not change significantly over time.

» Spatial and temporal resolution considerations. Although the 10-meter spatial resolution of Dynamic World allows for relatively fine-scale analysis, it may not detect small-scale changes such as selective logging, understory degradation, or small agricultural clearings. Additionally, the temporal resolution of the analysis is limited by the availability of cloud-free observations, meaning that some short-term disturbances or rapid land cover changes may not be fully captured.

Biodiversity Offsets Analysis

Due to resource constraints, the evaluation team could not conduct site visits or engage directly with client counterparts or beneficiaries on the topic of offsets. This limited the collection of firsthand data and hindered the ability to verify information or assess the contextual factors influencing project outcomes.

The evaluation team relied on different approaches to identify offset projects across institutions (IFC, MIGA, and the World Bank) because of limitations in access to documents and resource constraints. Although the list of MIGA and IFC projects with offsets was retrieved from ESG counterparts, the team relied on the Standard Reports and a combination of manual and large language model assessment. The World Bank does not have a centralized tracking tool for offsets, but the evaluation team met with several biodiversity experts in the World Bank and received their input on the list of projects.

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Appendix B. Evaluation Portfolio

Table B.1. World Bank Conservation Portfolio

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P086341	BR GEF Rio Grande do Sul Biodiversity	2010	Closed	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P086528	Development, Empowerment and Conservation in the Greater St Lucia Wetland Park and Surrounding Region	2010	Closed	South Africa	AFE	Environment, Natural Resources, and Blue Economy
P091659	Argentina Grasslands Project (Mercosur)	2010	Closed	Argentina	LAC	Agriculture and Food
P091827	Sustainable Cerrado Initiative	2010	Closed	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P094307	SL-GEF Biodiversity Conservation Project	2010	Closed	Sierra Leone	AFW	Environment, Natural Resources, and Blue Economy
P094335	Conservation of Biodiversity and Sustainable Land Management in the Atlantic Forest of Eastern Paraguay	2010	Closed	Paraguay	LAC	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P095424	Strengthening Biodiversity Conservation Through the National Protected Areas	2010	Closed	Peru	LAC	Environment, Natural Resources, and Blue Economy
P095617	Northern Botswana Human Wildlife Coexistence Project	2010	Closed	Botswana	AFE	Environment, Natural Resources, and Blue Economy
P097985	Integrated Coastal Zone Management	2010	Closed	India	SAR	Environment, Natural Resources, and Blue Economy
P116152	Second Programmatic Environmental DPL	2010	Closed	Peru	LAC	Environment, Natural Resources, and Blue Economy
P117836	Land Administration Project (PRODEP) Additional Financing	2010	Closed	Nicaragua	LAC	Urban, Disaster Risk Management, Resilience, and Land
P088520	Biodiversity Conservation and Rural Livelihoods Improvement	2011	Closed	India	SAR	Environment, Natural Resources, and Blue Economy
P094692	Kenya Coastal Development Project	2011	Closed	Kenya	AFE	Environment, Natural Resources, and Blue Economy
P098538	Sustainable Land and Water Management	2011	Closed	Ghana	AFW	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P100438	Adaptation to Climate Change Impacts on the Coastal Wetlands in the Gulf of Mexico	2011	Closed	Mexico	LAC	Environment, Natural Resources, and Blue Economy
P106680	Second Land Administration Project	2011	Closed	Honduras	LAC	Urban, Disaster Risk Management, Resilience, and Land
P107484	Madagascar Additional Finance-3rd Environmental Program	2011	Closed	Madagascar	AFE	Environment, Natural Resources, and Blue Economy
P108879	AFCC2/ RI-Nyika Transfrontier Conservation Area Project	2011	Closed	Africa	Africa	Environment, Natural Resources, and Blue Economy
P108882	Extension of Kasanka Management System to Lavushi Manda National Park	2011	Closed	Zambia	AFE	Environment, Natural Resources, and Blue Economy
P110661	Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin	2011	Closed	China	EAP	Environment, Natural Resources, and Blue Economy
P111205	EU Natura 2000 Integration Project	2011	Closed	Croatia	ECA	Environment, Natural Resources, and Blue Economy
P111918	CL Securitization and Carbon Sinks Project	2011	Closed	Chile	LAC	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P114580	Liberia: Expansion of Protected Areas Network—II	2011	Closed	Liberia	AFW	Environment, Natural Resources, and Blue Economy
P115836	Wetlands Conservation Project	2011	Closed	Sierra Leone	AFW	Environment, Natural Resources, and Blue Economy
P118713	Peru Third Programmatic Environmental DPL	2011	Closed	Peru	LAC	Environment, Natural Resources, and Blue Economy
P121210	APL on Strengthening Regional Cooperation for Wildlife Protection in Asia	2011	Closed	South Asia	SAR	Environment, Natural Resources, and Blue Economy
P122047	Guinea-Bissau Biodiversity Conservation Project	2011	Closed	Guinea-Bissau	AFW	Environment, Natural Resources, and Blue Economy
P122419	Support to Protected Areas Management	2011	Closed	Benin	AFW	Environment, Natural Resources, and Blue Economy
P126193	Second Phase of the APL on Strengthening Regional Cooperation for Wildlife Protection in Asia	2011	Closed	South Asia	SAR	Environment, Natural Resources, and Blue Economy
P103470	Sustainable Financing and Management of Eastern Caribbean Marine Ecosystem Project	2012	Closed	OECS countries	LAC	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P110112	Effective Management of the Nkhotakota Wildlife Reserve	2012	Closed	Malawi	AFE	Environment, Natural Resources, and Blue Economy
P112074	BR Sergipe Water	2012	Closed	Brazil	LAC	Water
P112106	Additional Financing for the National Protected Areas Project	2012	Closed	Colombia	LAC	Environment, Natural Resources, and Blue Economy
P114810	Amazon Region Protected Areas Program Phase II (GEF)	2012	Closed	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P117617	Malawi: Shire River Basin Management Program (Phase I) Project	2012	Closed	Malawi	AFE	Water
P118018	Cameroon: Ngoyla Mintom Project	2012	Closed	Cameroon	AFW	Environment, Natural Resources, and Blue Economy
P122701	Wildlife Consumption in Viet Nam: Reforming Policies and Practices to Strengthen Biodiversity Conservation	2012	Closed	Viet Nam	EAP	Environment, Natural Resources, and Blue Economy
P123922	Integrated Disaster and Land Management Project	2012	Closed	Togo	AFW	Environment, Natural Resources, and Blue Economy
P124085	Congo: Forest and Economic Diversification Project	2012	Closed	Congo, Rep.	AFW	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P113860	LA-Nam Et-Phou Louey Tiger Landscape Conservation Project	2013	Closed	Lao PDR	EAP	Environment, Natural Resources, and Blue Economy
P120561	Tunisia: Ecotourism and Conservation of Desert Biodiversity	2013	Closed	Tunisia	MENA	Environment, Natural Resources, and Blue Economy
P121152	Second Land Administration Project (PRODEP II)	2013	Closed	Nicaragua	LAC	Urban, Disaster Risk Management, Resilience, and Land
P123923	Russia Forest Fire Response Project	2013	Closed	Russian Federation	ECA	Environment, Natural Resources, and Blue Economy
P127258	Sustainable Coffee Landscape Project	2013	Closed	Burundi	AFE	Environment, Natural Resources, and Blue Economy
P127490	Sustainable Financing for Biodiversity Conservation and Natural Resources Management	2013	Closed	Bhutan	SAR	Environment, Natural Resources, and Blue Economy
P127861	JO-Badia Ecosystem and Livelihoods	2013	Closed	Jordan	MENA	Environment, Natural Resources, and Blue Economy
P083813	DRC GEF Financing to PREPAN Project	2014	Closed	Congo, Dem. Rep.	AFE	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P113794	Red Sea and Gulf of Aden Strategic Ecosystem Management GEF Project	2014	Closed	Middle East and North Africa	MENA	Environment, Natural Resources, and Blue Economy
P124018	Senegal—Sustainable and Inclusive Agribusiness Development Project	2014	Closed	Senegal	AFW	Agriculture and Food
P124625	Hwange-Sanyati Biological Corridor Project	2014	Closed	Zimbabwe	AFE	Environment, Natural Resources, and Blue Economy
P126361	Kihansi Catchment Conservation and Management Project	2014	Closed	Tanzania	AFE	Environment, Natural Resources, and Blue Economy
P127813	Coral Reef Rehabilitation and Management Program—Coral Triangle Initiative (COREMAP-CTI)	2014	Closed	Indonesia	EAP	Environment, Natural Resources, and Blue Economy
P128393	Second Lao Environment and Social Project (formerly Protected Area and Wildlife Project)	2014	Closed	Lao PDR	EAP	Environment, Natural Resources, and Blue Economy
P128887	Improved Forested Landscape Management Project (GEF Additional Financing)	2014	Closed	Congo, Dem. Rep.	AFE	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P129156	Sudan Sustainable Natural Resources Management Project	2014	Closed	Sudan	AFE	Environment, Natural Resources, and Blue Economy
P129647	Peru Strengthening Sustainable Management of the Guano Islands, Isles and Capes National Reserve System Project	2014	Closed	Peru	LAC	Environment, Natural Resources, and Blue Economy
P131709	Coastal Watersheds Conservation in the Context of Climate Change Project	2014	Closed	Mexico	LAC	Environment, Natural Resources, and Blue Economy
P143914	Gabon—Sustainable Management of Critical Wetlands Ecosystems	2014	Closed	Gabon	AFW	Environment, Natural Resources, and Blue Economy
P114294	Rural Corridors and Biodiversity	2015	Closed	Argentina	LAC	Environment, Natural Resources, and Blue Economy
P128968	BR Marine Protected Areas Project	2015	Closed	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P130474	Management and Protection of Key Biodiversity Areas in Belize	2015	Closed	Belize	LAC	Environment, Natural Resources, and Blue Economy
P131408	BZ Marine Conservation and Climate Adaptation	2015	Closed	Belize	LAC	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P131655	Pacific Islands Regional Oceanscape Program Forum Fisheries Agency	2015	Closed	Pacific Islands	EAP	Environment, Natural Resources, and Blue Economy
P131965	Mozambique Conservation Areas for Biodiversity and Development Project	2015	Closed	Mozambique	AFE	Environment, Natural Resources, and Blue Economy
P132317	Philippine Rural Development Project	2015	Active	Philippines	EAP	Agriculture and Food
P144254	Zambia COMACO Landscape Management	2015	Closed	Zambia	AFE	Agriculture and Food
P144271	Forest Conservation and Sustainability in the Heart of the Colombian Amazon	2015	Active	Colombia	LAC	Environment, Natural Resources, and Blue Economy
P145621	Sustainable Production Systems and Conservation of Biodiversity	2015	Closed	Panama	LAC	Agriculture and Food
P147015	Cape Verde Ninth Poverty Reduction Support Credit	2015	Closed	Cabo Verde	AFW	Macroeconomics, Trade, and Investment
P148183	Ghana FIP—Enhancing Natural Forest and Agroforest Landscapes Project	2015	Closed	Ghana	AFW	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P150892	ProCerrado Federal Project	2015	Closed	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P153301	Climate Change Adaptation Project	2015	Closed	Maldives	SAR	Environment, Natural Resources, and Blue Economy
P122383	Landscape Approach to Wildlife Conservation in Northeast China	2016	Closed	China	EAP	Environment, Natural Resources, and Blue Economy
P143185	Development of Systems to Prevent Forest Fires and Monitor Vegetation Cover in the Brazilian Cerrado	2016	Closed	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P154114	Liberia Forest Sector Project	2016	Closed	Liberia	AFW	Environment, Natural Resources, and Blue Economy
P156021	Ecosystem Conservation and Management	2016	Closed	Sri Lanka	SAR	Environment, Natural Resources, and Blue Economy
P154698	Sustainable Landscape Management Project	2017	Closed	Madagascar	AFE	Environment, Natural Resources, and Blue Economy
P157249	Wildlife and Human-Elephant Conflicts Management in the South of Gabon	2017	Closed	Gabon	AFW	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P160033	Mozambique Forest Investment Project	2017	Closed	Mozambique	AFE	Environment, Natural Resources, and Blue Economy
P161490	Zambia Integrated Forest Landscape Project (GEF)	2017	Closed	Zambia	AFE	Agriculture and Food
P150523	Tanzania: Resilient Natural Resource Management for Tourism and Growth	2018	Closed	Tanzania	AFE	Environment, Natural Resources, and Blue Economy
P155642	Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3)	2018	Closed	Eastern and Southern Africa	AFE	Environment, Natural Resources, and Blue Economy
P158000	Amazon Sustainable Landscapes Project	2018	Active	Brazil	LAC	Environment, Natural Resources, and Blue Economy
P158805	Shire Valley Transformation Program—Phase 1	2018	Active	Malawi	AFE	Water
P160613	Burundi Landscape Restoration and Resilience Project	2018	Closed	Burundi	AFE	Environment, Natural Resources, and Blue Economy
P161973	Natural Resources Governance Project in CAR	2018	Closed	Central African Republic	AFW	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P162337	West Africa Coastal Areas Resilience Investment Project	2018	Active	Western and Central Africa	AFW	Environment, Natural Resources, and Blue Economy
P162789	Forest Investment Program	2018	Closed	Côte d'Ivoire	AFW	Environment, Natural Resources, and Blue Economy
P162792	Strengthening Partnerships to Protect Endangered Wildlife in Viet Nam	2018	Closed	Viet Nam	EAP	Environment, Natural Resources, and Blue Economy
P163531	Nicaragua Property Rights Strengthening Project	2018	Closed	Nicaragua	LAC	Urban, Disaster Risk Management, Resilience, and Land
P164257	Promoting Community-Based Climate Resilience in the Fisheries Sector	2018	Closed	Jamaica	LAC	Environment, Natural Resources, and Blue Economy
P161304	Sudan Sustainable Natural Resources Management Project (SSNRMP) Additional Financing (Phase 2)	2019	Closed	Sudan	AFE	Environment, Natural Resources, and Blue Economy
P161996	Sustainable Forests and Livelihoods (SUFAL) Project	2019	Active	Bangladesh	SAR	Environment, Natural Resources, and Blue Economy
P162594	Multipurpose Cadaster Project	2019	Active	Colombia	LAC	Urban, Disaster Risk Management, Resilience, and Land

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P164764	Transforming Landscapes for Resilience and Development in Zambia	2019	Active	Zambia	AFE	Environment, Natural Resources, and Blue Economy
P165344	Cambodia Sustainable Landscape and Ecotourism Project	2019	Active	Cambodia	EAP	Environment, Natural Resources, and Blue Economy
P166802	Mozambique Conservation Areas for Biodiversity and Development—Phase 2	2019	Active	Mozambique	AFE	Environment, Natural Resources, and Blue Economy
P167748	Grenada Second Fiscal Resilience and Blue Growth Development Policy Credit	2020	Closed	Grenada	LAC	Macroeconomics, Trade, and Investment
P167830	Orinoquia Integrated Sustainable Landscapes	2020	Active	Colombia	LAC	Environment, Natural Resources, and Blue Economy
P170466	Uganda Investing in Forests and Protected Areas for Climate-Smart Development Project	2020	Active	Uganda	AFE	Environment, Natural Resources, and Blue Economy
P171611	Chad Local Development and Adaptation Project	2020	Active	Chad	AFW	Environment, Natural Resources, and Blue Economy
P166672	ID: Jambi Sustainable Landscape Management Project (J-SLMP)	2021	Active	Indonesia	EAP	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P168613	Guinea Natural Resources, Mining and Environmental Management Project	2021	Active	Guinea	AFW	Environment, Natural Resources, and Blue Economy
P170559	Lao Landscapes and Livelihoods Project	2021	Active	Lao PDR	EAP	Environment, Natural Resources, and Blue Economy
P173017	GPSA Caribbean—Collaborative Social Accountability for Improved Governance in Protecting Biodiversity Hotspots Project	2021	Active	Caribbean	LAC	Environment, Natural Resources, and Blue Economy
P173464	Critical Ecosystem Partnership Fund—Caribbean Hotspot Project	2021	Active	Caribbean	LAC	Environment, Natural Resources, and Blue Economy
P173558	Fiji Recovery and Resilience First Development Policy Operation with a Catastrophe Deferred Drawdown Option	2021	Active	Fiji	EAP	Macroeconomics, Trade, and Investment
P174002	Sustainable Rural Economy Program	2021	Active	Mozambique	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P174107	Panama Pandemic Response and Growth Recovery Development Policy Operation	2021	Closed	Panama	LAC	Macroeconomics, Trade, and Investment
P174337	Securing Uganda's Natural Resource Base in Protected Areas Project	2021	Closed	Uganda	AFE	Environment, Natural Resources, and Blue Economy
P174635	Northern Mozambique Rural Resilience Project	2021	Active	Mozambique	AFE	Environment, Natural Resources, and Blue Economy
P166189	Northern Congo Agroforestry Project	2022	Active	Congo, Rep.	AFW	Environment, Natural Resources, and Blue Economy
P170213	Catalyzing Financing and Capacity for the Biodiversity Economy Around Protected Areas Project	2022	Active	South Africa	AFE	Environment, Natural Resources, and Blue Economy
P170482	Communal Climate Action and Landscape Management Project	2022	Active	Burkina Faso	AFW	Environment, Natural Resources, and Blue Economy
P170846	Leveraging Eco-Tourism for Biodiversity Protection in Dominica	2022	Active	Dominica	LAC	Environment, Natural Resources, and Blue Economy
P171257	Brazil Amazon Sustainable Landscapes Project Phase 2	2022	Active	Brazil	LAC	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P171524	RESILAND CA+ Program: Tajikistan Resilient Landscape Restoration Project	2022	Active	Tajikistan	ECA	Environment, Natural Resources, and Blue Economy
P171833	Unleashing the Blue Economy of the Caribbean (UBEC)	2022	Active	OECS countries	LAC	Environment, Natural Resources, and Blue Economy
P171933	Ghana Landscape Restoration and Small-Scale Mining Project	2022	Active	Ghana	AFW	Environment, Natural Resources, and Blue Economy
P172980	Coastal and Marine Ecosystems Management Strengthening Project	2022	Active	St. Vincent and the Grenadines	LAC	Environment, Natural Resources, and Blue Economy
P174097	Wildlife Conservation Bond Operation	2022	Active	South Africa	AFE	Environment, Natural Resources, and Blue Economy
P174135	RESILAND CA+ Program: Uzbekistan Resilient Landscapes Restoration Project	2022	Active	Uzbekistan	ECA	Environment, Natural Resources, and Blue Economy
P175237	Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL)	2022	Active	Nigeria	AFW	Environment, Natural Resources, and Blue Economy
P175669	Sustainable Recovery of Landscapes and Livelihoods in Argentina Project	2022	Active	Argentina	LAC	Environment, Natural Resources, and Blue Economy

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P175930	Panama Pandemic Response and Growth Recovery DPL 2	2022	Closed	Panama	LAC	Macroeconomics, Trade, and Investment
P175982	Forest Investment Project, Phase 2	2022	Active	Côte d'Ivoire	AFW	Environment, Natural Resources, and Blue Economy
P176575	Shire Valley Transformation Program—Phase 2	2022	Active	Malawi	AFE	Water
P178224	Mexico Inclusive and Sustainable Economic Growth DPL	2022	Closed	Mexico	LAC	Macroeconomics, Trade, and Investment
P173391	Oceans for Prosperity Project—LAUTRA	2023	Active	Indonesia	EAP	Environment, Natural Resources, and Blue Economy
P175525	West Africa Coastal Areas Resilience Investment Project 2	2023	Active	Western and Central Africa	AFW	Environment, Natural Resources, and Blue Economy
P177786	Climate-Resilient and Inclusive Livelihoods Project (ProClimat Congo)	2023	Active	Congo, Rep.	AFW	Environment, Natural Resources, and Blue Economy
P178063	Panama Sustainable Rural Development and Biodiversity Conservation	2023	Active	Panama	LAC	Agriculture and Food
P178694	Fiji Tourism Development Program in Vanua Levu	2023	Active	Fiji	EAP	Transport

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P179008	PROGREEN Kazakhstan Resilient Landscapes Restoration Project	2023	Active	Kazakhstan	ECA	Environment, Natural Resources, and Blue Economy
P179612	Accelerating Blue Economy Development in the Kingdom of Morocco	2023	Active	Morocco	MENA	Environment, Natural Resources, and Blue Economy
P178161	Volcanoes Community Resilience Project	2024	Active	Rwanda	AFE	Environment, Natural Resources, and Blue Economy
P178401	China: Yellow River Basin Ecological Protection and Environmental Pollution Control Program (Gansu and Shandong)	2024	Active	China	EAP	Environment, Natural Resources, and Blue Economy
P179263	Mauritania Fiscal Management and Resilience Development Policy Financing with a Catastrophe Deferred Drawdown Option	2024	Active	Mauritania	AFW	Macroeconomics, Trade, and Investment
P180982	Coastal Resilience and Sustainable Tourism Project	2024	Active	São Tomé and Príncipe	AFE	Environment, Natural Resources, and Blue Economy

Source: Independent Evaluation Group.

Note: AFE = Eastern and Southern Africa; AFW = Western and Central Africa; APL = adaptable program loan; DPL = development policy loan;EAP = East Asia and Pacific; ECA = Europe and Central Asia; EU = European Union; FIP = Forest Investment Program;GEF = Global Environment Facility; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; OECS = Organisation of Eastern Caribbean States; SAR = South Asia.

Table B.2. World Bank Agriculture Portfolio

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P106685	AR Socio-Economic Inclusion in Rural Areas	2015	Closed	Argentina	LAC	Agriculture and Food
P128307	PK: Sindh Agricultural Growth Project	2015	Closed	Pakistan	SAR	Agriculture and Food
P132317	Philippine Rural Development Project	2015	Active	Philippines	EAP	Agriculture and Food
P132623	Sustainable Livelihoods and Adaptation to Climate Change	2015	Closed	India	SAR	Agriculture and Food
P132739	Neeranchal National Watershed Project	2015	Closed	India	SAR	Agriculture and Food
P133261	Guizhou Rural Development Project	2015	Closed	China	EAP	Agriculture and Food
P133326	Poverty Alleviation and Agriculture-Based Industry Pilot and Demonstration in Poor Areas Project	2015	Closed	China	EAP	Agriculture and Food
P143417	The Agriculture Investment and Market Development Project	2015	Closed	Cameroon	AFW	Agriculture and Food
P143608	Telangana Rural Inclusive Growth Project	2015	Closed	India	SAR	Agriculture and Food
P144254	Zambia COMACO Landscape Management	2015	Closed	Zambia	AFE	Agriculture and Food
P144497	Tanzania: Expanding Rice Production	2015	Closed	Tanzania	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P144531	Climate Smart Staple Crop Production	2015	Closed	China	EAP	Agriculture and Food
P144994	EU/IPA Agriculture and Rural Development Institution Building Project	2015	Closed	Montenegro	ECA	Agriculture and Food
P145037	Agriculture Cluster Development Project	2015	Closed	Uganda	AFE	Agriculture and Food
P145055	Sustainable Agriculture Transformation Project	2015	Closed	Viet Nam	EAP	Agriculture and Food
P145162	Pasture and Livestock Management Improvement Project	2015	Closed	Kyrgyz Republic	ECA	Agriculture and Food
P145419	Creating Inclusive Business Models for Marginalized Tribal Communities in Odisha, Jharkhand and Madhya Pradesh	2015	Closed	India	SAR	Agriculture and Food
P145621	Sustainable Production Systems and Conservation of Biodiversity	2015	Closed	Panama	LAC	Agriculture and Food
P145813	PK Sindh Irrigated Agriculture Productivity Enhancement Project	2015	Closed	Pakistan	SAR	Agriculture and Food
P146930	MZ Second Agriculture Development Policy Operation (AgDPO-2)	2015	Closed	Mozambique	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P147629	Agricultural Development Support Project	2015	Closed	Myanmar	EAP	Agriculture and Food
P147674	Regional Sahel Pastoralism Support Project	2015	Closed	Western and Central Africa	AFW	Agriculture and Food
P148114	Guinea Agricultural Support Project	2015	Closed	Guinea	AFW	Agriculture and Food
P148591	Second Agricultural Growth Project	2015	Closed	Ethiopia	AFE	Agriculture and Food
P148809	NI Caribbean Coast Food Security Project	2015	Closed	Nicaragua	LAC	Agriculture and Food
P148886	Second Emergency Food Security Support Project	2015	Closed	Guinea-Bissau	AFW	Agriculture and Food
P148927	Transformation of Agriculture Sector Program Phase 3 Program-for-Results	2015	Closed	Rwanda	AFE	Agriculture and Food
P149286	Uganda Multisectoral Food Security and Nutrition Project	2015	Closed	Uganda	AFE	Agriculture and Food
P149553	Bangladesh NATP-2: National Agricultural Technology Program—Phase II Project	2015	Closed	Bangladesh	SAR	Agriculture and Food
P149605	Nuton Jibon Livelihood Improvement Project	2015	Closed	Bangladesh	SAR	Agriculture and Food
P151215	Emergency Food and Livestock Crisis Response Project	2015	Closed	Chad	AFW	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P152024	Water for Agropastoral Livelihoods Pilot Project	2015	Closed	Somalia	AFE	Agriculture and Food
P152210	India: Andhra Pradesh Rural Inclusive Growth Project	2015	Closed	India	SAR	Agriculture and Food
P155039	Support to the Rebuilding of the Agricultural Productivity in Guinea, Sierra Leone and Liberia Project	2015	Closed	Africa	AFR	Agriculture and Food
P125728	Southern Agricultural Growth Corridor of Tanzania Investment Project	2016	Closed	Tanzania	AFE	Agriculture and Food
P143307	AFR RI-Regional Great Lakes Integrated Agriculture Development Project	2016	Closed	Eastern and Southern Africa	AFE	Agriculture and Food
P148737	Corredor Seco Food Security Project	2016	Active	Honduras	LAC	Agriculture and Food
P149620	Moz Agriculture and Natural Resources Landscape Management Project	2016	Closed	Mozambique	AFE	Agriculture and Food
P150631	KH-Land Allocation for Social and Economic Development Project II	2016	Closed	Cambodia	EAP	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P151469	Madagascar Agriculture Rural Growth and Land Management Project	2016	Closed	Madagascar	AFE	Agriculture and Food
P151744	Himachal Pradesh Horticulture Development Project	2016	Closed	India	SAR	Agriculture and Food
P151869	Burundi Coffee Sector Competitiveness Project	2016	Closed	Burundi	AFE	Agriculture and Food
P151963	Ecuador—Sustainable Family Farming Modernization Project	2016	Closed	Ecuador	LAC	Agriculture and Food
P153420	Climate Smart Agriculture Support Project	2016	Closed	Niger	AFW	Agriculture and Food
P153437	Smallholder Commercialization and Agribusiness Development Project	2016	Active	Sierra Leone	AFW	Agriculture and Food
P153713	Pastoralism and Stability in the Sahel and Horn of Africa (PASSHA)	2016	Closed	Africa	AFR	Agriculture and Food
P156019	Sri Lanka Agriculture Sector Modernization Project	2016	Closed	Sri Lanka	SAR	Agriculture and Food
P159576	Bihar Transformative Development Project	2016	Closed	India	SAR	Agriculture and Food
P143795	Bhutan Community-Based Rural Entrepreneurship Project	2017	Closed	Bhutan	SAR	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P146252	Indus Eco Region Community Livelihood Project (IECLP)	2017	Closed	Pakistan	SAR	Agriculture and Food
P148616	Agro-Processing, Productivity Enhancement and Livelihood Improvement Support Project	2017	Closed	Nigeria	AFW	Agriculture and Food
P150369	Ghana-Peri-Urban Commercial Vegetables Value Chains Project	2017	Closed	Ghana	AFW	Agriculture and Food
P153042	Inclusive Partnerships for Agricultural Competitiveness	2017	Closed	Philippines	EAP	Agriculture and Food
P153349	National Agricultural and Rural Inclusive Growth Project	2017	Closed	Kenya	AFE	Agriculture and Food
P153541	Shaanxi Poor Rural Areas Community Development Project	2017	Closed	China	EAP	Agriculture and Food
P153613	Livestock Sector Development Project	2017	Closed	Uzbekistan	ECA	Agriculture and Food
P153892	Guangxi Rural Poverty Alleviation Pilot Project	2017	Closed	China	EAP	Agriculture and Food
P154447	Smallholder Agriculture Development and Commercialization Project	2017	Closed	Angola	AFE	Agriculture and Food
P154784	Kenya Climate Smart Agriculture Project	2017	Closed	Kenya	AFE	Agriculture and Food
P154908	Livestock Development Project	2017	Closed	Cameroon	AFW	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P155412	Integrated Dairy Productivity Improvement Project	2017	Active	Kyrgyz Republic	ECA	Agriculture and Food
P155513	Food Security and Agriculture Productivity Project	2017	Closed	Bhutan	SAR	Agriculture and Food
P155541	Sustainable Agriculture Productivity Improvement Project	2017	Active	Timor-Leste	EAP	Agriculture and Food
P158359	Agriculture Policy Monitoring and Evaluation Capacity Building Project	2017	Closed	Armenia	ECA	Agriculture and Food
P158434	Malawi Agricultural Commercialization Project	2017	Closed	Malawi	AFE	Agriculture and Food
P158798	Jharkhand Opportunities for Harnessing Rural Growth Project	2017	Closed	India	SAR	Agriculture and Food
P158958	OECS Regional Agriculture Competitiveness Project	2017	Closed	OECS countries	LAC	Agriculture and Food
P159737	National Targeted Programs Support Project	2017	Closed	Viet Nam	EAP	Agriculture and Food
P159760	MARD M&E Capacity Building for Agricultural Restructuring Plan Implementation (MECARP)	2017	Closed	Viet Nam	EAP	Agriculture and Food
P160570	Grain Storage and Information for Agricultural Competitiveness	2017	Closed	Mexico	LAC	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P160606	Afghanistan Strategic Grain Reserve (SGR Project)	2017	Closed	Afghanistan	SAR	Agriculture and Food
P161490	Zambia Integrated Forest Landscape Project	2017	Closed	Zambia	AFE	Agriculture and Food
P161781	Great Lakes Regional Integrated Agriculture Development Project	2017	Active	Burundi	AFE	Agriculture and Food
P163559	South Sudan Emergency Food and Nutrition Security Project	2017	Closed	South Sudan	AFE	Agriculture and Food
P147009	Jiangxi Farm Produce Distribution System Development	2018	Active	China	EAP	Agriculture and Food
P147158	Paraiba Sustainable Rural Development	2018	Active	Brazil	LAC	Agriculture and Food
P151072	National Agricultural Higher Education Project	2018	Closed	India	SAR	Agriculture and Food
P153115	Hunan Integrated Management of Agricultural Land Pollution Project	2018	Closed	China	EAP	Agriculture and Food
P155081	Support to Nutrition Sensitive Agriculture and Capacity Development of Small and Marginal Farmers	2018	Closed	Côte d'Ivoire	AFW	Agriculture and Food
P155617	Assam Agribusiness and Rural Transformation Project	2018	Active	India	SAR	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P156797	Nepal Livestock Sector Innovation Project	2018	Closed	Nepal	SAR	Agriculture and Food
P157702	Tamil Nadu Rural Transformation Project (TNRTP)	2018	Active	India	SAR	Agriculture and Food
P158346	Strengthening Agri-Food Value Chains	2018	Closed	Morocco	MENA	Agriculture and Food
P158522	Tamil Nadu Irrigated Agriculture Modernization Project	2018	Active	India	SAR	Agriculture and Food
P158810	Cashew Value Chain Competitiveness Project	2018	Active	Côte d'Ivoire	AFW	Agriculture and Food
P159052	Angola Commercial Agriculture Development Project (PDAC)	2018	Active	Angola	AFE	Agriculture and Food
P159382	Livestock and Fisheries Sector Development Project	2018	Active	Ethiopia	AFE	Agriculture and Food
P159476	Burkina Faso Livestock Sector Development Support Project	2018	Closed	Burkina Faso	AFW	Agriculture and Food
P159835	Mexico: Sustainable Productive Landscapes Project	2018	Active	Mexico	LAC	Agriculture and Food
P159979	Commercial Agriculture Project	2018	Closed	Congo, Rep.	AFW	Agriculture and Food
P160408	Maharashtra Project on Climate Resilient Agriculture	2018	Closed	India	SAR	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P160641	Mali Livestock Sector Development Support Project (PADEL-M)	2018	Closed	Mali	AFW	Agriculture and Food
P161473	Agriculture Competitiveness Project	2018	Active	Lao PDR	EAP	Agriculture and Food
P161876	Transformation of Agriculture Sector Program 4 Phase 2	2018	Closed	Rwanda	AFE	Agriculture and Food
P162316	Integrated Risk Management in the Rural Agroindustrial System	2018	Active	Argentina	LAC	Agriculture and Food
P162446	Strengthening Markets for Agriculture and Rural Transformation Punjab Program	2018	Closed	Pakistan	SAR	Agriculture and Food
P162659	Smallholder Agricultural Production Restoration and Enhancement Project	2018	Closed	Yemen, Rep.	MENA	Agriculture and Food
P162908	Resilient Productive Landscapes in Haiti	2018	Closed	Haiti	LAC	Agriculture and Food
P162956	Climate Resilient Agriculture and Productivity Enhancement Project	2018	Closed	Chad	AFW	Agriculture and Food
P163138	Guangxi Poverty Reduction Program-for-Results	2018	Closed	China	EAP	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P164424	Montenegro Second Institutional Development and Agriculture Strengthening Project	2018	Active	Montenegro	ECA	Agriculture and Food
P164431	Smallholder Irrigated Agriculture and Market Access Project—IRRIGA 1	2018	Closed	Mozambique	AFE	Agriculture and Food
P164445	Second Agriculture Sector Wide Approach Support Project	2018	Closed	Malawi	AFE	Agriculture and Food
P166328	Emergency Agricultural Livelihoods and Climate Resilience Project	2018	Active	Dominica	LAC	Agriculture and Food
P160463	Andhra Pradesh Integrated Irrigation and Agriculture Transformation Project	2019	Active	India	SAR	Agriculture and Food
P160945	Smallholder Agriculture Transformation and Agribusiness Revitalization Project (STAR-P)	2019	Active	Liberia	AFW	Agriculture and Food
P161246	Livestock and Dairy Development Project	2019	Active	Bangladesh	SAR	Agriculture and Food
P163260	DR Resilient Agriculture and Integrated Water Resources Management	2019	Active	Dominican Republic	LAC	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P163264	Cambodia Agricultural Sector Diversification Project	2019	Active	Cambodia	EAP	Agriculture and Food
P163474	Khyber Pakhtunkhwa Irrigated Agriculture Improvement Project	2019	Active	Pakistan	SAR	Agriculture and Food
P163742	Climate Smart Irrigated Agriculture Project	2019	Active	Sri Lanka	SAR	Agriculture and Food
P163923	Adolescent Nutrition-Sensitive Agriculture Pilot Project	2019	Closed	Malawi	AFE	Agriculture and Food
P164052	Mali Drylands Development Project	2019	Active	Mali	AFW	Agriculture and Food
P164319	Food and Nutrition Security Enhancement Project	2019	Closed	Nepal	SAR	Agriculture and Food
P164326	Guinea Integrated Agricultural Development Project (PDAIG)	2019	Closed	Guinea	AFW	Agriculture and Food
P164336	Lowlands Livelihood Resilience Project	2019	Active	Ethiopia	AFE	Agriculture and Food
P164443	Women's Economic Empowerment Rural Development Project	2019	Active	Afghanistan	SAR	Agriculture and Food
P164486	Agricultural Productivity Program for Southern Africa—Angola and Lesotho	2019	Active	Eastern and Southern Africa	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P164509	Agricultural and Livestock Transformation Project	2019	Closed	Niger	AFW	Agriculture and Food
P164520	Sustainable Agricultural Intensification and Food Security Project	2019	Closed	Rwanda	AFE	Agriculture and Food
P165228	Smallholder Agriculture Development Project—II	2019	Active	Lesotho	AFE	Agriculture and Food
P165855	CAR—Agriculture Recovery and Agribusiness Development Support Project (ARADSP)	2019	Active	Central African Republic	AFW	Agriculture and Food
P166305	Ferghana Valley Rural Enterprise Development Project	2019	Active	Uzbekistan	ECA	Agriculture and Food
P166941	Accelerating Private Investment in Agriculture Program	2019	Closed	Ukraine	ECA	Agriculture and Food
P168385	Integrating Innovation for Rural Competitiveness in Honduras—COMRURAL II	2019	Active	Honduras	LAC	Agriculture and Food
P158372	Agriculture Modernization Project	2020	Active	Uzbekistan	ECA	Agriculture and Food
P159292	Balochistan Livelihoods and Entrepreneurship Project	2020	Active	Pakistan	SAR	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P163533	Odisha Integrated Irrigation Project for Climate Resilient Agriculture	2020	Active	India	SAR	Agriculture and Food
P164448	National Food and Agriculture System Project	2020	Closed	Myanmar	EAP	Agriculture and Food
P164967	Agriculture and Livestock Competitiveness Program-for-Results	2020	Active	Senegal	AFW	Agriculture and Food
P165129	Integrated Project for Source Sustainability and Climate Resilient Rain-Fed Agriculture in Himachal Pradesh	2020	Active	India	SAR	Agriculture and Food
P165873	Samoa Agriculture and Fisheries Productivity and Marketing Project (SAFPROM)	2020	Active	Samoa	EAP	Agriculture and Food
P165945	Livestock Commercialization Project	2020	Active	Mongolia	EAP	Agriculture and Food
P166222	PNG Agriculture Commercialization and Diversification Project	2020	Active	Papua New Guinea	EAP	Agriculture and Food
P166279	Second Rural Economic Development Initiative (REDI II) Project	2020	Active	Jamaica	LAC	Agriculture and Food
P166853	Climate Smart Management of Grassland Ecosystems	2020	Active	China	EAP	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P167455	Ceara Rural Sustainable Development and Competitiveness Phase II	2020	Active	Brazil	LAC	Agriculture and Food
P167634	Serbia Competitive Agriculture Project (SCAP)	2020	Active	Serbia	ECA	Agriculture and Food
P167786	Strengthening Agriculture Sector Capacities for Evidence-Based Policy Making	2020	Closed	Serbia	ECA	Agriculture and Food
P167945	Burkina Faso Agriculture Resilience and Competitiveness Project	2020	Active	Burkina Faso	AFW	Agriculture and Food
P168014	Agriculture Modernization Project	2020	Active	North Macedonia	ECA	Agriculture and Food
P168061	Hubei Smart and Sustainable Agriculture Project	2020	Active	China	EAP	Agriculture and Food
P168132	Agricultural Competitiveness and Export Diversification Project	2020	Active	Benin	AFW	Agriculture and Food
P168153	Market Access for Agricultural Products Project	2020	Active	Paraguay	LAC	Agriculture and Food
P168310	State of Maharashtra's Agribusiness and Rural Transformation Project	2020	Active	India	SAR	Agriculture and Food
P169758	Henan Green Agriculture Fund Project	2020	Active	China	EAP	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P170476	Exploring High-Value, Socially Inclusive and Water-Efficient Agriculture	2020	Closed	Jordan	MENA	Agriculture and Food
P171331	Land Allocation for Social and Economic Development Project III	2020	Active	Cambodia	EAP	Agriculture and Food
P173702	Emergency Locust Response Program	2020	Active	Eastern and Southern Africa	AFE	Agriculture and Food
P174170	Yemen Desert Locust Response Project	2020	Closed	Yemen, Rep.	MENA	Agriculture and Food
P161534	Climate-Smart Agriculture and Water Management Project	2021	Active	Bangladesh	SAR	Agriculture and Food
P162178	China Food Safety Improvement Project	2021	Active	China	EAP	Agriculture and Food
P164134	Nicaragua Dry Corridor Nutrition-Sensitive Agriculture Project	2021	Active	Nicaragua	LAC	Agriculture and Food
P164184	Guinea Commercial Agriculture Development Project	2021	Active	Guinea	AFW	Agriculture and Food
P166072	Valorization of Investments in the Valley of the Benue	2021	Active	Cameroon	AFW	Agriculture and Food
P169021	National Agriculture Development Program	2021	Active	Congo, Dem. Rep.	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P169120	South Sudan Resilient Agricultural Livelihoods Project	2021	Active	South Sudan	AFE	Agriculture and Food
P170215	Rural Enterprise and Economic Development Project	2021	Active	Nepal	SAR	Agriculture and Food
P170365	Sustainable Livestock Development Program-for-Results	2021	Closed	Kazakhstan	ECA	Agriculture and Food
P170419	Morocco Green Generation Program-for-Results	2021	Active	Morocco	MENA	Agriculture and Food
P170645	Chhattisgarh Inclusive Rural and Accelerated Agriculture Growth Project	2021	Active	India	SAR	Agriculture and Food
P171613	Côte d'Ivoire Agri-Food Sector Development Project	2021	Active	Côte d'Ivoire	AFW	Agriculture and Food
P173197	Regional Sahel Pastoralism Support Project II	2021	Active	Western and Central Africa	AFW	Agriculture and Food
P173398	Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA)	2021	Active	Western and Central Africa	AFW	Agriculture and Food
P173480	Responding to COVID-19: Modern and Resilient Agri-Food Value Chains	2021	Closed	Guatemala	LAC	Agriculture and Food
P174002	Sustainable Rural Economy Program	2021	Active	Mozambique	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P174017	Support to Economic Recovery and Job Creation in the Agri-Food Sector and Rural Space	2021	Active	Tunisia	MENA	Agriculture and Food
P174314	Locust Emergency and Food Security Project	2021	Closed	Pakistan	SAR	Agriculture and Food
P174328	Innovation for Rural Competitiveness Project—COMRURAL III	2021	Active	Honduras	LAC	Agriculture and Food
P174336	Guinea-Bissau Emergency Food Security Project	2021	Closed	Guinea-Bissau	AFW	Agriculture and Food
P174348	Emergency Agriculture and Food Supply Project	2021	Active	Afghanistan	SAR	Agriculture and Food
P174546	Emergency Locust Response Project	2021	Active	Eastern and Southern Africa	AFE	Agriculture and Food
P175263	Liberia: Rural Economic Transformation Project	2021	Active	Liberia	AFW	Agriculture and Food
P175641	Support to Economic Recovery and Job Creation in the Agri-Food Sector and Rural North West	2021	Closed	Tunisia	MENA	Agriculture and Food
P175645	Support to Economic Recovery and Job Creation in the Agri-Food Sector and Rural South	2021	Closed	Tunisia	MENA	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P175820	Resilience, Entrepreneurship and Livelihood Improvement Project	2021	Active	Bangladesh	SAR	Agriculture and Food
P175952	Strengthening Resilience of the Agriculture Sector Project	2021	Active	Tajikistan	ECA	Agriculture and Food
P176129	Yemen Food Security Response and Resilience Project	2021	Active	Yemen, Rep.	MENA	Agriculture and Food
P176754	Central African Republic (CAR) Emergency Food Crisis Response Project	2021	Active	Central African Republic	AFW	Agriculture and Food
P160865	Livestock Productivity and Resilience Support Project	2022	Active	Nigeria	AFW	Agriculture and Food
P171266	Agriculture Resilience and Competitiveness Project	2022	Active	Bosnia and Herzegovina	ECA	Agriculture and Food
P171462	Commercialization and De-Risking for Agricultural Transformation Project	2022	Active	Rwanda	AFE	Agriculture and Food
P172187	Rejuvenating Watersheds for Agricultural Resilience Through Innovative Development	2022	Active	India	SAR	Agriculture and Food
P172592	Climate Resilient and Sustainable Agriculture Project	2022	Active	Belize	LAC	Agriculture and Food
P172769	West Africa Food System Resilience Program (FSRP)	2022	Active	Western and Central Africa	AFW	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P173043	Solomon Islands Agriculture and Rural Transformation Project	2022	Active	Solomon Islands	EAP	Agriculture and Food
P173070	Gambia Inclusive and Resilient Agricultural Value Chain Development Project (GIRAV)	2022	Active	Gambia, The	AFW	Agriculture and Food
P173487	Agriculture Value Chain Development Project (ICARE)	2022	Active	Indonesia	EAP	Agriculture and Food
P174951	Cambodia Sustainable Livelihood for Indigenous Communities Project (CSLICP)	2022	Active	Cambodia	EAP	Agriculture and Food
P175011	Türkiye Climate Smart and Competitive Agricultural Growth Project (TUCSAP)	2022	Active	Türkiye	ECA	Agriculture and Food
P176017	Second Rural Enterprise Development Project	2022	Active	Uzbekistan	ECA	Agriculture and Food
P176232	Uruguay Agro-Ecological and Climate Resilient Systems Project	2022	Active	Uruguay	LAC	Agriculture and Food
P176758	National Agricultural Value Chain Development Project (NAVCDP)	2022	Active	Kenya	AFE	Agriculture and Food
P176905	Climate Intelligent and Inclusive Agri-Food Systems Project	2022	Active	Argentina	LAC	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P177072	Emergency Resilient Agriculture for Food Security Project	2022	Active	Haiti	LAC	Agriculture and Food
P177305	Smallholder Agricultural Transformation Project	2022	Active	Angola	AFE	Agriculture and Food
P177590	Green Agricultural and Rural Revitalization Program-for-Results—Phase I	2022	Active	China	EAP	Agriculture and Food
P177782	Emergency Project to Combat the Food Crisis in Cameroon	2022	Active	Cameroon	AFW	Agriculture and Food
P178280	Emergency Food Security Project	2022	Active	Afghanistan	SAR	Agriculture and Food
P178566	Food Systems Resilience Program for Eastern and Southern Africa	2022	Active	Eastern and Southern Africa	AFE	Agriculture and Food
P178866	Lebanon: Wheat Supply Emergency Response Project	2022	Closed	Lebanon	MENA	Agriculture and Food
P178926	Emergency Food Security and Resilience Support Project	2022	Active	Egypt, Arab Rep.	MENA	Agriculture and Food
P179010	Tunisia Emergency Food Security Response Project	2022	Active	Tunisia	MENA	Agriculture and Food
P167946	Agriculture Resilience, Value Chain Development and Innovation (ARDI) Program	2023	Active	Jordan	MENA	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P168847	Mauritania Agriculture Development and Innovation Support Project	2023	Active	Mauritania	AFW	Agriculture and Food
P170035	Agriculture Governance, Growth and Resilience Investment Project	2023	Active	Moldova	ECA	Agriculture and Food
P172497	Sustainable Multiple Use Landscape Consortia in Brazil	2023	Active	Brazil	LAC	Agriculture and Food
P173296	Uganda Climate Smart Agricultural Transformation Project	2023	Active	Uganda	AFE	Agriculture and Food
P173866	Mindanao Inclusive Agriculture Development Project	2023	Active	Philippines	EAP	Agriculture and Food
P175269	Rural Livelihoods Productivity and Resilience Project	2023	Active	Madagascar	AFE	Agriculture and Food
P175672	Innovation for Resilient Food Systems (Alianzas Rurales—PAR III) Project	2023	Active	Bolivia	LAC	Agriculture and Food
P176374	Program on Agricultural and Rural Transformation for Nutrition, Entrepreneurship, and Resilience in Bangladesh (PARTNER)	2023	Active	Bangladesh	SAR	Agriculture and Food
P176786	Punjab Resilient and Inclusive Agriculture Transformation	2023	Active	Pakistan	SAR	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P177671	Animal Health System Support for One Health Program (AHSSOH)	2023	Active	India	SAR	Agriculture and Food
P177816	Food Systems Resilience Program for Eastern and Southern Africa (Phase 3) FSRP	2023	Active	Eastern and Southern Africa	AFE	Agriculture and Food
P177825	Second Livestock Sector Development Project	2023	Active	Uzbekistan	ECA	Agriculture and Food
P178063	Panama Sustainable Rural Development and Biodiversity Conservation	2023	Active	Panama	LAC	Agriculture and Food
P178132	West Africa Food System Resilience Program (FSRP) Phase 2	2023	Active	Western and Central Africa	AFW	Agriculture and Food
P178372	Zambia Growth Opportunities Program	2023	Active	Zambia	AFE	Agriculture and Food
P178418	Tripura Rural Economic Growth and Service Delivery Project	2023	Active	India	SAR	Agriculture and Food
P178598	Burkina Faso Livestock Resilience and Competitiveness Project	2023	Active	Burkina Faso	AFW	Agriculture and Food
P178715	Climate Resilience and Agriculture Development Project	2023	Active	Albania	ECA	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P178907	China Green Agricultural and Rural Revitalization Program-for-Results (Hubei and Hunan)	2023	Active	China	EAP	Agriculture and Food
P178988	Djibouti Emergency Food Security Crisis Response Project	2023	Active	Djibouti	MENA	Agriculture and Food
P179818	Tanzania Food Systems Resilience Program	2023	Active	Tanzania	AFE	Agriculture and Food
P180060	Ghana Tree Crop Diversification Project	2023	Active	Ghana	AFW	Agriculture and Food
P180334	Lebanon: Green Agri-Food Transformation for Economic Recovery (GATE)	2023	Active	Lebanon	MENA	Agriculture and Food
P180379	Philippine Rural Development Project Scale-up	2023	Active	Philippines	EAP	Agriculture and Food
P155827	Eastern Province Jurisdictional Sustainable Landscape Program—Emissions Reduction Project	2024	Active	Zambia	AFE	Agriculture and Food
P174733	Virtual Cooperatives of Pastoral Livestock Communities	2024	Active	Mongolia	EAP	Agriculture and Food
P175723	Mato Grosso Sustainable Development of Family Farming	2024	Active	Brazil	LAC	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P176700	Connecting Farming Communities to Coastal Economies in El Balsamo—COSTA VIVA	2024	Active	El Salvador	LAC	Agriculture and Food
P177474	Piauí Pillars of Growth and Social Inclusion Project 2	2024	Active	Brazil	LAC	Agriculture and Food
P178120	Resilient Agri-Food Clusters Development Project	2024	Active	Kyrgyz Republic	ECA	Agriculture and Food
P178836	Djibouti Agri-Food Value Chain Development Project	2024	Active	Djibouti	MENA	Agriculture and Food
P179003	Sindh Livestock and Aquaculture Sectors Transformation Project	2024	Active	Pakistan	SAR	Agriculture and Food
P179238	Chad Agribusiness and Rural Transformation Project	2024	Active	Chad	AFW	Agriculture and Food
P179276	Livestock and Agriculture Modernization Project (LAMP)	2024	Active	Niger	AFW	Agriculture and Food
P179357	Uttarakhand Climate Responsive Rainfed Farming Project	2024	Active	India	SAR	Agriculture and Food
P179737	Improvement and Rehabilitation of Irrigation Systems Project	2024	Active	Kosovo	ECA	Agriculture and Food
P180076	Lowlands Livelihood Resilience Project, Phase Two (LLRP II)	2024	Active	Ethiopia	AFE	Agriculture and Food

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P180244	West Africa Food System Resilience Program (FSRP) Phase 3	2024	Active	Western and Central Africa	AFW	Agriculture and Food
P180732	Ukraine Agriculture Recovery Inclusive Support Emergency (ARISE) Project	2024	Active	Ukraine	ECA	Agriculture and Food
P181021	Sustainable Fodder Production and Low Methane Livestock Development Program-for-Results	2024	Active	China	EAP	Agriculture and Food
P181077	Second Sustainable Agricultural Intensification and Food Security Project	2024	Active	Rwanda	AFE	Agriculture and Food
P181087	Food and Nutrition Security Enhancement Project II	2024	Active	Nepal	SAR	Agriculture and Food
P181563	Technical Assistance for Repurposing of Agricultural Public Support Towards a Sustainable Food System Transformation in Bangladesh	2024	Active	Bangladesh	SAR	Agriculture and Food

Source: Independent Evaluation Group.

Note: AFE = Eastern and Southern Africa; AFR = Africa; AFW = Western and Central Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EU = European Union; GEF = Global Environment Facility;IPA = Instrument for Pre-Accession Assistance; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; OECS = Organisation of Eastern Caribbean States; SAR = South Asia.

Table B.3. World Bank Forest Production Portfolio

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P130474	Management and Protection of Key Biodiversity Areas in Belize	2015	Closed	Belize	LAC	ENV
P130492	Environmental Services	2015	Closed	Albania	ECA	ENV
P132846	Forests and Community	2015	Closed	Argentina	LAC	ENV
P144254	Zambia COMACO Landscape Management	2015	Closed	Zambia	AFE	AGR
P147760	Forestry Development Project	2015	Closed	Belarus	ECA	ENV
P148183	Ghana FIP—Enhancing Natural Forest and Agroforest Landscapes Project	2015	Closed	Ghana	AFW	ENV
P150503	MG-Reengagement DPO	2015	Closed	Madagascar	AFE	MTI
P144269	Promoting Sustainable CBNRM and Institutional Development	2016	Closed	Indonesia	EAP	ENV
P148499	Saweto Dedicated Grant Mechanism in Peru	2016	Closed	Peru	LAC	ENV
P149049	Forest Dependent Communities Support Project	2016	Closed	Congo, Dem. Rep.	AFE	ENV
P149434	Local Forest Communities Support Project	2016	Closed	Burkina Faso	AFW	ENV

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P149620	Moz Agriculture and Natural Resources Landscape Management Project	2016	Closed	Mozambique	AFE	AGR
P151102	Integrated Forest Ecosystem Management	2016	Closed	Kyrgyz Republic	ECA	ENV
P151869	Burundi Coffee Sector Competitiveness Project	2016	Closed	Burundi	AFE	AGR
P154114	Liberia Forest Sector Project	2016	Closed	Liberia	AFW	ENV
P157919	Tunisia Forest Investment Plan Preparation Project	2016	Closed	Tunisia	MENA	ENV
P145316	Dedicated Grant Mechanism for Local Communities Project	2017	Closed	Ghana	AFW	ENV
P151030	Integrated Landscapes Management in Lagging Regions Project	2017	Closed	Tunisia	MENA	ENV
P156475	Oromia National Regional State Forested Landscape Program	2017	Closed	Ethiopia	AFE	ENV
P159956	Green Resilient Growth DPF	2017	Closed	Lao PDR	EAP	ENV
P160033	Mozambique Forest Investment Project	2017	Closed	Mozambique	AFE	ENV
P160523	Nepal—Forest Investment Plan Preparation Grant	2017	Closed	Nepal	SAR	ENV

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P161015	Energy Service Improvement Project	2017	Closed	Benin	AFW	EAE
P161490	Zambia Integrated Forest Landscape Project	2017	Closed	Zambia	AFE	AGR
P133803	India Ecosystems Service Improvement Project	2018	Closed	India	SAR	ENV
P151604	Mexico Dedicated Grant Mechanism for Indigenous Peoples and Local Communities	2018	Closed	Mexico	LAC	ENV
P152322	Sudan—FCPF REDD Readiness	2018	Closed	Sudan	AFE	ENV
P157836	Meghalaya Community-Led Landscapes Management Project	2018	Closed	India	SAR	ENV
P158000	Amazon Sustainable Landscapes Project	2018	Active	Brazil	LAC	ENV
P159870	Zhejiang Qiandao Lake and Xin'an River Basin Water Resources and Ecological Environment Protection Project	2018	Closed	China	EAP	ENV
P160680	Sustainable Low-Carbon Development in Orinoquia Region Project	2018	Closed	Colombia	LAC	ENV
P162789	Forest Investment Program	2018	Closed	Côte d'Ivoire	AFW	ENV

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P163358	Improving the Efficiency and Sustainability of Charcoal and Woodfuel Value Chains	2018	Closed	Rwanda	AFE	ENV
P164661	Strengthening Entrepreneurship in Productive Forest Landscapes	2018	Active	Mexico	LAC	ENV
P161996	Sustainable Forests & Livelihoods (SUFAL) Project	2019	Active	Bangladesh	SAR	ENV
P163023	Integrated Forest Landscape Management Project in Atalaya, Ucayali	2019	Active	Peru	LAC	ENV
P164764	Transforming Landscapes for Resilience and Development in Zambia	2019	Active	Zambia	AFE	ENV
P165344	Cambodia Sustainable Landscape and Ecotourism Project	2019	Active	Cambodia	EAP	ENV
P166839	Lao PDR Green Resilient Growth DPO 2	2019	Closed	Lao PDR	EAP	MTI
P167678	Gazetted Forests Management Project	2019	Active	Benin	AFW	ENV
P163004	Dedicated Grant Mechanism for Côte d'Ivoire	2020	Closed	Côte d'Ivoire	AFW	ENV
P164047	Forest Ecosystem Improvement in the Upper Reaches of Yangtze River Basin Program	2020	Closed	China	EAP	ENV

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P165651	Sustainable Energy Scale-up Project	2020	Active	Belarus	ECA	EAE
P165742	ID: Strengthening of Social Forestry in Indonesia	2020	Active	Indonesia	EAP	ENV
P169505	Paraguay First Economic Management Development Policy Loan	2020	Closed	Paraguay	LAC	MTI
P169828	CDI Sustainable and Inclusive Growth DPF1	2020	Closed	Côte d'Ivoire	AFW	MTI
P170466	Uganda Investing in Forests and Protected Areas for Climate-Smart Development Project	2020	Active	Uganda	AFE	ENV
P171006	Climate Change and Green Growth DPF	2020	Closed	Viet Nam	EAP	ENV
P162605	North Central Region ER Program	2021	Active	Viet Nam	EAP	ENV
P163484	Fiji Carbon Fund ER Program	2021	Active	Fiji	EAP	ENV
P166244	ID: East Kalimantan Project for ER Results	2021	Active	Indonesia	EAP	ENV
P166672	ID: Jambi Sustainable Landscape Management Project (J-SLMP)	2021	Active	Indonesia	EAP	ENV
P169524	Albania Fiscal Sustainability and Growth DPF	2021	Closed	Albania	ECA	MTI
P170559	Lao Landscapes and Livelihoods Project	2021	Active	Lao PDR	EAP	ENV

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Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P170798	Forests for Prosperity Project	2021	Active	Nepal	SAR	ENV
P171577	Kazakhstan Resilient Landscapes Restoration Project	2021	Active	Kazakhstan	ECA	ENV
P172455	First Amazonas Fiscal and Environmental Sustainability Programmatic DPF	2021	Closed	Brazil	LAC	ENV
P174002	Sustainable Rural Economy Program	2021	Active	Mozambique	AFE	AGR
P174385	Second Ethiopia Resilient Landscapes and Livelihoods Project	2021	Active	Ethiopia	AFE	ENV
P174546	Emergency Locust Response Project	2021	Active	Eastern and Southern Africa	AFE	AGR
P174635	Northern Mozambique Rural Resilience Project	2021	Active	Mozambique	AFE	ENV
P166189	Northern Congo Agroforestry Project	2022	Active	Congo, Rep.	AFW	ENV
P170482	Communal Climate Action and Landscape Management Project	2022	Active	Burkina Faso	AFW	ENV
P170848	Integrated Landscape Management in Dominican Republic Watersheds	2022	Active	Dominican Republic	LAC	ENV

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P171524	RESILAND CA+ Program: Tajikistan Resilient Landscape Restoration Project	2022	Active	Tajikistan	ECA	ENV
P171933	Ghana Landscape Restoration and Small-Scale Mining Project	2022	Active	Ghana	AFW	ENV
P172079	Connecting Watershed Health with Sustainable Livestock and Agroforestry Production Project	2022	Active	Mexico	LAC	ENV
P174135	RESILAND CA+ Program: Uzbekistan Resilient Landscapes Restoration Project	2022	Active	Uzbekistan	ECA	ENV
P175669	Sustainable Recovery of Landscapes and Livelihoods in Argentina Project	2022	Active	Argentina	LAC	ENV
P175982	Forest Investment Project, Phase 2	2022	Active	Côte d'Ivoire	AFW	ENV
P176788	Equitable and Green Recovery DPF	2022	Closed	Colombia	LAC	POV
P151294	Oromia Forested Landscape Program—Emission Reduction Project	2023	Active	Ethiopia	AFE	ENV
P171720	Dedicated Grant Mechanism for Indigenous Peoples and Local Communities in Nepal	2023	Active	Nepal	SAR	ENV

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P175269	Rural Livelihoods Productivity and Resilience Project	2023	Active	Madagascar	AFE	AGR
P175915	Senegal: Natural Resources Management Project	2023	Active	Senegal	AFW	ENV
P177041	Mali Landscape Restoration Project	2023	Active	Mali	AFW	ENV
P177043	Niger Integrated Landscape Management Project	2023	Active	Niger	AFW	ENV
P177776	First Nepal Green, Resilient and Inclusive Programmatic DPC	2023	Closed	Nepal	SAR	ENV
P178642	Forest and Savanna Restoration Investment Program	2023	Active	Congo, Dem. Rep.	AFE	ENV
P179008	PROGREEN Kazakhstan Resilient Landscapes Restoration Project	2023	Active	Kazakhstan	ECA	ENV
P180060	Ghana Tree Crop Diversification Project	2023	Active	Ghana	AFW	AGR
P155827	Eastern Province Jurisdictional Sustainable Landscape Program—ER Project	2024	Active	Zambia	AFE	AGR

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P178161	Volcanoes Community Resilience Project	2024	Active	Rwanda	AFE	ENV

Source: Independent Evaluation Group.

Note: AFE = Eastern and Southern Africa; AFW = Western and Central Africa; AGR = Agriculture and Food; CBNRM = Community-Based Natural Resources Management; DPC = development policy credit; DPF = development policy financing; DPO = development policy operation; EAE = Energy and Extractives; EAP = East Asia and Pacific; ECA = Europe and Central Asia; ENV = Environment, Natural Resources, and Blue Economy; ER = emission reduction; FCPF = Forest Carbon Partnership Facility; FIP = Forest Investment Program; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; MTI = Macroeconomics, Trade, and Investment; POV = Poverty and Equity; REDD = Reducing Emissions from Deforestation and Forest Degradation; SAR = South Asia.

Table B.4. World Bank Fisheries and Aquaculture Portfolio

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P126773	West Africa Region Fisheries Program AF Guinea, Sierra Leone and Liberia	2015	Closed	Western and Central Africa	AFW	Environment, Natural Resources, and Blue Economy
P128437	Ocean Partnerships for Sustainable Fisheries and Biodiversity Conservation	2015	Closed	World	Other	Environment, Natural Resources, and Blue Economy
P131655	Pacific Islands Regional Oceanscape Program Forum Fisheries Agency	2015	Closed	Pacific Islands	EAP	Environment, Natural Resources, and Blue Economy
P132123	AFCC2/RI-South West Indian Ocean Fisheries Governance and Shared Growth Project 1	2015	Closed	Eastern and Southern Africa	AFE	Environment, Natural Resources, and Blue Economy

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P132317	Philippine Rural Development Project	2015	Active	Philippines	EAP	Agriculture and Food
P148647	Mekong Integrated Water Resources Management Project—Phase III	2016	Closed	Cambodia	EAP	Water
P149553	Bangladesh NATP-2: National Agricultural Technology Program—Phase II Project	2015	Closed	Bangladesh	SAR	Agriculture and Food
P149963	Tonga—Second Economic Reform Support Operation	2015	Closed	Tonga	EAP	Macroeconomics, Trade, and Investment
P149992	Mozambique—Artisanal Fisheries and Climate Change	2015	Closed	Mozambique	AFE	Environment, Natural Resources, and Blue Economy
P151058	Nouadhibou Eco-Seafood Cluster Project	2016	Closed	Mauritania	AFW	Finance, Competitiveness and Innovation
P151754	Pacific Islands Regional Oceanscape Program—Federated States of Micronesia	2015	Closed	Micronesia, Fed. Sts.	EAP	Environment, Natural Resources, and Blue Economy
P151760	Pacific Islands Regional Oceanscape Program—Republic of the Marshall Islands	2015	Closed	Marshall Islands	EAP	Environment, Natural Resources, and Blue Economy
P151777	Pacific Islands Regional Oceanscape Program—Solomon Islands	2015	Closed	Solomon Islands	EAP	Environment, Natural Resources, and Blue Economy

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P151780	Pacific Islands Regional Oceanscape Program—Tuvalu	2015	Closed	Tuvalu	EAP	Environment, Natural Resources, and Blue Economy
P153370	Second South West Indian Ocean Fisheries Governance and Shared Growth Project—Madagascar	2017	Closed	Southern Africa	AFE	Environment, Natural Resources, and Blue Economy
P153466	AFFC2/RI-Lake Victoria Environmental Management Project APL-1 AF	2015	Closed	Africa	Africa	Environment, Natural Resources, and Blue Economy
P155642	Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3)	2018	Closed	Eastern and Southern Africa	AFE	Environment, Natural Resources, and Blue Economy
P155902	National Program for Innovation in Fisheries and Aquaculture	2017	Closed	Peru	LAC	Environment, Natural Resources, and Blue Economy
P155961	Regional Partnership for African Fisheries Policy Reform (RAFIP)	2016	Closed	Africa	Africa	Environment, Natural Resources, and Blue Economy
P157801	Sustainable Fisheries Resources Development Project (Fourth South West Indian Ocean Fisheries Governance and Shared Growth Project)	2017	Closed	Maldives	SAR	Environment, Natural Resources, and Blue Economy

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P159382	Livestock and Fisheries Sector Development Project	2018	Active	Ethiopia	AFE	Agriculture and Food
P159447	Additional Financing for Mekong Integrated Water Resources Management (Lao PDR)	2018	Closed	Lao PDR	EAP	Water
P159637	PASA AF	2017	Closed	Togo	AFW	Agriculture and Food
P161534	Climate-Smart Agriculture and Water Management Project	2021	Active	Bangladesh	SAR	Agriculture and Food
P161568	Bangladesh Sustainable Coastal and Marine Fisheries	2019	Active	Bangladesh	SAR	Environment, Natural Resources, and Blue Economy
P161794	Fourth Economic Reform Development Policy Operation	2018	Closed	Kiribati	EAP	Macroeconomics, Trade, and Investment
P163980	Marine Fisheries and Socio-Economic Development Project	2020	Active	Kenya	AFE	Environment, Natural Resources, and Blue Economy
P164257	Promoting Community-Based Climate Resilience in the Fisheries Sector	2018	Closed	Jamaica	LAC	Environment, Natural Resources, and Blue Economy
P164424	Montenegro Second Institutional Development and Agriculture Strengthening Project	2018	Active	Montenegro	ECA	Agriculture and Food

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P164941	Tonga: Pathway to Sustainable Oceans	2019	Active	Tonga	EAP	Environment, Natural Resources, and Blue Economy
P165821	Kiribati: Pacific Islands Regional Oceanscape Program	2020	Active	Kiribati	EAP	Environment, Natural Resources, and Blue Economy
P165873	Samoa Agriculture and Fisheries Productivity and Marketing Project (SAFPROM)	2020	Active	Samoa	EAP	Agriculture and Food
P166328	Emergency Agricultural Livelihoods and Climate Resilience Project	2018	Active	Dominica	LAC	Agriculture and Food
P167263	Kiribati Fifth Economic Reform Development Policy Operation	2019	Closed	Kiribati	EAP	Macroeconomics, Trade, and Investment
P168475	Costa Rica Sustainable Fisheries Development Project	2020	Active	Costa Rica	LAC	Environment, Natural Resources, and Blue Economy
P171321	Caribbean Ocean and Aquaculture Sustainability FaciliTy (COAST) Project	2020	Closed	Caribbean	LAC	Environment, Natural Resources, and Blue Economy
P172012	Liberia Sustainable Management of Fisheries Project	2022	Active	Liberia	AFW	Environment, Natural Resources, and Blue Economy
P173391	Oceans for Prosperity Project—LAUTRA	2023	Active	Indonesia	EAP	Environment, Natural Resources, and Blue Economy

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P173866	Mindanao Inclusive Agriculture Development Project	2023	Active	Philippines	EAP	Agriculture and Food
P174137	Philippine Fisheries and Coastal Resiliency Project	2023	Active	Philippines	EAP	Environment, Natural Resources, and Blue Economy
P174798	Fisheries Sector COVID-19 Recovery Project	2022	Active	India	SAR	Environment, Natural Resources, and Blue Economy
P175915	Senegal: Natural Resources Management Project	2023	Active	Senegal	AFW	Environment, Natural Resources, and Blue Economy
P177239	Solomon Islands: Pacific Islands Regional Oceanscape Program—Second Phase for Economic Resilience	2022	Active	Solomon Islands	EAP	Environment, Natural Resources, and Blue Economy
P177661	Forum Fisheries Agency: Pacific Islands Regional Oceanscape Program—Second Phase for Economic Resilience	2024	Active	Pacific Islands	EAP	Environment, Natural Resources, and Blue Economy
P178032	Somali Sustainable Fisheries Development Project—Badmaal	2024	Active	Somalia	AFE	Environment, Natural Resources, and Blue Economy
P178143	Program on Sustainable Fishery Development in Red Sea and Gulf of Aden (SFISH)	2022	Active	Middle East and North Africa	MENA	Environment, Natural Resources, and Blue Economy

(continued)

Project ID	Project Name	Approval Fiscal Year	Project Status	Country	Region	Global Practice
P178544	Pacific Islands Regional Oceanscape Program—Second Phase for Economic Resilience	2023	Active	Marshall Islands	EAP	Environment, Natural Resources, and Blue Economy
P179242	Transforming Fisheries Sector Management in South-West Indian Ocean Region and Maldives Project (TransFORM, SWIOFish5)	2023	Active	South Asia	SAR	Environment, Natural Resources, and Blue Economy
P179599	Pacific Islands Regional Oceanscape Program—Second Phase for Economic Resilience: Tuvalu	2024	Active	Tuvalu	EAP	Environment, Natural Resources, and Blue Economy
P179612	Accelerating Blue Economy Development in the Kingdom of Morocco	2023	Active	Morocco	MENA	Environment, Natural Resources, and Blue Economy
P180379	Philippine Rural Development Project Scale-up	2023	Active	Philippines	EAP	Agriculture and Food

Source: Independent Evaluation Group.

Note: AF = additional financing; AFE = Eastern and Southern Africa; AFW = Western and Central Africa;APL = adaptable program loan; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = South Asia.

Appendix C. Country Diagnostics

Table C.1. List of Country Partnership Frameworks

No.	Economy	Region	Income Group	Lending Category	CPF Cycle
1	Afghanistan	South Asia	Low income	IDA	FY17–20
2	Albania	Europe and Central Asia	Upper-middle income	IBRD	FY23–27
3	Argentina	Latin America and the Caribbean	Upper-middle income	IBRD	FY19–22
4	Armenia	Europe and Central Asia	Upper-middle income	IBRD	FY19–23
5	Azerbaijan	Europe and Central Asia	Upper-middle income	IBRD	FY16–20
6	Bangladesh	South Asia	Lower-middle income	IDA	FY23–27
7	Belarus	Europe and Central Asia	Upper-middle income	IBRD	FY18–22
8	Belize	Latin America and the Caribbean	Upper-middle income	Blend	FY18–22
9	Benin	Western and Central Africa	Lower-middle income	IDA	FY19–23
10	Bhutan	South Asia	Lower-middle income	IDA	FY21–24
11	Bolivia	Latin America and the Caribbean	Lower-middle income	IBRD	FY23–26
12	Bosnia and Herzegovina	Europe and Central Asia	Upper-middle income	IBRD	FY23–27
13	Botswana	Eastern and Southern Africa	Upper-middle income	IBRD	FY16–20
14	Brazil	Latin America and the Caribbean	Upper-middle income	IBRD	FY24–28
15	Bulgaria	Europe and Central Asia	High income	IBRD	FY25–29
16	Burkina Faso	Western and Central Africa	Low income	IDA	FY18–23
17	Burundi	Eastern and Southern Africa	Low income	IDA	FY19–23
18	Cabo Verde	Western and Central Africa	Lower-middle income	Blend	FY20–25

(continued)

No.	Economy	Region	Income Group	Lending Category	CPF Cycle
19	Cambodia	East Asia and Pacific	Lower-middle income	IDA	FY25–29
20	Cameroon	Western and Central Africa	Lower-middle income	Blend	FY24–29
21	Caribbean small states	Latin America and the Caribbean			FY22–25
22	Central African Republic	Western and Central Africa	Low income	IDA	FY21–25
23	Chad	Western and Central Africa	Low income	IDA	FY16–20
24	Chile	Latin America and the Caribbean	High income	IBRD	FY24–27
25	China	East Asia and Pacific	Upper-middle income	IBRD	FY20–25
26	Colombia	Latin America and the Caribbean	Upper-middle income	IBRD	FY24–27
27	Comoros	Eastern and Southern Africa	Lower-middle income	IDA	FY20–24
28	Congo, Dem. Rep.	Eastern and Southern Africa	Low income	IDA	FY22–26
29	Congo, Rep.	Western and Central Africa	Lower-middle income	Blend	FY20–24
30	Costa Rica	Latin America and the Caribbean	Upper-middle income	IBRD	FY24–28
31	Côte d'Ivoire	Western and Central Africa	Lower-middle income	IDA	FY23–27
32	Croatia	Europe and Central Asia	High income	IBRD	FY19–24
33	Djibouti	Middle East and North Africa	Lower-middle income	IDA	FY22–26
34	Dominican Republic	Latin America and the Caribbean	Upper-middle income	IBRD	FY22–26
35	Ecuador	Latin America and the Caribbean	Upper-middle income	IBRD	FY19–23
36	Egypt, Arab Rep.	Middle East and North Africa	Lower-middle income	IBRD	FY23–27
37	El Salvador	Latin America and the Caribbean	Upper-middle income	IBRD	FY23–27
38	Eswatini	Eastern and Southern Africa	Lower-middle income	Blend	FY24–28
39	Ethiopia	Eastern and Southern Africa	Low income	IDA	FY18–22

(continued)

No.	Economy	Region	Income Group	Lending Category	CPF Cycle
40	Fiji	East Asia and Pacific	Upper-middle income	Blend	FY21–24
41	Gabon	Western and Central Africa	Upper-middle income	IBRD	FY23–27
42	Gambia, The	Western and Central Africa	Low income	IDA	FY22–26
43	Georgia	Europe and Central Asia	Upper-middle income	IBRD	FY19–22
44	Ghana	Western and Central Africa	Lower-middle income	IDA	FY22–26
45	Guatemala	Latin America and the Caribbean	Upper-middle income	IBRD	FY24–27
46	Guinea	Western and Central Africa	Lower-middle income	IDA	FY18–23
47	Guinea-Bissau	Western and Central Africa	Low income	IDA	FY18–21
48	Guyana	Latin America and the Caribbean	High income	IDA	FY23–26
49	Haiti	Latin America and the Caribbean	Lower-middle income	IDA	FY16–19
50	Honduras	Latin America and the Caribbean	Lower-middle income	IDA	FY23–27
51	India	South Asia	Lower-middle income	IBRD	FY18–22
52	Indonesia	East Asia and Pacific	Upper-middle income	IBRD	FY21–25
53	Iraq	Middle East and North Africa	Upper-middle income	IBRD	FY22–26
54	Jamaica	Latin America and the Caribbean	Upper-middle income	IBRD	FY24–27
55	Jordan	Middle East and North Africa	Lower-middle income	IBRD	FY24–29
56	Kazakhstan	Europe and Central Asia	Upper-middle income	IBRD	FY20–25
57	Kenya	Eastern and Southern Africa	Lower-middle income	Blend	FY23–28
58	Kosovo	Europe and Central Asia	Upper-middle income	IDA	FY23–27
59	Kyrgyz Republic	Europe and Central Asia	Lower-middle income	IDA	FY24–28
60	Lao PDR	East Asia and Pacific	Lower-middle income	IDA	FY23–26

(continued)

No.	Economy	Region	Income Group	Lending Category	CPF Cycle
61	Lebanon	Middle East and North Africa	Lower-middle income	IBRD	FY17–22
62	Lesotho	Eastern and Southern Africa	Lower-middle income	IDA	FY24–28
63	Liberia	Western and Central Africa	Low income	IDA	FY19–24
64	Madagascar	Eastern and Southern Africa	Low income	IDA	FY23–27
65	Malawi	Eastern and Southern Africa	Low income	IDA	FY21–25
66	Maldives	South Asia	Upper-middle income	IDA	FY23–27
67	Mali	Western and Central Africa	Low income	IDA	FY16–19
68	Mauritania	Western and Central Africa	Lower-middle income	IDA	FY18–23
69	Mauritius	Eastern and Southern Africa	Upper-middle income	IBRD	FY24–28
70	Mexico	Latin America and the Caribbean	Upper-middle income	IBRD	FY20–25
71	Moldova	Europe and Central Asia	Upper-middle income	IBRD	FY23–27
72	Mongolia	East Asia and Pacific	Upper-middle income	IBRD	FY21–25
73	Montenegro	Europe and Central Asia	Upper-middle income	IBRD	FY25–29
74	Morocco	Middle East and North Africa	Lower-middle income	IBRD	FY19–24
75	Mozambique	Eastern and Southern Africa	Low income	IDA	FY23–27
76	Myanmar	East Asia and Pacific	Lower-middle income	IDA	FY20–23
77	Namibia	Eastern and Southern Africa	Upper-middle income	IBRD	FY25–29
78	Nepal	South Asia	Lower-middle income	IDA	FY19–23
79	Nicaragua	Latin America and the Caribbean	Lower-middle income	IDA	FY18–22
80	Niger	Western and Central Africa	Low income	IDA	FY18–22
81	Nigeria	Western and Central Africa	Lower-middle income	Blend	FY21–25

(continued)

No.	Economy	Region	Income Group	Lending Category	CPF Cycle
82	North Macedonia	Europe and Central Asia	Upper-middle income	IBRD	FY24–28
83	Pacific island small states	East Asia and Pacific			FY17–21
84	Panama	Latin America and the Caribbean	High income	IBRD	FY24–28
85	Papua New Guinea	East Asia and Pacific	Lower-middle income	Blend	FY19–23
86	Paraguay	Latin America and the Caribbean	Upper-middle income	IBRD	FY19–23
87	Peru	Latin America and the Caribbean	Upper-middle income	IBRD	FY23–27
88	Philippines	East Asia and Pacific	Lower-middle income	IBRD	FY20–23
89	Poland	Europe and Central Asia	High income	IBRD	FY19–24
90	Romania	Europe and Central Asia	High income	IBRD	FY25–29
91	Rwanda	Eastern and Southern Africa	Low income	IDA	FY21–26
92	São Tomé and Príncipe	Eastern and Southern Africa	Lower-middle income	IDA	FY24–29
93	Senegal	Western and Central Africa	Lower-middle income	IDA	FY20–24
94	Serbia	Europe and Central Asia	Upper-middle income	IBRD	FY22–26
95	Seychelles	Eastern and Southern Africa	High income	IBRD	FY25–30
96	Sierra Leone	Western and Central Africa	Low income	IDA	FY21–26
97	Solomon Islands	East Asia and Pacific	Lower-middle income	IDA	FY18–23
98	Somalia	Eastern and Southern Africa	Low income	IDA	FY24–28
99	South Africa	Eastern and Southern Africa	Upper-middle income	IBRD	FY22–26
100	Sri Lanka	South Asia	Lower-middle income	IDA	FY24–27
101	Tajikistan	Europe and Central Asia	Lower-middle income	IDA	FY19–23
102	Tanzania	Eastern and Southern Africa	Lower-middle income	IDA	FY25–29

(continued)

No.	Economy	Region	Income Group	Lending Category	CPF Cycle
103	Thailand	East Asia and Pacific	Upper-middle income	IBRD	FY19–22
104	Timor-Leste	East Asia and Pacific	Lower-middle income	Blend	FY20–24
105	Togo	Western and Central Africa	Low income	IDA	FY25–29
106	Tunisia	Middle East and North Africa	Lower-middle income	IBRD	FY23–27
107	Türkiye	Europe and Central Asia	Upper-middle income	IBRD	FY24–28
108	Uganda	Eastern and Southern Africa	Low income	IDA	FY16–21
109	Ukraine	Europe and Central Asia	Upper-middle income	IBRD	FY17–21
110	Uruguay	Latin America and the Caribbean	High income	IBRD	FY23–27
111	Uzbekistan	Europe and Central Asia	Lower-middle income	Blend	FY22–26
112	Viet Nam	East Asia and Pacific	Lower-middle income	IBRD	FY18–22
113	Zambia	Eastern and Southern Africa	Lower-middle income	IDA	FY25–29

Source: Independent Evaluation Group.

Note: CPF = Country Partnership Framework; IBRD = International Bank for Reconstruction and Development; IDA = International Development Association.

Table C.2. List of Country Climate and Development Reports

No.	Economy	Region	Income Group	Lending Category	CCDR Year
1	Angola	Eastern and Southern Africa	Lower-middle income	IBRD	2022
2	Argentina	Latin America and the Caribbean	Upper-middle income	IBRD	2022
3	Armenia	Europe and Central Asia	Upper-middle income	IBRD	2024
4	Azerbaijan	Europe and Central Asia	Upper-middle income	IBRD	2023
5	Bangladesh	South Asia	Lower-middle income	IDA	2022

(continued)

No.	Economy	Region	Income Group	Lending Category	CCDR Year
6	Benin	Western and Central Africa	Lower-middle income	IDA	2023
7	Brazil	Latin America and the Caribbean	Upper-middle income	IBRD	2023
8	Cabo Verde	Western and Central Africa	Lower-middle income	Blend	2025
9	Cambodia	East Asia and Pacific	Lower-middle income	IDA	2023
10	Cameroon	Western and Central Africa	Lower-middle income	Blend	2022
11	Caribbean small states	Latin America and the Caribbean			2024
12	China	East Asia and Pacific	Upper-middle income	IBRD	2022
13	Colombia	Latin America and the Caribbean	Upper-middle income	IBRD	2023
14	Congo, Dem. Rep.	Eastern and Southern Africa	Low income	IDA	2023
15	Congo, Rep.	Western and Central Africa	Lower-middle income	Blend	2023
16	Côte d'Ivoire	Western and Central Africa	Lower-middle income	IDA	2023
17	Djibouti	Middle East and North Africa	Lower-middle income	IDA	2024
18	Dominican Republic	Latin America and the Caribbean	Upper-middle income	IBRD	2023
19	Ecuador	Latin America and the Caribbean	Upper-middle income	IBRD	2024
20	Egypt, Arab Rep.	Middle East and North Africa	Lower-middle income	IBRD	2022
21	Ethiopia	Eastern and Southern Africa	Low income	IDA	2024
22	G5 Sahel	Western and Central Africa			2022
23	Ghana	Western and Central Africa	Lower-middle income	IDA	2022
24	Honduras	Latin America and the Caribbean	Lower-middle income	IDA	2023
25	Indonesia	East Asia and Pacific	Upper-middle income	IBRD	2023
26	Iraq	Middle East and North Africa	Upper-middle income	IBRD	2022

(continued)

No.	Economy	Region	Income Group	Lending Category	CCDR Year
27	Jordan	Middle East and North Africa	Lower-middle income	IBRD	2022
28	Kazakhstan	Europe and Central Asia	Upper-middle income	IBRD	2022
29	Kenya	Eastern and Southern Africa	Lower-middle income	Blend	2023
30	Lebanon	Middle East and North Africa	Lower-middle income	IBRD	2024
31	Liberia	Western and Central Africa	Low income	IDA	2024
32	Madagascar	Eastern and Southern Africa	Low income	IDA	2024
33	Malawi	Eastern and Southern Africa	Low income	IDA	2022
34	Maldives	South Asia	Upper-middle income	IDA	2024
35	Moldova	Europe and Central Asia	Upper-middle income	IBRD	2024
36	Mongolia	East Asia and Pacific	Upper-middle income	IBRD	2024
37	Morocco	Middle East and North Africa	Lower-middle income	IBRD	2022
38	Mozambique	Eastern and Southern Africa	Low income	IDA	2023
39	Nepal	South Asia	Lower-middle income	IDA	2022
40	Pacific island small states	East Asia and Pacific			2024
41	Pakistan	South Asia	Lower-middle income	Blend	2022
42	Peru	Latin America and the Caribbean	Upper-middle income	IBRD	2022
43	Philippines	East Asia and Pacific	Lower-middle income	IBRD	2022
44	Poland	Europe and Central Asia	High income	IBRD	2024
45	Romania	Europe and Central Asia	High income	IBRD	2023
46	Rwanda	Eastern and Southern Africa	Low income	IDA	2022
47	Senegal	Western and Central Africa	Lower-middle income	IDA	2024

(continued)

No.	Economy	Region	Income Group	Lending Category	CCDR Year
48	South Africa	Eastern and Southern Africa	Upper-middle income	IBRD	2022
49	Tajikistan	Europe and Central Asia	Lower-middle income	IDA	2024
50	Tanzania	Eastern and Southern Africa	Lower-middle income	IDA	2024
51	Tunisia	Middle East and North Africa	Lower-middle income	IBRD	2023
52	Türkiye	Europe and Central Asia	Upper-middle income	IBRD	2022
53	Uzbekistan	Europe and Central Asia	Lower-middle income	Blend	2023
54	Viet Nam	East Asia and Pacific	Lower-middle income	IBRD	2022
55	West Bank and Gaza	Middle East and North Africa	Lower-middle income		2023
56	Western Balkans	Europe and Central Asia			2024
57	Yemen, Rep.	Middle East and North Africa	Low income	IDA	2024
58	Zimbabwe	Eastern and Southern Africa	Lower-middle income	Blend	2024

Source: Independent Evaluation Group.

Note: CCDR = Country Climate and Development Report; IBRD = International Bank for Reconstruction and Development; IDA = International Development Association.

Appendix D. Geospatial Analysis Protected Areas

This appendix lists the 448 protected area sites included in the geospatial analyses of tree cover.

Table D.1. Protected Area Sites

WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555587159	Loro Hablador	P114294	Argentina	Latin America and the Caribbean	Provincial reserve	Dry tropics	2015	2
555587129	Fuerte Esperanza	P114294	Argentina	Latin America and the Caribbean	Provincial park	Dry tropics	2015	2
555587128	Copo	P114294	Argentina	Latin America and the Caribbean	Multiple use provincial reserve	Dry tropics	2015	2
555577536	El Impenetrable	P114294	Argentina	Latin America and the Caribbean	National park	Dry tropics	2015	2
16848	Pampa del Indio	P114294	Argentina	Latin America and the Caribbean	Nature park	Dry tropics	2015	2
555637344	Traslasierra	P175669	Argentina	Latin America and the Caribbean	National park	Dry tropics	2022	3
10	Calilegua	P175669	Argentina	Latin America and the Caribbean	National park	Humid tropics	2022	3
555643561	Aconquija	P175669	Argentina	Latin America and the Caribbean	National reserve	Humid tropics	2022	3
555543040	Satchari	P121210	Bangladesh	South Asia	National park	Humid tropics	2011	1
12196	Chunati	P121210	Bangladesh	South Asia	Wildlife sanctuary	Humid tropics	2011	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555576099	Altadighi	P121210	Bangladesh	South Asia	National park	Humid tropics	2011	1
3314	Columbia River	P130474	Belize	Latin America and the Caribbean	Forest reserve	Humid tropics	2015	2
3306	Chiquibul	P130474	Belize	Latin America and the Caribbean	Forest reserve	Humid tropics	2015	2
28850	Maya Mountain	P130474	Belize	Latin America and the Caribbean	Forest reserve	Humid tropics	2015	2
313429	Spanish Creek	P130474	Belize	Latin America and the Caribbean	Wildlife sanctuary	Humid tropics	2015	2
116297	Vaca	P130474	Belize	Latin America and the Caribbean	Forest reserve	Humid tropics	2015	2
12201	W (Benin)	P122419	Benin	Western and Central Africa	National park	Dry tropics	2011	1
2253	Pendjari	P122419	Benin	Western and Central Africa	Hunting zone	Dry tropics	2011	1
555592602	San Rafael	P094335	Bolivia	Latin America and the Caribbean	Municipal protect-ed area	Dry tropics	2010	1
601	Nxai Pan	P095617	Botswana	Eastern and Southern Africa	National park	Dry tropics	2010	1
600	Chobe	P095617	Botswana	Eastern and Southern Africa	National park	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
7449	Moremi	P095617	Botswana	Eastern and Southern Africa	Game reserve	Dry tropics	2010	1
352082	Refúgio de Vida Silvestre Banhado Dos Pachecos	P086341	Brazil	Latin America and the Caribbean	Wildlife refuge	Dry tropics	2010	1
16091	Reserva Biológica Do Mato Grande	P086341	Brazil	Latin America and the Caribbean	Biological reserve	Dry tropics	2010	1
555636496	Parque Estadual Do Espinilho	P086341	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
16083	Reserva Biológica Do Ibirapuitã	P086341	Brazil	Latin America and the Caribbean	Biological reserve	Dry tropics	2010	1
33601	Área De Proteção Ambiental Do Banhado Grande	P086341	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1
555576468	Reserva Biológica Do São Donato	P086341	Brazil	Latin America and the Caribbean	Biological reserve	Dry tropics	2010	1
478500	Arie Do Córrego Mato Grande	P086341	Brazil	Latin America and the Caribbean	Area of relevant ecological interest	Dry tropics	2010	1
555600305	Área De Proteção Ambiental Ibirapuitã	P086341	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1
555682226	Parque Estadual Do Delta Do Jacuí	P086341	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555682652	Reserva Particular Do Patrimônio Natural Reserva Itapuã	P086341	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555682099	Área De Proteção Ambiental Estadual Delta Do Jacuí	P086341	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1
16092	Parque Estadual Do Podocarpus	P086341	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
67817	Lagoa do Peixe	P086341	Brazil	Latin America and the Caribbean	Ramsar site, wetland of international importance	Dry tropics	2010	1
19448	Parque Nacional Da Lagoa Do Peixe	P086341, P128968	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010, 2015	1, 2
351741	Parque Nacional Cavernas Do Peruaçu	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
555600243	Reserva Particular Do Patrimônio Natural Catingueiro	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555600196	Reserva Particular Do Patrimônio Natural Veredas Do Pratudinho	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555600159	Reserva De Desenvolvimento Sustentável Nascentes Geraizeiras	P091827	Brazil	Latin America and the Caribbean	Sustainable development reserve	Humid tropics	2010	1
198366	Parque Nacional Serra Das Confusões	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
555599967	Reserva Particular Do Patrimônio Natural Natura Mater	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555600088	Reserva Particular Do Patrimônio Natural Natura Cerrada	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
352010	Parque Estadual De Terra Ronca	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555599977	Reserva Particular Do Patrimônio Natural Catedral Do Jalapão	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
19272	Parque Nacional Grande Sertão Veredas	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
555600214	Reserva Particular Do Patrimônio Natural Santuário Das Pedras	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
352020	Parque Estadual Do Lajeado	P091827	Brazil	Latin America and the Caribbean	Park	Humid tropics	2010	1
351758	Parque Nacional Das Nascentes Do Rio Parnaiba	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
351746	Área De Proteção Ambiental Dos Meandros Do Rio Araguaia	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
351836	Reserva Extrativista De Recanto Das Araras De Terra Ronca	P091827	Brazil	Latin America and the Caribbean	Extractive reserve	Dry tropics	2010	1
555600019	Reserva Particular Do Patrimônio Natural Brumadinho	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555758977	Monumento Natural Municipal Da Serra Da Prata	P091827	Brazil	Latin America and the Caribbean	Natural monument	Humid tropics	2010	1
478551	Monumento Natural Das Árvores Fossilizadas Do Estado Do Tocantins	P091827	Brazil	Latin America and the Caribbean	Natural monument	Humid tropics	2010	1
352420	Parque do Araguaia	P091827	Brazil	Latin America and the Caribbean	Indigenous area	Dry tropics	2010	1
19752	Área De Proteção Ambiental Da Bacia Do Rio São Bartolomeu	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1
555715687	Parque Estadual Do João Leite	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
351907	Área De Proteção Ambiental Pouso Alto	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1
351751	Estação Ecológica Serra Geral Do Tocantins	P091827	Brazil	Latin America and the Caribbean	Ecological station	Dry tropics	2010	1
351736	Parque Nacional Das Sempre Vivas	P091827	Brazil	Latin America and the Caribbean	Park	Humid tropics	2010	1
352049	Parque Estadual Do Rio Preto	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
352018	Parque Estadual Do Jalapão	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
555600106	Reserva Particular Do Patrimônio Natural Bosque Dos Samambaiaçus—Resgate V	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Humid tropics	2010	1
354007	Reserva Extrativista Chapada Limpa	P091827	Brazil	Latin America and the Caribbean	Extractive reserve	Humid tropics	2010	1
555576328	Área De Proteção Ambiental Nascentes Do Rio Paraguai	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555600244	Parque Nacional Da Serra Do Gandarela	P091827	Brazil	Latin America and the Caribbean	Park	Humid tropics	2010	1
352415	Ponte de Pedra	P091827	Brazil	Latin America and the Caribbean	Indigenous area	Dry tropics	2010	1
555600227	Reserva Particular Do Patrimônio Natural Nascentes Do Rio Tocantins	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555783622	Área De Proteção Ambiental São Domingos	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Humid tropics	2010	1
351867	Área De Proteção Ambiental Bacia Do Cobre/ São Bartolomeu	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Humid tropics	2010	1
555600195	Reserva Particular Do Patrimônio Natural Parque Botânico Dos Kaiapós	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
478570	Parque Estadual Serra Do Intendente	P091827	Brazil	Latin America and the Caribbean	Park	Humid tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
351994	Parque Estadual Altamiro De Moura Pacheco	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1
555600287	Reserva Particular Do Patrimônio Natural São Bartolomeu	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555600264	Reserva Particular Do Patrimônio Natural Aves Gerais	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555600295	Reserva Particular Do Patrimônio Natural Vale Das Copaibeiras	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
555600029	Reserva Particular Do Patrimônio Natural Vale Das Arapongas—Resgate Ii	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Humid tropics	2010	1
351768	Reserva Extrativista Mata Grande	P091827	Brazil	Latin America and the Caribbean	Extractive reserve	Dry tropics	2010	1
352029	Parque Estadual Dos Pirineus	P091827	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555600026	Reserva Particular Do Patrimônio Natural Mata Dos Jacus—Resgate Vi	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Humid tropics	2010	1
555600256	Reserva Particular Do Patrimônio Natural Bico Do Javaés	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
351837	Reserva Extrativista Lago Do Cedro	P091827	Brazil	Latin America and the Caribbean	Extractive reserve	Dry tropics	2010	1
555600276	Reserva Particular Do Patrimônio Natural Pau Terra	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
478503	Área De Proteção Ambiental João Leite	P091827	Brazil	Latin America and the Caribbean	Environmental protection area	Dry tropics	2010	1
555600270	Reserva Particular Do Patrimônio Natural Maria Batista	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555600275	Reserva Particular Do Patrimônio Natural Integra o Parque	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
33898	Recreio/São Félix	P091827	Brazil	Latin America and the Caribbean	Indigenous area	Humid tropics	2010	1
555599990	Reserva Particular Do Patrimônio Natural Centro De Pesquisa Espeliológico—Aurora Natura	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
115891	Reserva Extrativista Extremo Norte Do Tocantins	P091827	Brazil	Latin America and the Caribbean	Extractive reserve	Humid tropics	2010	1
555600218	Reserva Particular Do Patrimônio Natural Sonhada	P091827	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Dry tropics	2010	1
59	Parque Nacional Da Chapada Dos Veadeiros	P091827, P143185	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010, 2016	1, 2
19737	Parque Nacional Da Serra Do Cipó	P091827, P143185	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010, 2016	1, 2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
351743	Refugio de Vida Silvestre Das Veredas Do Oeste Baiano	P091827, P150892	Brazil	Latin America and the Caribbean	Wildlife refuge	Dry tropics	2010, 2015	1, 2
351806	Parque Nacional Da Chapada Das Mesas	P091827, P150892	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010, 2015	1, 2
65	Parque Nacional Da Serra Da Canastra	P091827, P150892, P143185	Brazil	Latin America and the Caribbean	Park	Dry tropics	2010, 2015, 2016	1, 2
555624851	Taim Ecological Station	P128968	Brazil	Latin America and the Caribbean	Ramsar site, wetland of international importance	Dry tropics	2015	2
555682320	Reserva Extrativista Itapetininga	P128968	Brazil	Latin America and the Caribbean	Extractive reserve	Humid tropics	2015	2
555636643	Área De Proteção Ambiental De Guadalupe	P128968	Brazil	Latin America and the Caribbean	Environmental protection area	Humid tropics	2015	2
555599950	Reserva Particular Do Patrimônio Natural Fazenda Minas Gerais	P143185	Brazil	Latin America and the Caribbean	Natural heritage private reserve	Humid tropics	2016	2
352315	Baixo Rio Negro	P171257	Brazil	Latin America and the Caribbean	Indigenous area	Humid tropics	2022	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555637330	Rio Negro	P171257	Brazil	Latin America and the Caribbean	Ramsar site, wetland of international importance	Humid tropics	2022	3
115539	Kanamari do Rio Juruá	P171257	Brazil	Latin America and the Caribbean	Indigenous area	Humid tropics	2022	3
555705201	Complexe d'Aires Protégées Pô-Nazinga-Sissili	P098538	Burkina Faso	Western and Central Africa	Ramsar site, wetland of international importance	Dry tropics	2011	1
9160	Ruvubu	P127258, P160613	Burundi	Eastern and Southern Africa	National park	Dry tropics	2013, 2018	1, 2
9164	Bururi Forest	P127258, P160613	Burundi	Eastern and Southern Africa	Nature reserve	Humid tropics	2013, 2018	1, 2
9161	Kibira	P127258, P160613	Burundi	Eastern and Southern Africa	National park	Humid tropics	2013, 2018	1, 2
555703469	Ta Tai	P165344	Cambodia	East Asia and Pacific	Wildlife sanctuary	Humid tropics	2019	2
10118	Tonle Sap	P165344	Cambodia	East Asia and Pacific	Multiple use area	Humid tropics	2019	2
68865	Phnom Somkos	P165344	Cambodia	East Asia and Pacific	Wildlife sanctuary	Humid tropics	2019	2
313447	Phnom Aoral	P165344	Cambodia	East Asia and Pacific	Wildlife sanctuary	Humid tropics	2019	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555703505	Cardamom Corridor	P165344	Cambodia	East Asia and Pacific	Biodiversity corridor of protected area	Humid tropics	2019	2
555622119	Ngoyla	P118018	Cameroon	Western and Central Africa	Wildlife reserve	Humid tropics	2012	1
1250	Ouadi Rimé-Ouadi Achim	P171611	Chad	Western and Central Africa	Faunal reserve	Dry tropics	2020	3
12223	Galeras	P112106	Colombia	Latin America and the Caribbean	Fauna and flora sanctuary	Humid tropics	2012	1
20002	Cahuinarí	P112106	Colombia	Latin America and the Caribbean	National natural park	Humid tropics	2012	1
555698179	Chiribiquete National Park—"The Maloca of the Jaguar"	P112106	Colombia	Latin America and the Caribbean	World Heritage site (natural or mixed)	Humid tropics	2012	1
19991	Puinawai	P112106	Colombia	Latin America and the Caribbean	Nature reserve	Humid tropics	2012	1
555704128	Las Orquídeas	P112106	Colombia	Latin America and the Caribbean	Civil society nature reserve	Humid tropics	2012	1
19984	La Serranía de Chiribiquete	P112106, P144271	Colombia	Latin America and the Caribbean	National natural park	Humid tropics	2012, 2015	1, 2
129	El Tuparro	P167830	Colombia	Latin America and the Caribbean	National natural park	Dry tropics	2020	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555697703	Cinaruco	P167830	Colombia	Latin America and the Caribbean	Integrated management national districts	Dry tropics	2020	3
100760	Cuenca Alta del Río Satocá	P167830	Colombia	Latin America and the Caribbean	National protective forest reserves	Dry tropics	2020	3
1084	Kundelungu	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Dry tropics	2014	1
478291	Parc National des Virunga	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	Ramsar site, wetland of international importance	Dry tropics	2014	1
166889	Virunga	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Dry tropics	2014	1
1079	Upemba	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Dry tropics	2014	1
2017	Virunga National Park	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	World Heritage site (natural or mixed)	Dry tropics	2014	1
1083	Garamba	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Dry tropics	2014	1
4327	Garamba National Park	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	World Heritage site (natural or mixed)	Dry tropics	2014	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
72312	Itombwe	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	Nature reserve	Humid tropics	2014	1
20324	Bili-Uere	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	Hunting area	Dry tropics	2014	1
555626064	Réserve du Triangle de la Ngiri	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	Nature reserve	Humid tropics	2014	1
10906	Salonga National Park	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	World Heritage site (natural or mixed)	Humid tropics	2014	1
555697863	Salonga	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Humid tropics	2014	1
1082	Kahuzi-Biega	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Humid tropics	2014	1
555512077	Lomako-Yokokala	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	Nature reserve	Humid tropics	2014	1
4328	Kahuzi-Biega National Park	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	World Heritage site (natural or mixed)	Humid tropics	2014	1
124389	Okapi Wildlife Reserve	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	World Heritage site (natural or mixed)	Humid tropics	2014	1
555625665	Lomami National Park	P083813	Congo, Dem. Rep.	Eastern and Southern Africa	National park	Humid tropics	2014	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555512076	Tumba-Lediima	P128887	Congo, Dem. Rep.	Eastern and Southern Africa	Nature reserve	Humid tropics	2014	1
555571317	Ngyanga Nord	P177786	Congo, Rep.	Western and Central Africa	Wildlife reserve	Dry tropics	2023	3
555571319	Mont Fouari	P177786	Congo, Rep.	Western and Central Africa	Wildlife reserve	Humid tropics	2023	3
2270	Tsoulou	P177786	Congo, Rep.	Western and Central Africa	Wildlife reserve	Dry tropics	2023	3
313401	Conkouati-Douli	P177786	Congo, Rep.	Western and Central Africa	National park	Dry tropics	2023	3
2266	Léfini	P177786	Congo, Rep.	Western and Central Africa	Wildlife reserve	Dry tropics	2023	3
643	Odzala Kokoua	P177786	Congo, Rep.	Western and Central Africa	National park	Humid tropics	2023	3
313494	Lac Télé	P177786	Congo, Rep.	Western and Central Africa	Community re-serve	Humid tropics	2023	3
354010	Ntokou-Pikounda	P177786	Congo, Rep.	Western and Central Africa	National park	Humid tropics	2023	3
72332	Nouabalé-Ndoki	P177786	Congo, Rep.	Western and Central Africa	National park	Humid tropics	2023	3
145528	Azagny National Park	P162337	Côte d'Ivoire	Western and Central Africa	Ramsar site, wetland of interna-tional importance	Humid tropics	2018	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555682982	N'Zi River Lodge Voluntary Nature Reserve	P162789, P175982	Côte d'Ivoire	Western and Central Africa	Voluntary nature reserve	Dry tropics	2018, 2022	2, 3
5003	Taï National Park	P162789, P175982	Côte d'Ivoire	Western and Central Africa	World Heritage site (natural or mixed)	Humid tropics	2018, 2022	2, 3
29580	Ahua	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
29556	Laka	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
300782	N'zi Superieure	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
29545	Matiemba	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
29600	Kobo	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
29506	Réserve Naturelle de Mabi-Yaya	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Humid tropics	2022	3
1293	Réserve de Faune et de Flore du Haut Bandama	P175982	Côte d'Ivoire	Western and Central Africa	Natural reserve	Dry tropics	2022	3
29596	Scio	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Humid tropics	2022	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
724	Parc National du Mont Péko	P175982	Côte d'Ivoire	Western and Central Africa	National park	Humid tropics	2022	3
29638	Rapide Grah	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Humid tropics	2022	3
29586	Leraba	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
29636	Haute Dodo	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Humid tropics	2022	3
300768	Boundiali	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
300731	Pouniokele	P175982	Côte d'Ivoire	Western and Central Africa	Classified forest	Dry tropics	2022	3
4647	Northern	P170846	Dominica	Latin America and the Caribbean	Forest reserve	Humid tropics	2022	3
31306	Morne Diablotin	P170846	Dominica	Latin America and the Caribbean	National park	Humid tropics	2022	3
555624220	Jaragua	P173017, P173464	Dominican Republic	Latin America and the Caribbean	Specially protected area (Cartagena Convention)	Dry tropics	2021	3
555624221	Sierra de Bahoruco	P173017, P173464	Dominican Republic	Latin America and the Caribbean	Specially protected area (Cartagena Convention)	Dry tropics	2021	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
478128	Montaña La Humeadora	P173464	Dominican Republic	Latin America and the Caribbean	National park	Humid tropics	2021	3
478142	Valle Nuevo	P173464	Dominican Republic	Latin America and the Caribbean	National park	Dry tropics	2021	3
555624219	Los Haitises	P173464	Dominican Republic	Latin America and the Caribbean	Specially protected area (Cartagena Convention)	Humid tropics	2021	3
478089	Ébano Verde	P173464	Dominican Republic	Latin America and the Caribbean	Scientific reserve	Dry tropics	2021	3
478129	Monumento Natural Miguel Domingo Fuerte	P173464	Dominican Republic	Latin America and the Caribbean	Wildlife refuge	Humid tropics	2021	3
67932	Petit Loango	P143914	Gabon	Western and Central Africa	Ramsar site, wetland of international importance	Humid tropics	2014	1
109034	Bas Ogooue	P143914	Gabon	Western and Central Africa	Ramsar site, wetland of international importance	Humid tropics	2014	1
28845	Domaine de Chasse de Sette-Cama	P143914	Gabon	Western and Central Africa	Hunting area	Humid tropics	2014	1
303872	Parc National des Monts Birougou	P143914	Gabon	Western and Central Africa	National park	Humid tropics	2014	1
303874	Parc National de Loango	P157249	Gabon	Western and Central Africa	National park	Humid tropics	2017	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
303877	Parc National de Moukalaba—Doudou	P157249	Gabon	Western and Central Africa	National park	Humid tropics	2017	2
28847	Domaine de Chasse de Moukalaba	P157249	Gabon	Western and Central Africa	Hunting area	Humid tropics	2017	2
26546	Sissili Central	P098538	Ghana	Western and Central Africa	Forest reserve	Dry tropics	2011	1
26528	Pudo Hills	P098538	Ghana	Western and Central Africa	Forest reserve	Dry tropics	2011	1
26547	Sisilli North	P098538	Ghana	Western and Central Africa	Forest reserve	Dry tropics	2011	1
5153	Gbele	P098538, P171933	Ghana	Western and Central Africa	Resource reserve	Dry tropics	2011, 2022	1, 3
669	Mole	P098538, P171933	Ghana	Western and Central Africa	National park	Dry tropics	2011, 2022	1, 3
670	Digya	P171933	Ghana	Western and Central Africa	National park	Dry tropics	2022	3
40762	Jimira	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40870	South Fomangsu	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40786	Northern Scarp West	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555703398	Southern Scarp (Kwahu)	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40678	Fum Headwaters	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40785	Northern Scarp East	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
1543	Kogyae	P171933	Ghana	Western and Central Africa	Strict nature reserve	Dry tropics	2022	3
40761	Asenanyo	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40809	Pra Anum	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40764	Tano Ofin	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40869	Prakaw	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
40788	Southern Scarp (Akim)	P171933	Ghana	Western and Central Africa	Forest reserve	Humid tropics	2022	3
555703196	Forêt de Déré	P168613	Guinea	Western and Central Africa	Classified forest	Dry tropics	2021	3
29446	Baro	P168613	Guinea	Western and Central Africa	Classified forest	Dry tropics	2021	3
3027	Mount Nimba	P168613	Guinea	Western and Central Africa	UNESCO-MAB biosphere reserve	Humid tropics	2021	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555703195	Kounounkan	P168613	Guinea	Western and Central Africa	Nature reserve	Dry tropics	2021	3
555703197	Bossou	P168613	Guinea	Western and Central Africa	Classified forest	Dry tropics	2021	3
29484	Diécké	P168613	Guinea	Western and Central Africa	Classified forest	Humid tropics	2021	3
555697870	Niger Source	P168613	Guinea	Western and Central Africa	Classified forest	Dry tropics	2021	3
67986	Rio Pongo	P168613	Guinea	Western and Central Africa	Ramsar site, wetland of international importance	Dry tropics	2021	3
29465	Pic de Fon	P168613	Guinea	Western and Central Africa	Classified forest	Dry tropics	2021	3
67985	Rio Kapatchez	P168613	Guinea	Western and Central Africa	Ramsar site, wetland of international importance	Dry tropics	2021	3
33047	Orango	P122047	Guinea-Bissau	Western and Central Africa	National park	Dry tropics	2011	1
33048	Lagoas de Cufada	P122047	Guinea-Bissau	Western and Central Africa	Natural park	Dry tropics	2011	1
7879	Parc Macaya	P173464	Haiti	Latin America and the Caribbean	National park	Humid tropics	2021	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555643721	Grand Bois	P173464	Haiti	Latin America and the Caribbean	National park	Humid tropics	2021	3
7880	La Visite	P173464	Haiti	Latin America and the Caribbean	National park	Dry tropics	2021	3
102234	Danlí (Apagüiz)	P106680	Honduras	Latin America and the Caribbean	Water production reserve	Dry tropics	2011	1
555582977	Colibrí Esmeralda Hondureño	P106680	Honduras	Latin America and the Caribbean	Wildlife refuge	Dry tropics	2011	1
555582991	Montaña de Mico Quemado y Las Guanchías	P106680	Honduras	Latin America and the Caribbean	Ecological reserve	Humid tropics	2011	1
201	Río Plátano	P106680	Honduras	Latin America and the Caribbean	UNESCO-MAB biosphere reserve	Humid tropics	2011	1
68005	Chilika Lake	P097985	India	South Asia	Ramsar site, wetland of international importance	Humid tropics	2010	1
555511961	Teluk Mayalibit (Raja Ampat)	P127813	Indonesia	East Asia and Pacific	Locally managed marine area	Humid tropics	2014	1
124434	Bukit Tiga Puluh	P166672	Indonesia	East Asia and Pacific	National park	Humid tropics	2021	3
4994	Kerinci Seblat	P166672	Indonesia	East Asia and Pacific	National park	Humid tropics	2021	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
317205	Bukit Dua Belas	P166672	Indonesia	East Asia and Pacific	National park	Humid tropics	2021	3
1254	Berbak	P166672	Indonesia	East Asia and Pacific	National park	Humid tropics	2021	3
28856	Blue and John Crow Mountains National Park	P173464	Jamaica	Latin America and the Caribbean	National park	Humid tropics	2021	3
555542853	Litchfield-Matheson's Run	P173464	Jamaica	Latin America and the Caribbean	Forest reserve	Humid tropics	2021	3
28941	Cockpit Country	P173464	Jamaica	Latin America and the Caribbean	Forest reserve	Humid tropics	2021	3
28999	Peckham	P173464	Jamaica	Latin America and the Caribbean	Forest reserve	Humid tropics	2021	3
555542840	Dolphin Head	P173464	Jamaica	Latin America and the Caribbean	Forest reserve	Humid tropics	2021	3
7744	Witu	P094692	Kenya	Eastern and Southern Africa	Forest reserve	Dry tropics	2011	1
759	Shimba Hills	P094692	Kenya	Eastern and Southern Africa	National reserve	Dry tropics	2011	1
555622002	Kiunga	P094692	Kenya	Eastern and Southern Africa	Marine national reserve	Dry tropics	2011	1
555703743	Nam Et-Phouloey	P113860, P128393	Lao PDR	East Asia and Pacific	National park	Humid tropics	2013, 2014	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
61497	Nam Xam	P128393	Lao PDR	East Asia and Pacific	National protected area	Humid tropics	2014	1
555703747	Phou Sabot Phoungchong	P128393	Lao PDR	East Asia and Pacific	National protected area	Humid tropics	2014	1
555703745	Nakai-Nam Teun	P128393, P170559	Lao PDR	East Asia and Pacific	National park	Humid tropics	2014, 2021	1, 3
10192	Phou Khao Khuay	P128393, P170559	Lao PDR	East Asia and Pacific	National park	Humid tropics	2014, 2021	1, 3
555703744	Hin Nam No	P170559	Lao PDR	East Asia and Pacific	National park	Humid tropics	2021	3
555703750	Kounxe Nongma	P170559	Lao PDR	East Asia and Pacific	National protected area	Humid tropics	2021	3
61501	Phou Hin Poun	P170559	Lao PDR	East Asia and Pacific	National protected area	Humid tropics	2021	3
9176	East Nimba Nature Reserve	P154114	Liberia	Western and Central Africa	Nature reserve	Dry tropics	2016	2
555512168	Gbi	P154114	Liberia	Western and Central Africa	National park	Humid tropics	2016	2
7414	Wonegizi Nature Reserve	P154114	Liberia	Western and Central Africa	Nature reserve	Humid tropics	2016	2
9171	Gola Forest National Park	P154114	Liberia	Western and Central Africa	National park	Humid tropics	2016	2
555512165	Foya	P154114	Liberia	Western and Central Africa	National park	Humid tropics	2016	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555512166	Kpo Mountains	P154114	Liberia	Western and Central Africa	National park	Humid tropics	2016	2
555512169	Grand Kru-River Gee	P154114	Liberia	Western and Central Africa	National park	Humid tropics	2016	2
7409	Sapo National Park	P154114	Liberia	Western and Central Africa	National park	Humid tropics	2016	2
303695	Masoala	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
2309	Namoroka	P107484	Madagascar	Eastern and Southern Africa	National park	Dry tropics	2011	1
26070	Mantadia	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
5021	Analamazaotra	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
5038	Mangerivola	P107484	Madagascar	Eastern and Southern Africa	Special reserve	Humid tropics	2011	1
303702	Bemaraha	P107484	Madagascar	Eastern and Southern Africa	National park	Dry tropics	2011	1
354012	Mikea	P107484	Madagascar	Eastern and Southern Africa	National park	Dry tropics	2011	1
5022	Analamerana	P107484	Madagascar	Eastern and Southern Africa	National park	Dry tropics	2011	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
5026	Manongarivo	P107484	Madagascar	Eastern and Southern Africa	Special reserve	Humid tropics	2011	1
5039	Nosy Mangabe	P107484	Madagascar	Eastern and Southern Africa	Special reserve	Humid tropics	2011	1
2314	Montagne d'Ambre	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
2312	Isalo	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
2306	Tsaratanana	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
20287	Ranomafana	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
6932	Ambohitantely	P107484	Madagascar	Eastern and Southern Africa	Special reserve	Humid tropics	2011	1
5024	Ankarana	P107484	Madagascar	Eastern and Southern Africa	Special reserve	Dry tropics	2011	1
303698	Baie de Baly	P107484	Madagascar	Eastern and Southern Africa	National park	Dry tropics	2011	1
20273	Zombitse Vohibasia	P107484	Madagascar	Eastern and Southern Africa	National park	Dry tropics	2011	1
2303	Andohahela	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1
20272	Befotaka Midongy	P107484	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
352249	Makira	P107484, P154698	Madagascar	Eastern and Southern Africa	Natural park	Humid tropics	2011, 2017	1, 2
354013	Zahamena	P107484, P154698	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2011, 2017	1, 2
5037	Ambatovaky	P107484, P154698	Madagascar	Eastern and Southern Africa	Special reserve	Humid tropics	2011, 2017	1, 2
2305	Marojejy	P154698	Madagascar	Eastern and Southern Africa	National park	Humid tropics	2017	2
5023	Anjanaharibe-Sud	P154698	Madagascar	Eastern and Southern Africa	Special reserve	Humid tropics	2017	2
555697907	COMATSA Nord	P154698	Madagascar	Eastern and Southern Africa	Managed resource protected area	Humid tropics	2017	2
555697905	Mahimborondro	P154698	Madagascar	Eastern and Southern Africa	Managed resource protected area	Humid tropics	2017	2
555697904	COMATSA Sud	P154698	Madagascar	Eastern and Southern Africa	Protected land-scape	Humid tropics	2017	2
4648	Vwaza Marsh Wildlife Reserve	P108879	Malawi	Africa	Wildlife reserve	Dry tropics	2011	1
779	Nyika National Park	P108879	Malawi	Africa	National park	Dry tropics	2011	1
2318	Nkhotakota Wildlife Reserve	P110112	Malawi	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2012	1
33160	Tsamba	P117617	Malawi	Eastern and Southern Africa	Forest reserve	Dry tropics	2012	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
33162	Zomba Malosa Forest Reserve	P117617	Malawi	Eastern and Southern Africa	Forest reserve	Dry tropics	2012	1
33157	Mangochi	P117617	Malawi	Eastern and Southern Africa	Forest reserve	Dry tropics	2012	1
33230	Neno Eastern Escarpment	P117617	Malawi	Eastern and Southern Africa	Proposed forest reserve	Dry tropics	2012	1
33158	Liwonde Forest Reserve	P117617	Malawi	Eastern and Southern Africa	Forest reserve	Dry tropics	2012	1
2315	Lengwe National Park	P117617, P158805, P176575	Malawi	Eastern and Southern Africa	National park	Dry tropics	2012, 2018, 2022	1, 2, 3
33181	Matandwe	P117617, P158805, P176575	Malawi	Eastern and Southern Africa	Forest reserve	Dry tropics	2012, 2018, 2022	1, 2, 3
2320	Mwabvi Wildlife Reserve	P117617, P158805, P176575	Malawi	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2012, 2018, 2022	1, 2, 3
555624877	Elephant Marsh	P117617, P158805, P176575	Malawi	Eastern and Southern Africa	Ramsar site, wetland of international importance	Dry tropics	2012, 2018, 2022	1, 2, 3
2319	Majete Wildlife Reserve	P158805, P176575	Malawi	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2018, 2022	2, 3
33161	Thambani	P176575	Malawi	Eastern and Southern Africa	Forest reserve	Dry tropics	2022	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
95349	Parc National du Diawling	P162337	Mauritania	Western and Central Africa	Ramsar site, wetland of international importance	Dry tropics	2018	2
902281	Sian Ka'an	P100438	Mexico	Latin America and the Caribbean	Ramsar site, wetland of international importance	Humid tropics	2011	1
214	Pico de Orizaba	P131709	Mexico	Latin America and the Caribbean	National park	Dry tropics	2014	1
107569	Cañón del Usumacinta	P131709	Mexico	Latin America and the Caribbean	Flora and fauna protection area	Humid tropics	2014	1
217	Cofre de Perote o Nauhcampatépetl	P131709	Mexico	Latin America and the Caribbean	National park	Humid tropics	2014	1
903016	Pantanos de Centla	P131709	Mexico	Latin America and the Caribbean	UNESCO-MAB biosphere reserve	Humid tropics	2014	1
903013	Los Tuxtlas	P131709	Mexico	Latin America and the Caribbean	UNESCO-MAB biosphere reserve	Humid tropics	2014	1
555783785	Sierra de Vallejo-Río Ameca	P131709	Mexico	Latin America and the Caribbean	Biosphere reserve	Dry tropics	2014	1
555745265	Sierra de San Miguelito	P178224	Mexico	Latin America and the Caribbean	Flora and fauna protection area	Dry tropics	2022	3
20295	Limpopo	P131965	Mozambique	Eastern and Southern Africa	National park	Dry tropics	2015	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
799	Banhine	P131965	Mozambique	Eastern and Southern Africa	National park	Dry tropics	2015	2
555698170	Pomene	P131965	Mozambique	Eastern and Southern Africa	National reserve	Dry tropics	2015	2
800	Zinave	P131965	Mozambique	Eastern and Southern Africa	National park	Dry tropics	2015	2
4652	Maputo	P131965	Mozambique	Eastern and Southern Africa	Special reserve	Dry tropics	2015	2
555705345	Chimanimani	P131965	Mozambique	Eastern and Southern Africa	National park	Dry tropics	2015	2
555705202	Gilé	P131965, P160033	Mozambique	Eastern and Southern Africa	National park	Dry tropics	2015, 2017	2
9035	Quirimbas	P131965, P160033, P174635	Mozambique	Eastern and Southern Africa	Buffer zone	Dry tropics	2015, 2017, 2021	2, 3
303677	N°14	P166802	Mozambique	Eastern and Southern Africa	Hunting reserve	Dry tropics	2019	2
7947	Régulo Zomba	P166802	Mozambique	Eastern and Southern Africa	Forest reserve	Dry tropics	2019	2
303676	N°10	P166802	Mozambique	Eastern and Southern Africa	Hunting reserve	Dry tropics	2019	2
303674	N°11	P166802	Mozambique	Eastern and Southern Africa	Hunting reserve	Dry tropics	2019	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
7948	Maronga	P166802	Mozambique	Eastern and Southern Africa	Forest reserve	Dry tropics	2019	2
342677	Moribane	P166802	Mozambique	Eastern and Southern Africa	Forest reserve	Dry tropics	2019	2
555698167	Magoe	P174002	Mozambique	Eastern and Southern Africa	National park	Dry tropics	2021	3
555705344	Niassa	P174635	Mozambique	Eastern and Southern Africa	Special reserve	Dry tropics	2021	3
342681	Primeiras and Segundas	P174635	Mozambique	Eastern and Southern Africa	Environmental protection area	Dry tropics	2021	3
7938	Mecuburi	P174635	Mozambique	Eastern and Southern Africa	Forest reserve	Dry tropics	2021	3
1309	Suklaphanta	P121210	Nepal	South Asia	Wildlife reserve	Dry tropics	2011	1
555569944	Banke	P121210	Nepal	South Asia	National park	Dry tropics	2011	1
1308	Bardia	P121210	Nepal	South Asia	National park	Dry tropics	2011	1
1310	Koshi Tappu	P121210	Nepal	South Asia	Wildlife reserve	Dry tropics	2011	1
10089	Parsa	P121210	Nepal	South Asia	Wildlife reserve	Humid tropics	2011	1
10905	Chitwan National Park	P121210	Nepal	South Asia	World Heritage site (natural or mixed)	Humid tropics	2011	1
61043	Complejo Volcánico Telica—Rota	P117836	Nicaragua	Latin America and the Caribbean	Nature reserve	Dry tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
61049	Tepesomoto—Pataste	P117836	Nicaragua	Latin America and the Caribbean	Nature reserve	Dry tropics	2010	1
145584	Reserva de Biosfera Bosawas	P121152	Nicaragua	Latin America and the Caribbean	UNESCO-MAB biosphere reserve	Humid tropics	2013	1
12662	Cerro Musún	P163531	Nicaragua	Latin America and the Caribbean	Nature reserve	Humid tropics	2018	2
12672	Sierra Amerrisque	P163531	Nicaragua	Latin America and the Caribbean	Nature reserve	Dry tropics	2018	2
61060	Cerro Mombachito—La Vieja	P163531	Nicaragua	Latin America and the Caribbean	Nature reserve	Dry tropics	2018	2
34685	Cerro Cumaica—Cerro Alegre	P163531	Nicaragua	Latin America and the Caribbean	Nature reserve	Dry tropics	2018	2
145539	Refugio de Vida Silvestre Los Guatuzos	P163531	Nicaragua	Latin America and the Caribbean	Ramsar site, wetland of international importance	Humid tropics	2018	2
30631	Archipiélago de Solentiname	P163531	Nicaragua	Latin America and the Caribbean	National monument	Humid tropics	2018	2
61061	Fila Masigüe	P163531	Nicaragua	Latin America and the Caribbean	Nature reserve	Humid tropics	2018	2
30632	Fortaleza La Inmaculada Concepción de María	P163531	Nicaragua	Latin America and the Caribbean	Historical monument	Humid tropics	2018	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
1332	Yankari	P175237	Nigeria	Western and Central Africa	Game reserve	Dry tropics	2022	3
819	Kainji Lake	P175237	Nigeria	Western and Central Africa	National park	Dry tropics	2022	3
7874	Kamuku	P175237	Nigeria	Western and Central Africa	National park	Dry tropics	2022	3
7875	Falgore (Kogin Kano)	P175237	Nigeria	Western and Central Africa	National park	Dry tropics	2022	3
7873	Gashaka-Gumti	P175237	Nigeria	Western and Central Africa	National park	Humid tropics	2022	3
36556	Alawa	P175237	Nigeria	Western and Central Africa	Forest reserve	Dry tropics	2022	3
7834	Ebbe/Kampe	P175237	Nigeria	Western and Central Africa	Game reserve	Dry tropics	2022	3
12685	Cerro Hoya	P145621	Panama	Latin America and the Caribbean	National park	Humid tropics	2015	2
107334	Narganá	P145621, P178063	Panama	Latin America and the Caribbean	Wild area	Humid tropics	2015, 2023	2, 3
115110	Santa Fe	P145621, P178063	Panama	Latin America and the Caribbean	National park	Humid tropics	2015, 2023	2, 3
99631	General de División Omar Torrijos Herrera	P145621, P178063	Panama	Latin America and the Caribbean	National park	Humid tropics	2015, 2023	2, 3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
241	Altos de Campana	P145621, P178063	Panama	Latin America and the Caribbean	National park	Humid tropics	2015, 2023	2, 3
107289	Damani-Guariviara	P145621, P178063	Panama	Latin America and the Caribbean	Ramsar site, wetland of international importance	Humid tropics	2015, 2023	2, 3
555705286	La Amistad	P145621, P178063	Panama	Latin America and the Caribbean	National park	Humid tropics	2015, 2023	2, 3
240	Volcán Barú	P145621, P178063	Panama	Latin America and the Caribbean	National park	Humid tropics	2015, 2023	2, 3
555705285	Isla Bastimentos	P145621, P178063	Panama	Latin America and the Caribbean	National park	Humid tropics	2015, 2023	2, 3
17185	Palo Seco	P145621, P178063	Panama	Latin America and the Caribbean	Protective forest	Humid tropics	2015, 2023	2, 3
303326	Fortuna	P145621, P178063	Panama	Latin America and the Caribbean	Forest reserve	Humid tropics	2015, 2023	2, 3
12698	La Yeguada	P178063	Panama	Latin America and the Caribbean	Forest reserve	Humid tropics	2023	3
555790186	Carapa	P094335	Paraguay	Latin America and the Caribbean	Natural reserve	Humid tropics	2010	1
555786056	Pozuelo	P094335	Paraguay	Latin America and the Caribbean	Natural reserve	Humid tropics	2010	1
20991	Refugio Biológico Mbaracayú	P094335	Paraguay	Latin America and the Caribbean	Natural reserve	Humid tropics	2010	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555790199	Ypeti	P094335	Paraguay	Latin America and the Caribbean	Private reserve	Humid tropics	2010	1
555629428	Yguazú	P094335	Paraguay	Latin America and the Caribbean	Natural reserve	Humid tropics	2010	1
20987	Ñacunday	P094335	Paraguay	Latin America and the Caribbean	National park	Humid tropics	2010	1
37115	Del Bosque Mbaracayú	P094335	Paraguay	Latin America and the Caribbean	Natural reserve	Humid tropics	2010	1
245	Caazapa	P094335	Paraguay	Latin America and the Caribbean	National park	Humid tropics	2010	1
555790200	Tapyta	P094335	Paraguay	Latin America and the Caribbean	Private reserve	Humid tropics	2010	1
555790192	Morombi	P094335	Paraguay	Latin America and the Caribbean	Private reserve	Humid tropics	2010	1
20187	Laquipampa	P095424	Peru	Latin America and the Caribbean	Wildlife refuge	Dry tropics	2010	1
555555662	Bosque Moyán—Palacio	P095424	Peru	Latin America and the Caribbean	Regional conservation area	Dry tropics	2010	1
20183	Alto Mayo	P095424	Peru	Latin America and the Caribbean	Protection forest	Humid tropics	2010	1
127825	Bahuaja—Sonene	P116152, P118713	Peru	Latin America and the Caribbean	National park	Humid tropics	2010, 2011	1
3370	Tambopata	P116152, P118713	Peru	Latin America and the Caribbean	National reserve	Humid tropics	2010, 2011	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
5190	Parc National des Volcans	P178161	Rwanda	Eastern and Southern Africa	UNESCO-MAB biosphere reserve	Humid tropics	2024	3
13930	Forêt de Maka-Diama	P124018	Senegal	Western and Central Africa	Forest reserve	Dry tropics	2014	1
5178	Ndiael	P124018	Senegal	Western and Central Africa	Wildlife reserve	Dry tropics	2014	1
352608	Forêt de Tilene et Ndiaye	P124018	Senegal	Western and Central Africa	Forest reserve	Dry tropics	2014	1
352611	Forêt de Mpal	P124018	Senegal	Western and Central Africa	Forest reserve	Dry tropics	2014	1
5180	Kangari Hills	P094307	Sierra Leone	Western and Central Africa	Forest reserve	Humid tropics	2010	1
555555549	Kilimi	P094307	Sierra Leone	Western and Central Africa	National park	Dry tropics	2010	1
7417	Outamba	P094307	Sierra Leone	Western and Central Africa	National park	Dry tropics	2010	1
29968	Loma Mountains	P094307	Sierra Leone	Western and Central Africa	National park	Humid tropics	2010	1
8517	Loma Mountains Alikalia	P094307	Sierra Leone	Western and Central Africa	No or non–hunting forest reserve	Humid tropics	2010	1
198331	Sierra Leone River Estuary	P115836	Sierra Leone	Western and Central Africa	Ramsar site, wetland of international importance	Humid tropics	2011	1

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555720436	Mamunta-Mayossor	P115836	Sierra Leone	Western and Central Africa	Forest reserve	Humid tropics	2011	1
198302	iSimangaliso Wetland Park	P086528, P170213	South Africa	Eastern and Southern Africa	World Heritage site (natural or mixed)	Dry tropics	2010, 2022	1
873	Kruger National Park	P170213	South Africa	Eastern and Southern Africa	National park	Dry tropics	2022	3
351273	Great Fish River Mouth Wetland Nature Reserve	P170213, P174097	South Africa	Eastern and Southern Africa	Nature reserve	Dry tropics	2022	3
875	Addo Elephant National Park	P170213, P174097	South Africa	Eastern and Southern Africa	National park	Dry tropics	2022	3
27890	Tawalama P.R.	P156021	Sri Lanka	South Asia	Other state forest	Humid tropics	2016	2
2104	Hurulu Forest Reserve	P156021	Sri Lanka	South Asia	UNESCO-MAB biosphere reserve	Dry tropics	2016	2
27941	Mulatiyana	P156021	Sri Lanka	South Asia	Reserved forest	Humid tropics	2016	2
27480	Wanniyagama	P156021	Sri Lanka	South Asia	Reserved forest	Dry tropics	2016	2
143052	Ipologama	P156021	Sri Lanka	South Asia	Reserved forest	Dry tropics	2016	2
2474	Padaviya Tank	P156021	Sri Lanka	South Asia	Sanctuary	Dry tropics	2016	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
2200	Castries and Dennery Waterworks Reserve and Marquis	P173464	St. Lucia	Latin America and the Caribbean	Protected forest/ forest reserve	Humid tropics	2021	3
555579299	Parrot Reserve (Colonarie Forest Reserve)	P172980	St. Vincent and the Grenadines	Latin America and the Caribbean	Wildlife reserve	Humid tropics	2022	3
14083	Colonarie	P172980	St. Vincent and the Grenadines	Latin America and the Caribbean	Forest reserve	Humid tropics	2022	3
26472	Chateaubelair Islet	P172980	St. Vincent and the Grenadines	Latin America and the Caribbean	Wildlife reserve/ marine park	Humid tropics	2022	3
61700	Cumberland	P173464	St. Vincent and the Grenadines	Latin America and the Caribbean	Forest reserve	Humid tropics	2021	3
19297	Udzungwa Mountains National Park	P126361, P150523	Tanzania	Eastern and Southern Africa	National park	Humid tropics	2014, 2018	1, 2
917	Ruaha National Park	P150523	Tanzania	Eastern and Southern Africa	National park	Dry tropics	2018	2
5005	Selous Game Reserve	P150523	Tanzania	Eastern and Southern Africa	World Heritage site (natural or mixed)	Dry tropics	2018	2
919	Mikumi National Park	P150523	Tanzania	Eastern and Southern Africa	National park	Dry tropics	2018	2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
555703407	Amou-Mono	P123922	Togo	Western and Central Africa	Natural resource management area	Dry tropics	2012	1
37159	Missahoé	P123922	Togo	Western and Central Africa	Forest reserve	Humid tropics	2012	1
20978	Abdoulaye	P123922	Togo	Western and Central Africa	Faunal reserve	Dry tropics	2012	1
20977	Alédjo	P123922	Togo	Western and Central Africa	Faunal reserve	Humid tropics	2012	1
555703403	Togodo-Sud	P162337	Togo	Western and Central Africa	National park	Dry tropics	2018	2
555703405	Togodo-Nord	P162337	Togo	Western and Central Africa	Natural resource management area	Dry tropics	2018	2
313110	Kabwoya	P170466	Uganda	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2020	3
1445	Ajai	P170466	Uganda	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2020	3
313109	Mgahinga Gorilla	P170466	Uganda	Eastern and Southern Africa	National park	Humid tropics	2020	3
64671	Era	P170466	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2020	3
61609	Bwindi Impenetrable National Park	P170466	Uganda	Eastern and Southern Africa	World Heritage site (natural or mixed)	Humid tropics	2020	3

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40042	Semuliki	P170466	Uganda	Eastern and Southern Africa	National park	Humid tropics	2020	3
1444	Katonga	P170466	Uganda	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2020	3
40371	Echuya	P170466	Uganda	Eastern and Southern Africa	Forest reserve	Humid tropics	2020	3
39985	Kagombe	P170466	Uganda	Eastern and Southern Africa	Forest reserve	Humid tropics	2020	3
315238	Kibale	P170466	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2020	3
61608	Rwenzori Mountains National Park	P170466	Uganda	Eastern and Southern Africa	World Heritage site (natural or mixed)	Humid tropics	2020	3
34804	Budongo	P170466, P174337	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2020, 2021	3
956	Murchison Falls	P170466, P174337	Uganda	Eastern and Southern Africa	National park	Dry tropics	2020, 2021	3
1440	Toro-Semliki	P170466, P174337	Uganda	Eastern and Southern Africa	Wildlife reserve	Dry tropics	2020, 2021	3
315143	Kasyoha—Kitomi	P170466, P174337	Uganda	Eastern and Southern Africa	Forest reserve	Humid tropics	2020, 2021	3
3051	Queen Elizabeth National Park	P170466, P174337	Uganda	Eastern and Southern Africa	UNESCO-MAB biosphere reserve	Humid tropics	2020, 2021	3

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
34805	Bugoma	P170466, P174337	Uganda	Eastern and Southern Africa	Forest reserve	Humid tropics	2020, 2021	3
40069	Rwensambya	P170466, P174337	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2020, 2021	3
40000	Wambabya	P174337	Uganda	Eastern and Southern Africa	Forest reserve	Humid tropics	2021	3
317282	South Maramagambo	P174337	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2021	3
40027	Kalinzu	P174337	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2021	3
33147	Itwara	P174337	Uganda	Eastern and Southern Africa	Forest reserve	Humid tropics	2021	3
40052	Ibambaro	P174337	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2021	3
40467	Matidi	P174337	Uganda	Eastern and Southern Africa	Forest reserve	Dry tropics	2021	3
26944	Lundazi	P108879, P161490	Zambia	Africa; Eastern and Southern Africa	Forest reserve	Dry tropics	2011, 2017	1, 2
1102	Nyika	P108879, P161490	Zambia	Africa; Eastern and Southern Africa	National park	Dry tropics	2011, 2017	1, 2

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WDPA ID	Protected Area Name	Associated World Bank Projects	Country	Region	IUCN Classification	Biome	Approval Years	Cohort
1094	Lavushi Manda	P108882, P164764	Zambia	Eastern and Southern Africa	National park	Dry tropics	2011, 2019	1, 2
1099	Kasanka	P108882, P164764	Zambia	Eastern and Southern Africa	National park	Dry tropics	2011, 2019	1, 2
26731	Mpomwa	P144254	Zambia	Eastern and Southern Africa	Forest reserve	Dry tropics	2015	2
1091	Lukusuzi	P161490	Zambia	Eastern and Southern Africa	National park	Dry tropics	2017	2
1100	Luambe	P161490	Zambia	Eastern and Southern Africa	National park	Dry tropics	2017	2
26703	Chimalilo	P161490	Zambia	Eastern and Southern Africa	Forest reserve	Dry tropics	2017	2
4109	Tondwa	P164764	Zambia	Eastern and Southern Africa	Game management area	Dry tropics	2019	2
4110	Kaputa	P164764	Zambia	Eastern and Southern Africa	Game management area	Dry tropics	2019	2
1092	Nsumbu	P164764	Zambia	Eastern and Southern Africa	National park	Dry tropics	2019	2
1090	Mweru Wantipa	P164764	Zambia	Eastern and Southern Africa	National park	Dry tropics	2019	2
4106	Bangweulu	P164764	Zambia	Eastern and Southern Africa	Game management area	Dry tropics	2019	2
1095	Lusenga Plain	P164764	Zambia	Eastern and Southern Africa	National park	Dry tropics	2019	2

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1105	Chizarira	P124625	Zimbabwe	Eastern and Southern Africa	National park	Dry tropics	2014	1
1991	Hwange	P124625	Zimbabwe	Eastern and Southern Africa	National park	Dry tropics	2014	1
20354	Ngamo	P124625	Zimbabwe	Eastern and Southern Africa	State forest	Dry tropics	2014	1
20357	Sikumi	P124625	Zimbabwe	Eastern and Southern Africa	State forest	Dry tropics	2014	1

Source: Independent Evaluation Group.

Note: Cohort 1 = protected area in project approved in FY10–14; cohort 2 = protected area in project approved in FY15–19; cohort 3 = protected area in project approved in FY20–24. IUCN = International Union for Conservation of Nature and Natural Resources; MAB = Man and the Biosphere; UNESCO = United Nations Educational, Scientific, and Cultural Organization; WDPA = World Database on Protected Areas.

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